

Institution: University of Southampton
Unit of Assessment: 17 Business & Management Studies
<p>1. Unit context and structure, research and impact strategy</p> <p>1.1 Unit context and structure</p> <p>Southampton Business School (SBS) is successful, growing, international and diverse, hosting a vibrant and collegial community of researchers. Although SBS's performance in REF2014 was relatively strong, there was a belief that it could be further improved. A five-year School-level strategy was developed in 2014, together with a new management team from 2015. The rationale behind this strategy was twofold: to consolidate core strengths (e.g. business analytics, management sciences, accounting and finance), and to grow sustainably in new identified areas (entrepreneurship, innovation and project management), aligning with the University Strategy (REF5a§1.2). This resulted in significant investments in research, including increased internal pump-priming research funds, personal research budgets, and notably academic research staff, increasing from 56.4 FTE (59 headcount (18F,41M)) in 2014 to 94.9 FTE (100 headcount (28F,72M)) in 2020. We have also become more international, increasing from 50% non-UK (EU/EEA and Rest of World) in REF2014 to 64% today.</p> <p>SBS has grown substantially in breadth and size over the last five years, now comprising six Departments, covering all core management disciplines: Accounting (DoA), Banking and Finance (DBF), Decision Analytics and Risk (DAR), Digital and Data-Driven Marketing (DDDM), Human Resource Management and Organisational Behaviour (HRMOB), and Strategy Innovation and Entrepreneurship (DSIE). The purpose of our Departments is to promote excellence in interdisciplinary research, consultancy and education in key management areas such as accountancy, banking, finance, risk and management science.</p> <p>Research activity within SBS is coordinated through eight multidisciplinary research centres (RCs), which are subsidiary to Departments. The longest established RC is the Centre for Operational Research, Management Sciences and Information Systems (CORMSIS), which includes 33 SBS staff, nine staff from the School of Mathematical Sciences, plus three staff from Health Sciences. This total of 45 permanent academic staff makes CORMSIS one of the UK's largest groups of researchers in Operational Research and Management Sciences. The other seven RCs are: the Centre for Risk Research (CRR); Centre for Research in Accounting, Accountability and Governance (CRAAG); Centre for Marketing Research (CMR); Centre for Empirical Research in Finance and Banking (CERFIB); Centre for Digital Finance (CDF); Centre for Research on Work and Organisations (CWO); and the Centre for Inclusive and Sustainable Entrepreneurship and Innovation (CISEI). See Figure 1.</p> <p>The purpose of our RCs is to generate and disseminate knowledge, understanding and practical impact. Each RC has a distinctive research vision. For example, CORMSIS covers the whole spectrum from theoretical mathematical developments to problem structuring and knowledge management and has internationally-renowned expertise in the specific areas of risk, optimisation, finance and health, and CISEI plays a pivotal role in connecting several strands of sustainability, diversity and inclusiveness in the main domains of entrepreneurship and innovation research. RCs are led by Directors, typically senior staff, operating alongside Departmental Heads. In addition, the RCs foster co-working and ownership of the research mission/direction by enabling our Early Career Researchers (ECRs) to develop their careers and thrive in their fields of interest. Staff belong to one or more RC, e.g. there is overlap in membership between CRR and CERFIB. All RCs hold regular seminar series and some, e.g. CORMSIS, run an overseas academic visitor programme which enables visitors to undertake scholarly activity at SBS.</p>

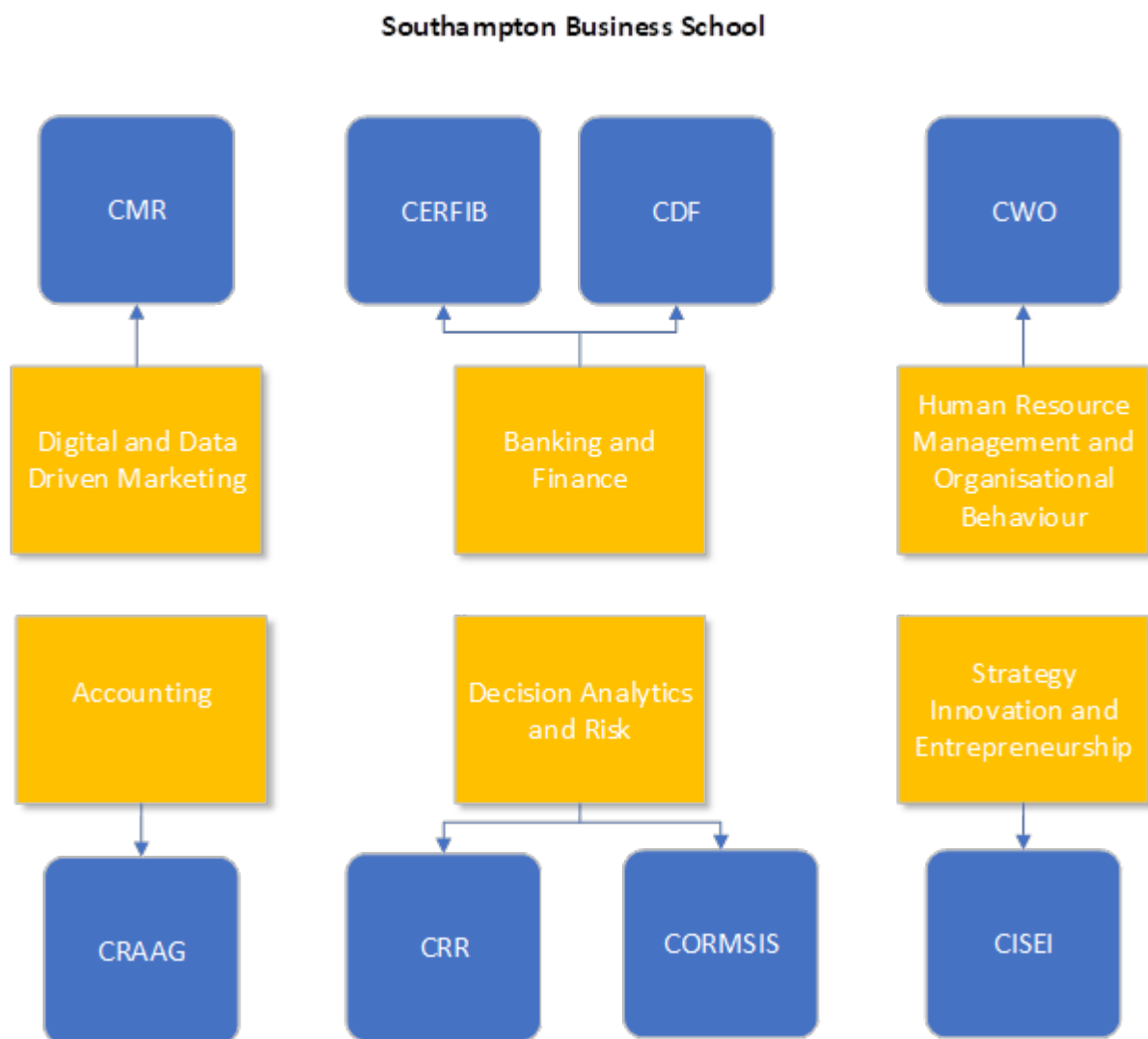


Figure 1: Six Departments (Orange) and how they link to eight RCs (blue)

Our research areas have world-leading expertise, e.g. Operational Research (OR), transportation and logistics, healthcare modelling, human resource management, credit scoring and credit risk analysis. OR is ranked 37th in the 2020 QS world rankings, 12th in Europe and 7th in the UK. In addition, SBS researchers collaborate in UKRI-funded and EU-funded projects in many of the University's areas of global excellence, such as computer science, engineering, health sciences and demography.

People are critical to our sustainable growth and SBS has recruited internationally at all levels (non-UK staff have increased from 46% (in REF2014) to 64% (Table 2, §2)). Our recruitment strategy balances three requirements:

- a) appointing outstanding researchers to achieve critical mass in new areas;
- b) maintaining vitality and research intensity in established areas of research strength; and
- c) appointing staff with teaching expertise and business experience to cover core topics required by a business school.

This recruitment strategy has expanded SBS's academic research staff numbers and strengthened (and broadened) our research foci, e.g. marketing, and strategy and innovation. We have established several new research themes; selected through a deliberate process of targeted horizon-scanning, e.g. in the era of "big data", digital marketing and digital finance are fast-growing emergent themes, where SBS exploits its traditional strength in quantitative analytics, collaborating with other areas such as Electronics and Computer Sciences.

1.2 Research strategy

Oversight of research strategy and impact development is led by the Deputy Head of School Research & Enterprise (DHoSRE). Our strategy reflects the four principles explicit in the University's 2016 research strategy (REF5a§1.2): quality, sustainability, internationalisation and collegiality.

In REF2014, we set ambitious targets for sustainable growth, research excellence and meaningful impact, and highlighted a strategy to become an internationally-recognised, research-led Business School. Thus, a rebranding of Southampton Management School (SMS) to SBS took place in 2015. SBS duly refreshed its research strategy in early 2016, setting out a vision to become a Business School that is truly distinctive via its multidisciplinary and integrated approach, enhancing its world-class cutting-edge research to shape future business practice through delivering social and economic impact. Our mission is to deliver management research and education with rigour and relevance. In tandem, SBS prioritised connections with industry as a vehicle to further deliver impactful research. Four objectives were defined to guide the research activities of SBS:

- To deliver world-class research through maintaining a strong publication portfolio in international journals, impact on businesses and the public sector and attracting research funding by promoting a thriving research culture to attract internationally-recognised colleagues.
- To establish and invest in at least one RC per Department, to support research excellence through hosting seminars, attending conferences, inviting visitors and engaging with the international research community.
- To develop interdisciplinary research collaborations within the University of Southampton (UoS) and with external partners.
- To increase the quantity and diversity of research grant income by (1) enhancing internal staff training and administrative support for research grant bid writing, (2) encouraging large multidisciplinary research grant bids, especially with mathematical sciences, engineering and computer sciences, and (3) diversifying SBS's portfolio of research funders.

A fifth objective was added in late 2019 to reflect our commitment to 'horizon-scan' to respond to developments in emergent areas of growth in response to our fast-changing world.

Each of the above objectives has been achieved over the REF period, evidenced as follows:

- Our delivery of world-class research is evidenced through our strong publication portfolio, producing over 1,770 publications, including 67 books, 1,057 journal articles, 101 book chapters and 29 reports with 1,499 external/international collaborators from 74 countries. Impact on businesses/public sector can be seen in §1.3 and the successes of our thriving research culture are evidenced in §4.
- Eight RCs have been established and all Departments own at least one RC (§1.1, Figure 1), and evidence of their success in creating and supporting our colleagues in achieving research excellence is evidenced throughout §4.
- Our focus on interdisciplinary research has led to the formation of sustainable collaborations within UoS and with external partners (§1.5, §4.1).
- Our commitment to supporting colleagues with research bid applications has led to an increase in average annual grant income, coupled with a successful diversification of our research funders over the REF period (§3.2).
- Horizon-scanning has led to research on the digital age (§1.5), e.g. in digital finance research into crypto-currencies, artificial intelligence (AI) and machine learning, and ways

to embed sustainability into business practice in a world where climate change is now considered a global emergency (CDF, CRR).

Our seven REF impact case studies (ICSs) (§1.3) demonstrate our REF2014 commitment to lead on (rather than co-investigate) research projects.

1.3 Impact and Enterprise strategy

Oversight of impact development is led by SBS's Impact Champion and DHoSRE. We also have a dedicated Enterprise Division, connecting colleagues with industry executives, partners and practitioners, to better understand and respond to business-critical issues. Enterprise activities promoting sustainable, collaborative relationships are prioritised and inform our research agenda. SBS's mission, vision and values were refreshed in March 2020. One key goal is to utilise our expertise to co-create sustainable solutions with regional and global organisations to change the world for the better (REF5a§1.2). Thus, a new Enterprise Strategy 2020 was developed to maximise SBS's opportunity to connect with local, regional and global organisations (REF5a§2.3).

Two key strategic research priorities were identified:

- Developing links and engaging with external organisations and alumni to promote research, creating opportunities for collaboration and consultancy to develop impact; and
- Providing an internal environment conducive to all staff, building relationships with business/industry for research collaboration and output.

In response to the strategic priorities highlighted above, three research-focused objectives were agreed in consultation with the Enterprise Committee and the School Executive Group:

- Creating an effective structure of support for enterprise activities.
- Engaging staff in consultancy projects; enhancing visibility, advocacy, impact and revenue.
- Maximising opportunities for corporate engagement with SBS enterprise activities by effective publicity.

To retain existing colleagues and attract new staff, SBS is mindful of the financial and time cost implications of activities supporting impact generation. Our staffing strategy aligns with our Impact and Enterprise strategy priorities by encouraging our colleagues to apply for School-level, as well as University-level schemes, e.g. the ESRC Impact Acceleration Account (IAA). Impact generation is recognised within SBS annual appraisals, and in staff promotions (**Baden** to L7, **Brito, So, Martinez-Sykora** to L6 and **Vithana** to L5). Colleagues benefit from the availability of SBS small grants and impact funding, and Research and Innovation Services (RIS) support for IAA bids (§4.2). The Public Engagement with Research (PERu) and Public Policy Southampton (PP|S) units (REF5a§2.9) identify potential pathways to impact and FSS Research Excellence Framework Officers support impact-generation and evidence-gathering. SBS encourages collaboration with industry through KTPs and mKTPs.

Our ICSs demonstrate a strong commitment by colleagues to connect academic research findings with key stakeholders in the business world and policy-makers to develop sustainable solutions to real-world problems:

1.3.1 **Baden's** (CWO) research has contributed to environmental benefits and improved economic competitiveness within the UK's £6.2bn hairdressing industry. In 2015 the industry changed its default recommendation, recommending that the UK's 55,000 hairdressers reduce shampooing from twice to just once. This recommendation and information on greener products and practices were embedded in training for the estimated 84,000 people that have taken haircare apprenticeships since 2015. Since its launch in 2016, 135 salons and 2,560 stylists in 14 countries have gained the research-based Sustainable Salon Certification. Adopting the changes required for certification saves the average salon 286,000 litres of water and 24,150 kWh of energy every year, leading to an estimated collective annual saving for 135 certified salons of more than £700K. Sustainability training resources have been adapted for use in water-scarce countries like

Mauritius and Malta. Baden won the ESRC Outstanding Impact in Business and Enterprise Prize in 2018.

- 1.3.2 **Brailsford's** computer simulation models (CORMSIS) are now in routine use by the Sri Lankan Ministry of Health for planning the recruitment and training of health professionals. As a direct result of the first model, for dental surgeons, over 1.5 million people with no previous access to state-funded care are now able to visit a dentist once a year, leading to a significant improvement in population oral health and the number of unemployed qualified dentists fell from over 250 in 2010 to zero. In 2016, the Ministry established a Human Resources Division to support its 125,000-strong workforce, and since 2018 simulation models are used to plan postgraduate medical training in 56 specialties.
- 1.3.3 Research by **Mues, Bravo, So, Baesens, Thomas** and **Bijak** (CORMSIS) has benefited companies and regulators worldwide, achieving impact in two areas: improving lending modelling practices and providing fairer access to credit. The researchers supported new legislation regarding data privacy in credit scoring and the FCA's new rules on credit cards, supported the management of portfolios worth billions of pounds (Banco Ripley), whilst being linked to tens of millions in cost savings, and the work on alternative data has helped Fintech start-up Grandata develop new solutions that improve financial inclusion.
- 1.3.4 **Tauringana's** (CRAAG) work on sustainability reporting in developing countries led to the training of 105 companies (mainly belonging to Uganda Manufacturers Association (UMA)) on how to prepare sustainability reports in Uganda. Organisations produced their sustainability report and uploaded them on the Global Reporting Initiative (GRI) database. To encourage more organisations to prepare sustainability reports, UMA and the University of Southampton have launched a sustainability reporting quality mark, issued to any Ugandan organisation that produces and uploads its sustainability report on the GRI database. UMA also announced a new policy that recommends companies that hold a sustainability quality mark to potential buyers ahead of the rest. The research has led to a direct impact on Uganda's progress towards achieving Sustainable Development Goal (SDG) 12, Target 6.
- 1.3.5 Research into experiential learning by **Baden** (CWO) found that positive solution-based news stories are more effective than catastrophic stories or cautionary tales at inspiring ethical/sustainable behaviour and mindsets. This research has had impacts in the news sector, raising public awareness of the adverse effect of the dominance of negative news and supporting the design of high-profile initiatives by leading media organisations (including BBC and The Guardian) that have engaged several million people in a more constructive, solutions-focused approach to journalism. The research has informed the content of 'constructive journalism' training in the UK and Europe.
- 1.3.6 **Mues, Baesens, Bravo** and **Thomas** (CORMSIS) undertook a new research track on fraud analytics in 2012, leading to methodological advances in the use of network data and machine learning since 2014, benefiting a variety of sectors including public services, financial services and the insurance industry. A novel network-based algorithm, GOTCHA!, is currently being applied by the Belgian social security service, the on-demand delivery unicorn Rappi and evaluated by firms such as AG Insurance, to reduce fraud. Through a proof-of-concept study, the research on text mining led to its adoption for car insurance fraud detection by a joint venture of the leading 14 insurance companies in Chile. The research also enabled Lloyds Banking Group to adopt a powerful machine learning technique, 'random forests', thus increasing the accuracy of fraud detection.
- 1.3.7 Research on risk and reliability of marine autonomous systems (MAS) developed by **Brito** (CRR) has underpinned a collaboration with ASV Ltd., via a KTP, leading to the implementation of risk and reliability processes enabling the company to develop marine autonomous systems for commercial applications. The company was able to expand into a new market, namely oil and gas, increase its product line by 50% and create an internal department focused on risk and reliability and invested £500K in the creation of a risk and

reliability department, resulting in the employment of two safety systems personnel. In addition, statistical survivor estimator models developed by **Brito** have been used to inform a mission conducted by autonomous underwater vehicles to gather evidence to support the Canadian Government's submission to the United Nations Convention on the Law of the Sea (UNCLOS) to extend its jurisdiction beyond 200 nautical miles.

In addition to our seven ICSs, there are many other examples of research rooted in helping organisations improve their efficiency and effectiveness (§4.2).

1.4 Research Funding

SBS's research strategy, in combination with staff growth, has facilitated a diversification of funding away from a reliance on EPSRC grants, to a wider range of sources, e.g. from professional associations in fields such as HRM (CIPD) and accounting (CIMA) to Government agencies (NHS and the British Council), charities (Leverhulme, Leadership Foundation for Higher Education) and most recently Arts Council England. KTPs are another source of funding, examples being **Brito** (autonomous surface vehicles) and **Johnson** (investment management support). Recent changes in KTP funding policy introducing mKTPs in 2019 presents additional opportunities for SBS which are being actively explored (Operations Management and Project Management teams). Another key area of focus is the Industrial Strategy and the Strength in Places Fund (Digital Marketing team).

Table 1: Number and Value (£) of Research Funding Awards

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
Number	8	12	11	6	2	8	15	62
Value (£)	369,628	615,043	988,044	158,735	39,508	444,176	926,092	£3,541,226

Since 2014, SBS has generated a total of 62 awards, worth in excess of £3.5M and broken down by academic year in Table 1. There was a decline to a low number of two awards in 2017/18, which reflects retirement of key personnel (**Johnson**), departure of leading research income generators (**Bektas**, **Bennell**) and a challenging UK funding climate. Since then, the number of awards has recovered strongly, reflecting a growth in staff numbers and an emphasis on increasing the number of bids (**Kunc**, **Parry**). Our refreshed research strategy aims to build on this recent success over the next REF period (§1.2).

1.5 Research interdisciplinarity

Originally, as an Accounting and Management Sciences department within a large university with a strong computing, engineering, medicine and science focus, SBS has historically possessed distinct strengths in conducting interdisciplinary research. We support interdisciplinary research in four key ways: First, extra resources are offered directly to support the activities and operations of our highly interdisciplinary-oriented RCs (e.g. CRR and CORMSIS). For instance, two industrial liaison officers were appointed to support knowledge transfer and impact activities of CORMSIS. Second, by providing targeted small internal (pump-prime) grants that prioritise funding interdisciplinary-oriented projects (**Brito's** work (£10K) with the national ambulance service (with Health Sciences); **Chowdhury's** project (£5K) with Rohingya refugees). Third, SBS prioritises and encourages interdisciplinary research grant applications, e.g. colleagues submitted 122 interdisciplinary research bids which secured £1.56M interdisciplinary research grant income over the period under review. Finally, SBS encourages members to jointly supervise PGRs with colleagues from other disciplines; 47 PGRs were jointly supervised successfully to completion with colleagues from Electronics and Computer Sciences (ECS), Health Sciences, Mathematical Sciences and Social Sciences over the REF period.

SBS also builds closer working relationships with other parts of UoS (e.g. ECS, Psychology, Artificial Intelligence via the Web Sciences Institute (WSI), Sustainability via Geography and the Environment and Mathematical Sciences) through leveraging colleagues' expertise and harnessing links with industry and research funders to develop research collaborations that utilise the reputation and expertise from within SBS. For example, CORMSIS is a long-standing joint venture with Mathematical Sciences that continues to produce new methods and models to enable organisations to improve their performance, from healthcare workforce planning and decision scenario modelling (**Brailsford, Klein, Penn**) to the sea-ferry industry (**Martinez-Sykora, So**). Colleagues (**Beigi, Parry, Veliziotis**) are members of the Work Futures Research Centre (WFRC) which is a strategic interdisciplinary RC focusing on all aspects of work, drawing membership from Sociology, Social Policy, Criminology, as well as SBS. WFRC aims to bring together interdisciplinary expertise to facilitate research collaboration, consultancy and innovation.

1.6 Research Integrity

We are committed to upholding the highest standards of research integrity in line with UoS's policy as a signatory to the national *Concordat to Support Research Integrity*. UoS's Research Integrity and Governance Committee (RIGC) (REF5a§2.8) leads on policy development and provides further guidance through the Faculty's Associate Dean for Research and Enterprise (ADRE) who chairs the Faculty Research Ethics Committee (FREC). FREC provides specialist advice on research ethics and supports colleagues through the process of obtaining ethics approval for research involving human participants or data, and provides direction on procedures, policies and complex cases.

Beigi is Faculty Research Integrity Champion (FRIC) and maintains the intranet-based FSS *Research Integrity Corner*, supports staff and postgraduate research students (PGRs) with training and advice, and is part of a wider University network of FRICs. Research ethics and integrity issues are discussed regularly by DHoSRE and FRIC at Departmental and School meetings and away days. Ethics and research integrity matters are considered at Faculty Research Committee (FRC) twice a year. Guidance and procedures are communicated to staff and students through DHoSRE and ADRE, via an online researcher portal (*Ethics Corner*), and *ERGOII*, the Ethics and Research Governance Online approval system. ADRE prepares the Faculty's annual research integrity report for discussion and review by the FRIC and RIGC.

Our Ethics Champion (**Frei**) chairs the SBS Ethics, Responsibility and Sustainability Committee, and sits on the FSS Research Ethics Committee and SBS Research Committee, ensuring strong connections and development of SBS's research integrity culture. All staff and PGRs must obtain ethical approval of their research via *ERGOII* before collecting any data. All types of research conducted by staff are subject to peer review. For research grants and collaborations, the peer review process is overseen and implemented by the DHoSRE who approves all research grant submissions. Researchers are required to incorporate feedback and make recommended changes before submission, checked and signed off by DHoSRE. For academic research papers, the process is overseen by heads or deputy heads of departments and RCs. In addition, PGRs' research is subject to peer review by assessors, who are independent of the supervisory team. All new PGRs and ECRs must undertake ethics training via two compulsory online courses "Ethical Research" and "Research Integrity".

1.7 Future direction

For the period to 2026, we have identified five strategic objectives:

- Expanding and investing in our RCs to establish ourselves as global pioneers in thought leadership, theory and practice. New RCs are in development (e.g. Centre for Health Analytics and the Product Return Research Group).
- Enhancing policy impact of research through facilitating direct engagement with government agencies (e.g. the Low Pay Commission) through PERu and PP|S.
- Continuing to increase the quantity and diversity of research income by: (i) attracting new talent; (ii) enhancing staff training and administrative support for research grant bid writing;

and (iii) encouraging large multidisciplinary research grant bids to leverage our strong local, regional, national and international collaborations.

- Enhancing our enterprise activities with corporate partners through round-table discussions, seminars, consultancy projects, and Knowledge Transfer Partnerships (KTPs) and management KTPs (mKTPs), leading to industry-relevant research outputs and impact.
- A budget to specifically support impact case study development along with 20% of time allocated to impact case study writers annually.

1.8 Open research environment

SBS is committed to encouraging and meeting open research requirements: open (gold and green) access, open data and data management, in line with the policies of research councils and UoS. Outputs from research council-funded projects are open access. Through University subscriptions with major publishers, publications in journals such as Journal of Business Ethics are automatically open access. Where appropriate, SBS pays for gold open access publication, which is either automatically approved and paid as part of a research grant requirement or paid if considered high impact. In the latter case, it is assessed and recommended by the DHoSRE and approved by the Head of School (HoS). Since 2014, there have been at least ten gold open access publications. As part of their data plans for external research bid and non-external research bid supported projects and outputs, staff are regularly reminded to deposit their accepted outputs, within three months, into PURE (research information management system), with a compliance rate of 88%, which has risen from 62% in 2014. We also encourage staff to share their research findings in alternative ways, such as academic social media, Academia and ResearchGate. All research outputs are also self-archived in our UoS institutional repository ePrints (REF5a§2.4).

SBS has achieved a strong digital presence through ORCID, Academia, Google Scholar, ResearchGate and SSRN, amongst others. SBS won the prestigious 3rd Annual WRDS-SSRN Innovation Award for the EMEA region in 2019. This award recognises AACSB accredited Schools that have made a commitment to financial research, with an elevated visibility, impact and credibility of their research. The award consisted of a plaque and \$10K grant to SBS's general research fund. In line with UoS's signature to the San Francisco Declaration on Research Assessment (DORA), we are also committed to a policy of fair access and responsible use of research metrics.

2. People

2.1 Staffing strategy and staff development

People are critical to our sustainable growth. SBS's staffing strategy over the REF period has been one of expansion and internationalisation, enhancing our thriving research culture (§4) in line with our research strategy (§1.2) to conduct sustainable world-class impactful research (§1.3). We have incorporated the University's Core Principles of Collegiality, Quality, Internationalisation and Sustainability into its strategic planning (REF5a§1.2). SBS has made incremental change, carefully scaling up our ambitions and activities.

We have made significant investment in new appointments that have strengthened research intensity. Research capacity has grown, with 94.93 FTE staff being returned compared with 34.4 FTE (61% of REF-eligible staff) in REF2014. Total staff numbers in SBS have increased from 59 to 100 over the REF period. We have recruited internationally, "rising stars" (**Wang, Yarovaya, Barak, Veliziotis, Angell and Chowdhury**) as well as "established researchers" including (**Agyie-Boapeah, Jory, Frei, Lopez and Nayak**) and has successfully retained some of its most outstanding PGR students as ECRs (**Bakoush, Penn**). Several outstanding research-led professorial appointments were made in fields where SBS needed leadership succession, e.g. **Kunc**, in Decision Analytics and Risk, **Shukla**, in Marketing and **Daskalaki** and **Rogers** in Human Resource Management, **Ntim** and **Tauringana** in Accounting and **Brown**, in Operations Management. Internationalisation of SBS staff has increased since 2014. Table 2 highlights that non-UK/EU appointments have increased by 179% over the REF period.

Table 2: SBS Research Staff Internationalisation			
Nationality	2021	2014	Growth
UK	36 (36%)	32 (54%)	+12%
European	25 (25%)	13 (22%)	+92%
Rest of World	39 (39%)	14 (24%)	+179%
Total head count	100 (100%)	59 (100%)	+69%

Staff development

SBS enhanced its points-based workload allocation model (WAM) to enable staff to contribute in ways best suiting their capabilities and specialisms. Research-contracted staff are allocated approximately 40% of their time for research and impact activities. Highly productive researchers (in terms of high-quality publications and/or grant income) are rewarded with extra WAM research points. Staff are also given additional WAM allowance for supervision and line managing research staff. All new appointments and internal promotions are conducted using rigorous selection criteria and giving careful consideration to equality, diversity and inclusion (EDI). Staff on recruitment and promotion panels participate in unconscious bias training, as well as EDI training. For appointments at Associate Professor or above, selection criteria include an international reputation (based on external references) and a track record of high-quality publications, grant income and PGR supervision (REF5a§3.7). For junior level appointments, we adopt a “talent spotting” approach to identify future potential.

From Table 3, the age group categories which grew the most over the REF period are 36-45 (+5%) and 46-55 (+8%). Overall, 60% of SBS staff are aged under 46, which corresponds to an international, youthful and vibrant research environment.

Table 3: SBS Research Staff by Age Category			
Age Group	2021	2014	Change
26-35	19 (19%)	18 (31%)	-12%
36-45	41 (41%)	21 (36%)	+5%
46-55	27 (27%)	11 (19%)	+8%
56-65	10 (10%)	8 (14%)	-4%
66+	3 (3%)	1 (2%)	+1%
Totals	100 (100%)	59 (100%)	

SBS colleagues, in particular new staff and ECRs benefit from an extensive University-level support programme that includes awareness-raising of the *Concordat to Support the Career Development of Researchers* (CSCDR) (REF5a§3.5), through the Faculty and SBS Induction Processes. UoS hosts a dedicated website *References and Resources for Research Staff* making staff aware of a broad range of opportunities to facilitate their careers and improve their well-being, including tailored resources for women in academia, skills development and leadership workshops, and maintains a dedicated intranet site showcasing research excellence and success stories on a monthly basis.

Established measures of career development support, e.g. appraisals, mentoring and probation are complemented by research training opportunities offered at University and Faculty level (including Gradbook, Staffbook, and *The Centre for Higher Education Practice* (CHEP)). CHEP promotes academic professional learning for every member of University staff, in all areas of academic activity and at every stage of their career (REF5a§3.5). Annual appraisals are an opportunity to identify training to meet research needs whilst reviewing successes over the

previous year. ECRs are provided with a mentor in their first three years, to support with grant applications, writing and publishing academic papers and preparing conference presentations. SBS has established several measures for supporting staff development which are aligned with the CSCDR to support the career progression of colleagues that include an annual research-staff away-day and collegial support in RCs. Our research-staff away-day identifies priorities and strategic aims, providing colleagues with an opportunity to share best practice and research ideas.

RCs hold regular “brown-bag” seminars to facilitate the sharing and mutually supportive critiquing of papers in progress. In their RCs, ECRs benefit from feedback on papers and research proposals. Senior colleagues invite ECRs to join PhD supervisory teams to gain experience that is very important at the beginning of their careers.

UoS was a founding signatory of the Athena SWAN Charter and currently holds a Silver Athena SWAN Award. SBS is working towards making a submission for a Bronze Award in 2022. SBS has an explicit strategy of mentoring and supporting women to apply for promotion. A decade ago, SBS had no female professors and in 2020 has six (**Daskalaki** and five of whom were promoted internally (**Baden, Brailsford, Costanzo, Karatas-Ozkan, Sung**)). CORMSIS is active in promoting women in OR/Analytics, e.g. **Brailsford** is the only person to have won the Goodeve Medal three times, awarded in recognition of the most outstanding contribution to the philosophy, theory or practice of OR published in the *Journal of the OR Society*.

Since 2014, seven staff (2F and 5M) were promoted from lectureship (L4) to lectureship (L5) (**Gong, Malagila, Papakyriakou, Vithana, Wang, Zhang Q., Zhang Z.**), additionally twelve staff, (3F and 9M) were promoted from lectureship (L5) to associate professorship (L6) (**Baxter, Beigi, Brito, Chipulu, Dawson, Degl’Innocenti, Ma, Martinez-Sykora, Marshall, Ramogulou, So and Zalata**).

2.2 Research students

SBS has a successful, diverse and sustainable PhD programme. In 2019/20, a total of 85 PGR students (80 FTE) were supervised. This number fluctuates from year-to-year. In 2020, 45% of our PGR students were female; 27% from the UK, 8% from the EU and 65% overseas. Of the total (159.7) SBS PhD degrees awarded since 2014, 36.6% were female (FPE=57.1) while 102.6 (63.4%) were male. Several highly competitive PhD studentships were offered each year to ensure that we attracted outstanding applicants from the global pool (Table 4).

Table 4: Doctoral Students Completed

PGR		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total
DBA Admissions	FPE	1	4	4	7	1	1	0	
	FTE	1	3	3	5	1	1	0	
DBA No. Students	FPE	8	11	12	16	13	10	10	
	FTE	6	8	9	12	10	8	8	
DBA Completions		-	-	-	-	-	1	2	3
PhD Admissions	FPE	13	38	12	14	19	12	19	
	FTE	12	37	12	14	18	12	19	
PhD No. students	FPE	101	119	113	95	94	83	85	
	FTE	95	114	108	91	89	78	80	
PhD Completions		18.20	30.00	20.00	20.30	26.25	29.05	15.85	159.65
PGR		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Total

As of July 2020, ten Doctor of Business Administration (DBA) students are enrolled on our burgeoning programme, which started in 2011/12. There were three DBA completions during the REF period. DBA students have only recently started completing in the latter part of the REF cycle because of their part-time status. Quite often students need to suspend their studies due to external pressures, thus elongating the time span between initial enrolment and final graduation.

Over the REF period, SBS hosted 39 UKRI-funded doctoral students to completion via the University's EPSRC, ESRC, Web Science and Complexity Doctoral Training Centres, the latter two involving cross-disciplinary research links with Computer Science. Additionally, PGRs are supported by funders such as research councils, charities and overseas governments. All PGRs are associated with at least one RC and are encouraged to participate in its seminar series; we also organise Doctoral Colloquia where PGRs present their research to each other. Academic staff are given a WAM allowance for PGR supervision, which recognises the time commitment involved in providing top-quality supervision. SBS offers PGRs rigorous research training through modules in qualitative, quantitative and mixed research methods, advanced software, data analysis and presentation techniques. Finally, SBS operates a PGR Publication Award Scheme to reward students who publish their research in peer-reviewed scientific journals. The scheme provides awards of up to £1K for an accepted paper and since 2014, 26 awards were made to successful PGRs during their enrolment.

The Faculty Graduate School (FGS) oversees doctoral research activity across FSS, including:

- (a) Recruiting the best potential candidates through rigorously managing the studentship application processes.
- (b) Overseeing a research skills training programme which equips PGRs for an increasingly diverse global research environment.
- (c) Monitoring its activities and identifying areas where practical steps and actions are needed to improve PGR experience.
- (d) Promoting diversity and equality in all aspects of recruitment and PGR progression.
- (e) Implementing UoS's regulatory and quality assurance frameworks to adhere to appropriate academic standards.

FGS has responsibility for developing and delivering its vision and strategy. The FGS Advisory Group has PGR representatives from each School. PGRs are also represented on a number of other Faculty committees, e.g. the Equality, Diversity and Inclusion Committee. FGS provides financial support for every PGR for conference attendance (£750 in 2019-20). FGS is fully aligned with the University's Doctoral College (DC) which co-ordinates PGR activities and doctoral training across all five Faculties.

PGR performance is closely monitored through a formal University-wide PGR-Tracker system and evaluated by supervisors, requiring PGRs to continuously record their progress, achievements and training activities. A formal examination must be passed every year (e.g. Progression reviews to ensure the quality and quantity of the research is appropriate at PhD level).

SBS Graduate School operationalises Faculty Doctoral College strategy and offers a supportive environment for PGRs throughout their PG research journey. UoS is a signatory to the CSCDR and has been actively implementing its seven Principles since January 2009 (§2.1).

The DC implements the PGR Code of Practice, setting out the rights and responsibilities of Schools, supervisors and PGRs. It provides a range of experiential learning opportunities (e.g. demonstrating and teaching; internships; peer-coaching; outreach and public engagement through School/Faculty and University-level initiatives such as a Research Showcase, PGR conferences, Doctoral Colloquia, and Grad Book) by working in partnership with academic disciplines and UoS training providers (e.g. iSolutions, Library, Careers & Employability Service) to ensure a tailored and high-quality experience for all PGRs, including delivery of a professional development programme aligning with the Researcher Development Framework (RDF). Face-to-face programmes are complemented by a suite of on-line researcher development resources

available via *Blackboard™*. PGRs also have the opportunity to participate in intensive training and development activities, for example external Summer-Schools such as Cumberland Lodge: Life Beyond the PhD, and the RENKEI Researcher Development Summer School. Provision for late-stage PGRs is being enhanced, particularly to support their transition to employment, which includes piloting a new Career & Leadership residential programme. Careers guidance for PGRs is provided through our Careers & Employability Service (REF5a§3.6).

As part of SBS's physical infrastructure, PGRs have well-equipped shared offices, allocated based on individual needs, with continuous access between 6.00am and 11.00pm daily.

2.3 Supporting and Promoting Equality, Diversity and Inclusion (EDI)

EDI research practices in SBS: These are framed by UoS's ethos and core principles (REF5a§1.2) and by the CSCDR (Principle 6). EDI is at the heart of our working practices as exemplified by the following:

Study leave arrangements: The opportunity to apply for research leave is offered on a strategic and competitive basis to staff who have completed at least three years of service and based on one semester for every seven semesters worked (REF5a§3.2). Three flexible modes of sabbatical are offered: mode 1, sabbatical taken in semester 1; mode 2, sabbatical taken in semester 2; or mode 3, sabbatical taken by way of a total workload reduction across the whole academic year. A total of 29 researchers were approved to take a sabbatical over the REF period by a panel comprising HoS, DHoSRE and the SBS Research Committee and the Dean (Table 5). A guidance document makes clear that the panel considers applicants' seniority and personal circumstances (e.g. illness, pregnancy) that might affect their profile and track record.

Table 5: EDI and Sabbaticals				
	White	BAME	Male	Female
Number	15	14	20	9
% of Total	52%	48%	69%	31%

Supporting flexible and/or remote working: We offer flexible working, job sharing, career breaks and voluntary reduced hours to accommodate a range of personal circumstances (including disability, religion and caring responsibilities). Our staff are invited to adjust their timetables to facilitate, e.g. childcaring, disabilities and or religious commitments. Those with caring responsibilities are eligible for up to five hours a week for drop-off and pick-up non-teaching time.

Career pathways for part-time (PT) and fixed term staff and Early Career Researcher (ECR) security: Our policy is to appoint ECRs as permanent lecturers rather than on fixed-term contracts to promote mental wellbeing, job security and in turn, to foster sustainability. Staff on PT contracts can access promotion on the same basis as full-time staff and receive support from their Head of Department (HoD), DHoSRE and HoS. In 2019/20, there were eleven SBS staff on PT fractional contracts.

Supporting conference attendance and other necessary travel for staff and PGRs with caring responsibilities: SBS recognises that travel for presenting at conferences and other research and impact-related activity forms an integral part of being an academic researcher. Staff whose personal circumstances make travelling difficult (e.g. caring responsibilities, disabilities) are encouraged to work with the DHoSRE and their RC director to explore alternative ways of presenting research at events (e.g. using the SBS Research Support Fund to host events at Southampton).

Supporting funding applications and access to research funding: To promote inclusivity, all colleagues seeking access to research funding can seek advice from the collegial environment of their RC, apply to access internal funds (SBS Research Support Fund) and receive feedback on draft applications. Within UoS more broadly, researchers draw on the support of RIS, PERu and PPJS, as well as applying for ESRC IAA's. SBS pays the cost of editing research outputs and bids,

together with transcribing and translation (e.g. research interviews and materials) for all researchers, including non-native English Language users.

Staff returning from periods of Research Leave: Colleagues receive targeted support returning from research, compassionate and maternity/paternity leaves to help them to adjust seamlessly back to their research and work environment, e.g. being offered flexible and graduated workload arrangements, often starting with a reduced workload, and gradually increasing to full load over an academic year. Recent beneficiaries include **Al-sayed, Degl'Innocenti, Karatas-Oskan, Mues, Ntim** and **Wang W.**

Promotion: Line managers/HoDs and staff discuss career aspirations and promotion plans annually. HoS also meets with staff monthly for an informal group discussion of SBS matters and to encourage staff to discuss their career aspirations and plans with their line managers/HoDs to apply for promotion when appropriate. REF selection decisions to include or exclude outputs are not used as a basis for decisions relating to promotion, aligning to the UoS REF2021 Code of Practice (REF5a). Similarly, DHoSRE and HoDs work closely with individual researchers who, due to physical or mental illness or other personal circumstances (e.g. parental and caring responsibilities), have struggled to produce publications, to identify particular challenges and draw up tailored research plans.

Gender: In 2020, our staff has a gender mix of 28% females, and numbers have fluctuated from year to year (Table 6). Staff numbers have grown for both females and males at equal rates since 2014 (56%). Out of a total headcount of 100, the number of women in SBS has risen to 28 from 18.

Table 6: SBS Research Staff by Gender			
Gender	2021	2014	Growth
Female	28 (28%)	18 (31%)	+56%
Male	72 (72%)	41 (69%)	+57%
Total	100 (100%)	59 (100%)	

Gender balance at Level 7 (full professor): the proportion of women was 30% (14M and 6F), representing a significant gender rebalancing since 2014. At lecturer level, 35% (14) were female out of a total of 40 staff (Table 7).

Table 7: SBS Research Staff: Gender by Level (2020)			
Gender/Level	Lecturer	Associate Prof.	Full Professor
Female	14 (35%)	8 (20%)	6 (30%)
Male	26 (65%)	32 (80%)	14 (70%)
Total	40 (100%)	40 (100%)	20 (100%)

We ensure that shortlisting, interview and promotion panels are gender-balanced and adhere to UoS policies.

Diversity has increased with 50% of our staff currently from Black, Asian and Minority Ethnic (BAME) backgrounds, which has significantly increased from a proportion of only 27% of staff in 2014 (Table 8). At a senior level, seven of our twenty professors (35%) identify as BAME.

Table 8: SBS Research Staff by Ethnicity			
Ethnicity	2021	2014	Growth
White	46 (46%)	34 (58%)	+35%
BAME	50 (50%)	16 (27%)	+213%
Unknown	4 (4%)	9 (15%)	
Total	100 (100%)	59 (100%)	+69%

EDI and the REF: SBS's research leadership is acutely aware of the need for proactive steps to counter the risk of unconscious biases that may play a role in the quality-review and selection of outputs and ICSs, as well as in the support and priority given to different areas of research. Unconscious bias training is mandatory for all our staff and additional EDI training made compulsory for REF decision-makers. Selection of ICSs were made based on impact on the wider society by a committee of senior staff tasked to mitigate bias. Procedures for assessing the quality of outputs were made as free as possible from bias by combining internal and external reviews, checked by DHoSRE and with follow-up meetings between DHoSRE and individual staff to discuss feedback and fairness.

Wellbeing: We have a Staff Wellbeing Champion (**Kandiah**), who organises weekly wellbeing, mindfulness, relaxation, spiritual and prayer sessions for staff in a dedicated and well-equipped staff common room (moved on-line during COVID-19).

3. Income, infrastructure and facilities

Total grant income received by SBS during the REF period exceeds £3.9M (Table 9). Traditional areas of strength have continued to attract grant funding, e.g. £1.45M EPSRC Freight Traffic Control 2050 collaborative project between four Universities and Transport for London and other freight operators; The National Institute of Health Research (NIHR), £900K project bringing together four Universities (Southampton, Leicester, Sheffield and the LSE). Additionally, we have successfully diversified our funding sources over the REF period: RCs have attracted grant funding from Arts Council England, EPSRC, ESRC, GCHQ, EU Commission, Royal Society, British Academy, British Council, Leverhulme, NIHR, and many commercial, public and third sector organisations, e.g. the Alan Turing Institute, Audencia Foundation, BAE systems, CIMA, EU Intellectual Property Office, HEA, Gateways Research Fund, Huawei, London Borough of Tower Hamlets, Munich Re., Seven Investment Management, Star Financial Systems, and the Web Science Institute.

3.1 Research funding and strategies for generating research income

Our research incentivisation policy offers generous research time and support allowance for successful research grant holders. SBS implemented strategies to generate research income in a very competitive funding landscape. Strategic investments were made in training, mentoring and expert coaching for staff, e.g. in 2017-2018 investing £10K in external research grant-writing coaching and mentoring programme. Since 2014, more than 40 colleagues, mostly ECRs, were funded to attend research presentation and data analyses training. SBS also runs a competitive small research grants annual scheme, offering up to £10K to "pump-prime" staff research, bid writing and impact generation, with the expectation that successful applicants will apply for additional external funding. On average, 20 small grants are made annually, mostly to ECRs, e.g. **Frei** (Sustainability in Product Returns, Small Grant, £5K, 2019), leading to ESRC Grant funding of £227,171 (Forecasting and influencing Product Returns and fraud rates in a COVID-19 world) and **Parry** (Future of Work Research, Small Grant, £1K, 2020) leading to an ESRC Grant award of £214,820 (How is the COVID-19 accidental experiment around working from home changing the way the UK will work after the lockdown?). These support structures provide opportunities for capacity-building particularly for ECRs/junior colleagues, providing experience in application writing, peer-review, and research project management. SBS provides a flexible personal research support allowance (£3K p.a. and scope to claim for more, where appropriate), used for travel for conference participation and to buy books, hardware, and software.

RCs are central to research income and impact generation. Since 2014, £4.37M (approximately £625K per academic year) was invested to fund RC activities, including seminars, appointments, visiting academics and professorships. RCs aim to improve their bid success rate by engaging in interdisciplinary bids with national and international partners. Since 2014, SBS's sources of research income and funders focuses not only on large traditional areas of external grant strength, such as EPSRC, BA, ESRC and NERC, but also small- to medium-sized bids to:

- Professional Chartered (e.g. Accounting – CIMA, ICAEW; HRMOB – CIPD; Marketing - CIM; Project Management - CAPM).
- Association funding (e.g. British Council, Fellowships, Leverhulme, Government, and quasi-Government bodies (NHS, Leadership Foundation, local Government).
- Global Challenges Research Fund (GCRF).
- Industrial Strategy Challenge Fund (ISCF).

Performance of RCs and individuals are monitored with direct reporting to SBS Research Committee. Highly productive RCs are offered additional funding, e.g. for extra staff appointments: CORMSIS employs full-time industry liaison colleagues, as well as two joint appointments (**Nguyen, Beullens**) with Mathematical Sciences.

3.2 Research grant applications, income and awards

Whereas Table 1 (§1.5) highlights 62 research awards achieved during REF2021, Table 9 provides a detailed breakdown of external funding during the REF period, demonstrating a high degree of diversity in our sources of funding and funders, including research councils, the European Commission, charitable trusts, third sector partners and local government agencies and authorities, demonstrating flexibility, quality and reach with regard to income generation. SBS's total grant income exceeds £3.9M. This equates to an average annual income of £0.56M (compared to £0.53M in REF2014).

Table 9: Main External funding over the REF2021 period		Total Research Income (£)
Classification of Fund Provider		
1	UKRI Research Councils, Royal Society, British Academy	£1,147,711
2	UK-based charities (open competitive process)	£47,948
3	UK-based charities (other)	£26,867
4	UK cent gov bodies/ local authorities, health and hospital authorities	£1,017,762
5	UK cent gov tax credits for research and development expenditure	£102,562
6	UK industry, commerce and public corporations	£855,219
7	EU government bodies	£275,894
8	EU other	£46,801
9	Non-EU industry, commerce and public corporations	£334,960
10	Non-EU other	£69,078
11	Other Sources	£24,439
Total		£3,949,240

Panel(a) of Figure 2 (below) relates to Table 9 (above), and depicts each of the eleven categories in a pie chart. As a contrast, Panel(b) (below) presents funding in each of the eleven categories for REF2014. Funding sources have diversified since 2014 and are less reliant on EPSRC (Category 1 light blue), with notable expansion into industry- and Government/health-funding (Categories 4 (yellow) and 6 (green)).

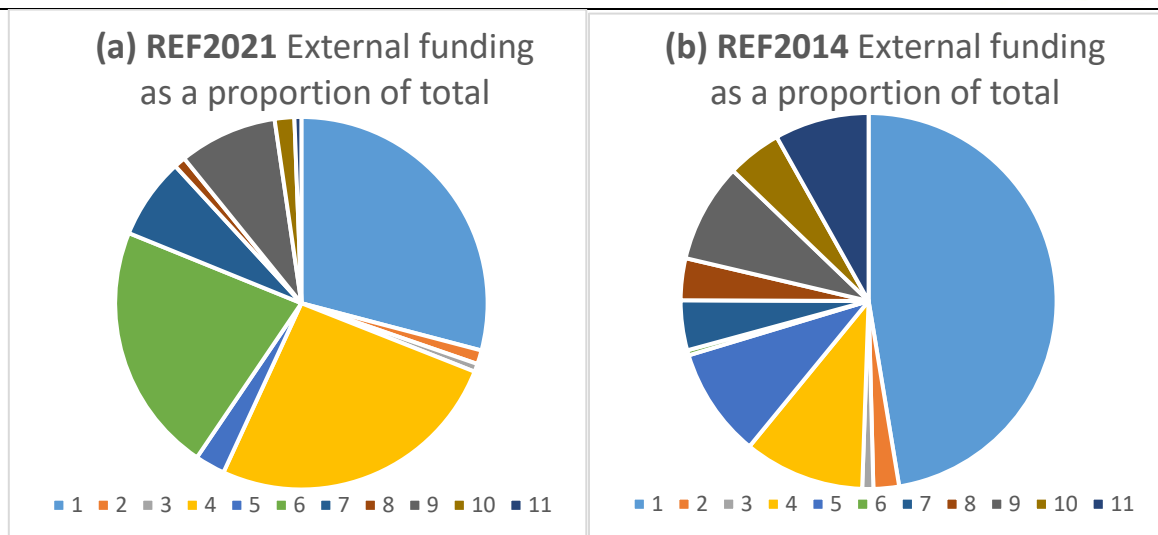


Figure 2: Funding categories as a proportion of total income

All eight RCs contributed towards attracting grants from diverse sources and funders (e.g. British Academy, British Council, ESRC, EU, Huawei, Leverhulme, London Capital, NERC), nevertheless, our RCs (CORMSIS, CRR) that focus on our traditional areas of strength attracted the majority of our grant funding, especially from the EPSRC and NHS.

Examples of funded projects are:

- **Baden** (ESRC, 'Embedding sustainability in the hairdressing curriculum - sustainable solutions for the hair & beauty sector', £96,322, 2014-2016).
- **Brailsford** (NHS, 'NIHR emergency care', £138,683, 2018-2021).
- **Karatas-Ozkan** ('British Council Newton Institutional Links', £157,208, 2016-2018).
- **Ma** (Huawei, 'Failure detection algorithm for SDN/NFV environment', £172,241, 2016-2017).
- **McGroarty** (Seven Investment Management LLP, 'Strategic asset allocation in an uncertain environment', £247,000, 2015-2017).
- **Nguyen** (EPSRC, 'Cooperative game theory: New mathematical and algorithmic approaches', £419,229, 2017-2022).
- **Onggo** (EPSRC, 'Designing a resilient food supply network for natural disasters in West Java Indonesia using simulation optimisation method', £248,815, 2019-2021).
- **Parry** (ESRC, 'How is the COVID-19 accidental experiment around working from home changing the way the UK will work after lockdown?', £214,000, 2020-2022).

3.3 Organisational infrastructure supporting research and impact

Research policy and strategy is driven by DHoSRE, liaising with ADRE, FRC and RIS to exploit interdisciplinary opportunities. The ADRE and DHoSREs meet each month to discuss and share insights into research and enterprise issues relating to individual Schools/Departments and to FSS generally. Within SBS, the DHoSRE is supported by the six HoDs and the eight RC Directors. Departmental staff are line-managed by HoDs and RC Directors with responsibility for research, as well as ensuring that colleagues are supported in developing individual research plans through annual appraisals. SBS manages its research budget through the DHoSRE where HoDs and Directors of RCs have devolved research budgets. SBS Research Committee and HoS exercise advisory oversight on spending. Research leave (sabbaticals) and internal small grants are reviewed and approved by SBS Research Leave and Grants Committee. All research bids are subject to SBS's internal peer-review process, administered by the DHoSRE.

Our research is well supported administratively. The DHoSRE is supported permanently by a dedicated team of administrative staff, focusing on different aspects, such as REF impact, output and environment, as well as School and programme accreditations (e.g. AACSB, AMBA). Each RC also has a dedicated administrator to support with activities, e.g. research seminars and conference planning. UoS's dedicated Finance Research Hub provides research bid costing and processing, while the Faculty Finance team supports staff conference attendance and expense processing. RIS assists in identifying funding opportunities, advising on funding schemes, and facilitating academic collaborations, industrial interactions and knowledge transfer.

RIS provides a range of support, advice and training to SBS staff. These include bid proposal reviews and justification of resources for UKRI and EU applications; provision of specialist advice on research ethics, including support with *ERGOII*; contract management advice and support on contracts and liaisons with third parties and training and workshop sessions on a range of topics for ECRs. The ESRC IAA supports impact-oriented research activities of colleagues in SBS (§4). UoS provides funding for impact generation activities centrally (REF5a§2.3), e.g. **Baden** (hairdressing), **So** (Red Funnel Ferries), **Tauringana** (sustainability) and **Brito** (autonomous surface vehicles). PERu supports our staff with training and expert advice on designing and executing impactful research by incorporating high quality public engagement activities into research grants and projects. Similarly, PPJS supports (through training, advice and policy opportunities) SBS colleagues on how to make effective and impactful contributions to public policy.

3.4 Operational and scholarly infrastructure supporting research and impact

SBS has access to a wide range of powerful computing, research databases and statistical software; for example, WRDS data, Thomson ONE Banker, DataStream, Boardex and Fame along with Bloomberg terminal access, Financial Times electronic subscription, Stata, EViews and SPSS along with survey tools, such as Qualtrics to support researchers. The University Library enables access to Business and Management journals and books (available electronically where possible). SBS has an internally funded system to finance editing or copy editing of draft staff papers and research bids and pays for journal submission fees (primarily in the Accounting, Banking and Finance disciplines), professional (and learned) association membership fees along with interview translation and transcription costs. iSolutions provides computing and IT support to all staff and students (REF5a§3.7).

Opened in 2019, the new Centenary building on Highfield Campus has dramatically improved the physical infrastructure for SBS, which boasts a state-of-the-art MBA suite, replete with Harvard style lecture theatre and breakout rooms. Our staff offices and meeting rooms are in a convenient adjacent building.

3.5 EDI issues in accessing infrastructure supporting research and impact

As acknowledged in §2.3, not all individuals are equally placed to take advantage of the research and impact support infrastructure. For instance, the personal research allowance for researchers and PGRs is generally intended to support travel for conference attendance. However, travel may be more difficult for researchers with significant caring responsibilities and/or disabilities. Accordingly, SBS takes a flexible view on a case-by-case basis and will allow expenditure on other research or impact-related activities. The Library where most of SBS's research and scholarly materials are kept is accessible to all staff regardless of any disabilities. We ensure researchers are regularly assessed to provide ergonomically-appropriate equipment, especially computer screens, taking into account different levels of personal disability and need.

3.6 The cross-HEI shared and collaborative use of research infrastructure, facilities and expertise in relation to research and impact activities

We encourage and support cross-HEI shared and collaborative use of research infrastructure, facilities and expertise in developing research and impact generation activities. Examples include:

- CRAAG (e.g. **Broad**) has been involved in the Worldwide Universities Network (WUN) collaborative higher education governance research with colleagues from six Universities (Southampton, Bristol, Essex, Ghana, Vietnam (DaNang and Foreign Trade Universities)) in four countries (Ghana, Nigeria, UK and Vietnam).
- CORMSIS supports researchers at Southampton (Mathematical Sciences, Engineering, Computer Science), but also regionally (e.g. Bournemouth, Portsmouth, Surrey, Sussex), nationally (Imperial College, Lancaster, Warwick) and internationally (Belgium (KU Leuven), Canada (British Columbia), China (Dalian), Germany (Magdeburg), Spain (Barcelona), US (Pennsylvania State, Michigan)).
- As noted in §2.1, PERu provides an institutional platform for our researchers to engage with different stakeholders and publics in the form of live events/shows, training and development, and public engagement networks, evaluation and funding, e.g. participation in PERu's 'bringing research to life roadshows' (**Brailsford**, 2017, **Baden**, 2018, **Dawson**, 2019).
- Similarly, PP|S helps connect SBS's researchers with policymakers through Fellowship programmes, capacity building and engagement activities (e.g. policy consultations, events and training) to better support evidence-based policymaking, e.g. **Degl'Innocenti** (SME Finance, Parliament, Treasury Committee, 2018) and **Brito** (integration of Innovate UK with research, BEIS, 2016).
- Through DSIE/CISEI, SBS has strong research interests in entrepreneurship and innovation. UoS's Future Worlds and Science Park offer state-of-the-art incubation facilities for business start-ups, mentorships, events and public engagement opportunities for our staff and students, e.g. **Baxter**, **Costanzo**, **Grinevich**, **Karatas-Ozkan** have worked closely with Future Worlds in generating impact through pedagogic research and teaching students' entrepreneurship and innovation skills, and supporting entrepreneurship-oriented student societies such as *Enactus* (which creates social enterprises focused around environmental, economic and social sustainability, thereby improving the lives of over 50,000 people in other countries) (REF5a§2.3) and the student-led initiative *Fish on Toast* (working to nurture and develop the next generation of entrepreneurs by encouraging a culture of innovation, inspiration and collaboration).
- Annual SBS enterprise-industry events (2016-2020), monthly evening seminars and professorial (**Kunc**, **Mishra**, **Ntim**, **Singh** and **Shukla**) inaugural lecture series provide opportunities for researchers to generate impact through direct engagement with potential collaborators.

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

Our goal to achieving research excellence can only be realised by instilling a constructive and inclusive research culture to support the development of all SBS colleagues from PGRs/ECRS through to Professors, by creating and sustaining impactful opportunities for scholarly dissemination. Following our research strategy objective (§1.2), SBS collaborates extensively with the UoS community, academic institutions, industries and policymakers across the UK and overseas. Vibrant seminar series provide opportunities for development and growth, through encouraging sustainable research collaborations (Figure 3).

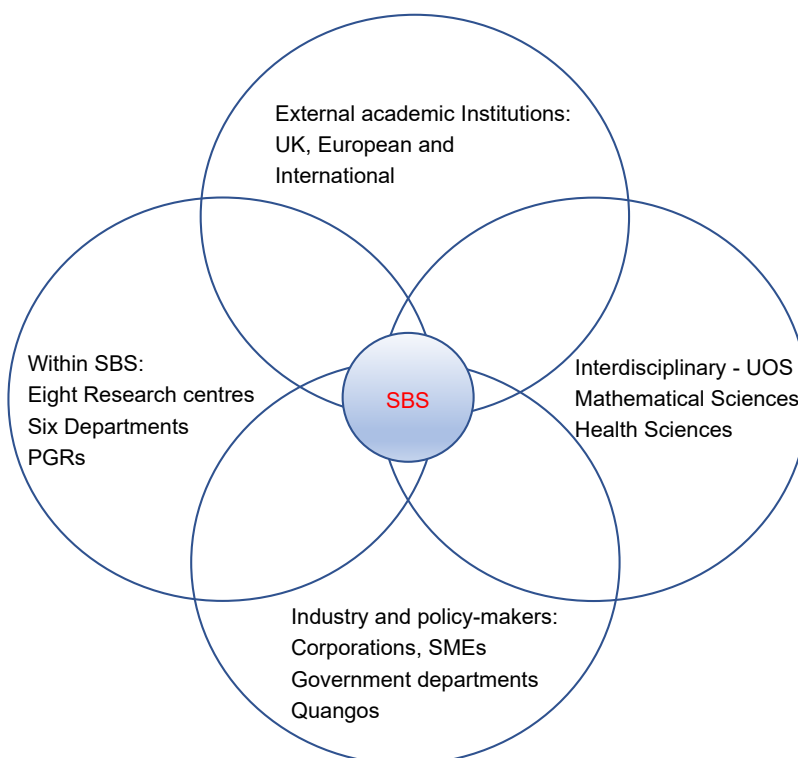


Figure 3: SBS Interdisciplinarity and Collaborations

4.1 Sustainable research collaborations, networks and partnerships

We encourage sustainable, collaborative relationships in finding solutions to real-world business challenges in two ways. SBS co-ordinates corporate engagement opportunities connecting colleagues with industry executives, partners and practitioners to better understand and respond to business-critical issues. The Director of Enterprise (**Bennett**) is responsible for steering the Impact and Enterprise Strategy (§1.3) to create sustainable and mutually beneficial relationships with corporates, small- and medium-sized enterprises, third sector organisations, Government departments and professional bodies. HoDs and School Executive Group members are responsible for implementing the enterprise strategic objectives across SBS. The Enterprise Team maintain our connectivity to the world of practice, using the Corporate Relationship Management system.

SBS actively encourages collaboration with industry, in particular through KTPs (and mKTPs). Over the REF period, our researchers engaged in over ten solution-oriented KTPs, e.g. Autonomous Surface Vehicles Limited (**Brito**), Seven Investment Management LLP (**McGroarty**) and Star Financial Systems Ltd. (**Sung**) of over £1M in value.

SBS Internationalisation strategy has led to colleagues continuing to form research networks and partnerships with international academic institutions, e.g. **Brailsford** (former Chair of the European Working Group on Operational Research Applied to Health Services), with links to University of

Toronto (Canada), University of Melbourne (Australia), University of Vienna (Austria) and the National Healthcare Group of Singapore; **Johnson** collaborates with University of Sydney (Australia), Clark University (Massachusetts, USA), University of Hamburg (Germany), Humboldt University (Germany), Macao Polytechnic Institute (Macao), National Taipei University of Technology (Taiwan), Asia Pacific Association for Gambling Studies, Tunghai University (Taiwan), Chulalongkorn University (Thailand), Macao University of Science and Technology (Macao); **Broad** conducted research with VN-UK (Vietnam), University of Ghana (Ghana), University of Cape Town (South Africa), University of Dar-Es-Salaam (Tanzania) and University of Mauritius (Mauritius).

In 2020, SBS negotiated bilateral research collaborations with Audencia Business School, France and T.A. Pai Management Institute (TAPMI), India, (both top-ranked Business Schools, holding double Accreditation (AMBA and AACSB)) to promote future sustainable collaborations across all areas of research, including PhD supervision.

All our Departments, RCs and individual colleagues foster strong links with academic disciplines within the wider University, to develop research groups and promote opportunities for interdisciplinary research collaborations via CORMSIS, members have expertise in mutual research methodologies (predictive and prescriptive analytics (**Mues, Bravo, So, Bijak, Baesens**)), continuous optimisation (**Beullens**), discrete optimisation (**Beullens, Martinez-Sykora**), risk and uncertainty (**Ma, Brito, Sung, Martinez-Sykora, Yu**), and simulation (**Brailsford, Kunc, McGroarty, Onggo**). Examples of collaborative research with Mathematical Sciences include the digital economy (**McGroarty, Ma, So**), energy, engineering and revenue management (**Martinez-Sykora**), finance (**McGroarty, Ma**), supply chain management (**Beullens, Brown, Martinez-Sykora, Frei**), transport and logistics (**Beullens, Martinez-Sykora, Onggo**) and web analytics and marketing analytics (**Mues, So**). Examples of cross-cutting research collaborations with Health Sciences include scheduling, cutting and packing (**Martinez-Sykora**) and healthcare (**Brailsford, Klein, Onggo**).

All RCs host regular seminar series (scheduled weekly or semi-monthly). Members and guest speakers share their research with colleagues and PGRs, which has helped to raise our profile nationally and internationally. Since 2014, SBS has hosted more than 580 seminars, e.g. CORMSIS has convened 152 seminars, including 28 speakers from renowned international institutions (Pennsylvania State University, University of Madrid, University of Cape Town). SBS's collaborative relationship via CORMSIS has led to 39 successful PhD projects, 16 of which were jointly supervised with colleagues from Mathematical Sciences; CISEI, CMR and CWO organised in excess of 100 seminars, 25 were presented by international speakers (USA, Canada, Australia and Denmark).

Successful collaborations can be measured by the plethora of high-quality research publications, many co-authored with authors from external centres of excellence, as evidenced by our REF2021 outputs submission. Since 2014, several SBS authors have received Best Papers Awards for their publications, e.g. **Lui** (International Review of Financial Analysis (2014)), **Baesens** (European Journal of Operational Research (2017)) and **Chowdhury** (Critical Management Learning and Education (2020)).

4.2 Staff interactions and engagement with key research users to develop impact

In addition to our seven impact case studies (§1.3), other examples of research which has made a difference to organisations to improve their efficiency and effectiveness include: making the business case for the Living Wage (**Vithana**), understanding the impact of social media on purchasing decisions (**Nisar and Yeung**), developing new modelling tools to optimise the packing of 'growing cabinets' in the premium hospitality sector (**Martinez-Sykora**) and understanding board decision-making in higher education (**Marnet and Soobaroyen**).

Since 2014, colleagues have secured IAA funding e.g. **Ma** and colleagues (Effective Risk Management for Big Data-Supported Mobile Finance (£21,000)), **Baden** (£9,383.30) (Promotion of Sustainable Hairdressing); **Huang** and colleagues 'Reducing Waiting Times in Emergency

Departments' (£9,374.81) (all in 2016); **Costanzo, Karatas-Ozkan and Ibrahim** awarded £6,254.06 for their project on 'Social Entrepreneurship and Social (2017); **Vithana, Baruch and Ntim** receiving an award of £57,000 in 2017 to develop their interdisciplinary project 'Investment case behind living wage accreditation'; in 2018, **Vithana, Baruch and Ntim** also received an award of £56,500 (together with Aviva Plc.) for another collaborative project 'Incorporating the broad Environmental, Social, and Governance (ESG) agenda in investment analysis: case of climate related engagements'; **So, Bravo and Mues** received £18,579 to fund their research 'Using advanced analytics to support national central banks in managing their banknote production' (2019).

SBS has growing strengths in its research portfolio including digital finance (**McGroarty**), risk management (**Mues, Bravo**), operations management (**Brown**), ethics in business practice (**Baden**), sustainability in business practice (**Baden, Tauringana**), governance (**Ntim**) and careers (**Baruch**), as well as emerging research areas responding to the needs of the digital age: e.g. cryptocurrencies (**Yarovaya**), agile change and project management (**Brown**). Sustainability is a key theme in our research strategy, e.g. sustainable and ethical business practice (**Baden's** work to reduce water wastage in the hairdressing sector) and **Tauringana's** engagement with manufacturers in Uganda to produce sustainability reports to incentivise environmental and social change. **Tauringana** co-founded a new Non-Governmental Organisation called Transparency for Sustainable Development (Uganda) in 2020 to assist the country's progress in achieving UN SDG 12 (responsible consumption and production).

4.3 Wider contributions of SBS staff to the economy and society

Sung, Ma and Johnson (CRR and CDF) developed powerful forecasting tools to predict behaviour of spread traders, leading to a company (Star Financial Systems Ltd.) supporting a bid for a full KTP, which was awarded by ESRC and Trustee Savings Bank. The project was awarded the Certificate of Excellence by Innovate UK and awarded the highest grade of 'Outstanding' by the KTP Grading Panel.

The project was deemed 'industry changing' and outstanding. As a direct result, Star Financial Systems Ltd. initiated the start-up of a spin-off company, Analytic AI. The company Chairman declared "The KTP has also enabled us to unlock the potential of the data we hold on behalf of clients, so that we can now provide data analytics products to improve their risk management decisions. The Directors of our business are confident that these key developments, which stem directly from the KTP, will produce profits of around £2M p.a. within three years".

Since 2017, **Vithana, Ntim and Baruch** (CRAAG and CWO) worked with Aviva Investors (UK), Living Wage Foundation (UK) and the London Stock Exchange to conduct research highlighting the economic benefits of paying a real living wage to employees. The research enabled Aviva to articulate the benefits of living wage accreditation to investment companies, leading to an increase in the number of accredited firms, and also resulted in businesses achieving United Nations Sustainable Development Goals 8 (Decent work and economic growth) and 10 (Reduced inequalities).

So, Martinez-Sykora and Bennell's (CORMSIS) EPSRC-funded project with sea-ferry companies (e.g. Red Funnel, operating between Isle of Wight and the mainland) was aimed at developing pricing and allocation solutions to increase the efficiency of ferry services and ensure that pricing properly reflected the cost of placing a vehicle into the limited deck space. The work has wide-ranging implications in a number of industry sectors, particularly in optimal pricing for freight, where the packing efficiency is considered when setting delivery charges.

Commencing in June 2020, **Parry** (CWO) leads an ESRC-funded project designed to support economic recovery from the COVID-19 crisis, investigating the impact of home working, together with partners based in the Institution for Employment Studies, and Half the Sky (a consultancy specialising in flexible work). The research focuses on how the pandemic has affected two different UK sectors: professional services and public administration, analysing the longer-term implications

of working from home, identifying which new behaviours and working practices should be encouraged to remain.

In July 2020, **Shukla** was invited to join a high-level working group 'Trust in Public Institutions' in the Government Office for Science on COVID-19 areas of research interest, organised by Government Chief Scientific Adviser (Professor Sir Patrick Vallance) and the Executive Chair of the ESRC (Professor Jennifer Rubin). The purpose is to shape the scientific agenda and funding streams in the area.

4.4 Engagement with diverse communities and publics through research

Our colleagues have engaged with a range of diverse communities and publics over the REF period in the following ways:

The Enterprise Team organises annual enterprise-industry joint events ('working in partnership with SBS'), involving hosting local businesses, regional and national executives of companies, small business owners, charities, local government officials, professionals, practitioners, regulators and other policymakers and the general public. The primary aim of the event is to showcase the latest research and create two-way conversations connecting staff with industry to explore research projects, consultancy projects and KTPs.

The Enterprise Team also hosts a professorial inaugural lecture series for recently promoted or appointed professors to disseminate their research. Since 2014, six professorial inaugural lectures were convened (**Ntim, Mishra, Shukla, Fraher, Kunc and Singh**), each attended by approximately 200 members, mainly from industry, resulting in collaborations with organisations (JP Morgan, RNLI, Ordnance Survey, Carnival Plc, Astute Technical Recruitment, Stannah, Southern Co-Op, Blake Morgan and CMA Recruitment).

Further, the Enterprise Team organises monthly evening seminars, creating opportunities for colleagues to share insights from their research and interact with members from industry and the broader public and users of research. The seminars are often delivered by members from industry, rather than academics. Since 2014, there were over 45 evening seminars, attended by approximately 2,000 members from industry.

PERu also offers a platform for SBS researchers to engage with the public, e.g. 2019 Human Worlds Festival, John Hansard Gallery (3D interactive model explaining risk factors) where **Dawson** (CRR) attended the 'Hands on Humanities' public engagement event organised by Southampton City Council, showcasing his 3D model of the 'IPAT formula' to engage the public in discussions and highlight awareness of factors driving contemporary risks to the natural environment.

4.5 Contribution to the sustainability of Business and Management

We contribute to the sustainability of the discipline of Business and Management through collaboration with industry, via policy initiatives and through dissemination in journals and conferences, e.g. by working collaboratively with external organisations to catalyse more sustainable business models via research, impact and outreach activities. As a society, we should be consuming around a fifth of what we consume currently, yet most business models are predicated on increasing consumption. For this reason, colleagues are actively involved in debates around shifting from ownership models to access/sharing models, e.g. **Baden** (CWO) and **Frei** (CORMSIS) presented at the 7th International Workshop on the 'Sharing Economy' in Barcelona and 'Organizing Sustainably: Actors, Institutions, and Practices' in Chania, Crete (2020). **Baden** also delivered a session on Sustainable Business Model Innovation at the EURAM Conference, Lisbon (2019).

Costanzo and **Karatas-Ozkan** (CISEI) and **Gong** (CORMSIS) delivered an industry-sponsored workshop on 'Sustainable Supply Chain Management in Emerging Countries', focusing on the themes of employee engagement/empowerment, value-chain management in designing and implementing corporate social responsibility programmes to build business resilience (2019). The workshop marked the beginning of an academic-industry partnership for knowledge exchange

between the CORMISIS-CISEI researchers, business leaders and consultants operating in emerging economies.

Our colleagues conduct research contributing to addressing Governmental sustainable future priorities, such as the Grand Challenges embedded within the UK Industrial Strategy: Artificial Intelligence and Data (cutting-edge research into cryptocurrency (bitcoin and virtual cash systems)) by **Yarovaya** (CDF), **Mishra** (CERFIB), cyber-security (interdisciplinary collaboration with Electronics and Computer Science **Ma** (CRR), Big Data, **Ma, Sung** (CRR), **Johnson** (CRR), **Nisar** (CWO), **McGroarty** (CDF), Ageing Society, **Brailsford** (CORMSIS) collaborating with University of Leicester in NIHR-funded research on modelling, Clean Growth and Future of Mobility: Electric Vehicles NS SatNav, **Grinevich** (CISEI) (EPSRC collaborative project with Aston University), Autonomous Vehicles and risk, **Brito** (CRR).

SBS colleagues demonstrate good citizenship in the sustainability of the discipline, e.g. since 2014, colleagues are, or have been Editors-in-Chief of the following journals: *Health Systems* (**Brailsford**); *International Journal of Operations and Production Management* (**Brown**). Associate Editors for the following journals: *Human Relations* (**Beigi**); *European Journal of Finance* (**Mishra, Wolfe**); *Human Resources Management* (**Baruch**); Editors of special issues in: *International Journal of Operations and Production Management* (**Brown**); *European Journal of Operational Research* (**Kunc, Mues**); *Information Sciences* (**Bravo**); *Critical Perspectives on Accounting* (**Ntim**); *Journal of Business Research* (**Shukla**); and were or are on the Editorial Boards of over 20 international journals.

SBS has hosted several major conferences since 2014, e.g. the 8th International Conference on Computational Logistics (2017), SanEco Sustainability Conference (2016), BAM Corporate Governance Conference (2019), 4th India Global Summit (2019), 2nd Cryptocurrency Research Conference (2019) and 3rd Cryptocurrency Research Conference (2020 hosted virtually).

4.6 Indicators of wider influence by SBS colleagues

We have also influenced research-related activities in the following ways:

Presenting over 20 **keynote lectures** at international conferences and other prestigious events to academics, industry experts and policymakers, e.g. **Grinevich** was invited by the Friedrich Ebert Foundation in Berlin to give a keynote speech at a conference on *Sharing Economy – New Communitality or New Hypercapitalism* in 2016. **Baruch** gave a keynote speech in the “Career twists in the future of work”, held at the Vrije Universiteit Brussel, Belgium in November 2016. **Baden** was a keynote speaker at the 5th International Conference on Social responsibility, Ethics and Sustainable Business, Milan, October 2016. **Bravo** was a keynote speaker at the IEEE EVIC 2017, in Santiago, Chile, on the topic of: ‘*Big Data and Business Analytics: Data Analysis for Knowledge Discovery*’, in December 2016. **Bennell** delivered a one-hour keynote speech on ‘*Get packing! Key concepts and future directions in cutting and packing problem*’ at the International Federation of Operational Research (OR) Societies Conference 2017, Quebec, Canada (2017). **Katsikopoulos** delivered a keynote lecture at the ORBIT [Behavioural Aspects of Operational Research Interventions in Transformational Projects] Workshop organised by the Warwick Business School (Shard campus), in June 2018. **Higgs** delivered keynotes in successive years (2015 and 2016) at the International Conference of Research in Management, Economics and Accounting (Istanbul). **Beigi** gave two keynote presentations at the International Management Conference in 2017 on ‘*Work-family interface and social media*’ and at the Chartered Association of Business Schools Annual Learning, Teaching and Student Experience in 2018.

SBS colleagues make a strong contribution to the wider research community via academic association memberships and appointments to key positions within learned societies, e.g. **Bennell** appointed Chair and Co-ordinator of the European Working Group in Cutting and Packing (ESICUP) (a Working Group within the European Federation of Operational Research Societies). **Ntim** elected in 2018 as Chairperson of the British Accounting and Finance Association’s (BAFA) Special Interest Group (SIG) on Accounting and Finance in Emerging Economies (AFEE). **Wolfe** appointed (in 2020) to the Advisory Board of the BAFA Financial Markets and Institutions Special

Interest Group. **Broad** elected as Vice Chair of the Council of Chartered Association of Business Schools in 2018. **Katsikopoulos** elected Academic Chair of the Operational Research Society's Special Interest Group in Behavioural OR, commencing October 2018. **Onggo** elected as Member of the General Council of The Operational Research Society commencing January 2020 to December 2022. **Beigi** appointed as a member of the Research Activities Committee, University Forum for Human Resource Development (UFHRD) until 2021. **Baruch** elected a Fellow of the British Academy of Management (BAM) in 2016, and since 2019, **Marnet** is a Member of the BAM Corporate Governance Special Interest Group Committee.

SBS colleagues made noteworthy contributions to the European Academy of Management (EURAM) since 2014: **Baruch** appointed Vice President for Research in 2016. In 2017, **Karatas-Ozkan** elected Chair of EURAM Doctoral Colloquium (one of the flagship events of EURAM for the doctoral community) and awarded EURAM Fellowship status at the 2019 annual conference in Portugal. **Costanzo** was an invited speaker on "Qualitative Research" and mentor at the 2018 EURAM Doctoral Colloquium (Iceland).

We have also been invited as experts by industry leaders, policy-makers and academic institutions (national and international), which is testament to quality of our research-active staff, e.g. **Johnson** elected Vice President of the Asia Pacific Association for Gambling Studies (APAGS) in 2016 (an international academic network of scholars, professionals, regulators, and policy-makers focussed on gambling research). **Tauringana** elected as the President of the African Accounting and Finance Association for a two-year term in 2017. **Bravo** designated as **foreign expert** on the project "Digital Crime Observatory in Chile: An intelligent system to support the Chilean automotive industry, regarding theft of vehicles and accessories" (2016); **Gong** elected as an expert member of the Purchasing and Supply Chain Management Expert Committee member by China Federation of Logistics & Purchasing (CFLP) (2020).

Veliziotis appointed by the Greek Minister of Labour to serve as a member of the Committee of Independent Experts to advise the Ministry on the determination of the statutory level of the minimum wage for the Greek economy (2018); **Baden** was an invited expert at an All Party Political Group on Beauty, Aesthetics and Wellbeing panel event at Westminster on what the beauty industry is doing to be more sustainable (2020). In June 2020, **Mukherjee** was invited by the Indian Institute of Foreign Trade (IIFT is an autonomous body under the Indian Ministry of Human Resource Development within the Government of India) to participate in a virtual panel discussion on "Trade, Finance and Economic Development in a Post-Covid Scenario". Written evidence was submitted by **Al-Kaddour** and **Ntim** to UK Parliament's Public Accounts Committee's Consultation on UK Government's Management of Tax Reliefs in June 2020. **Shukla** received an invitation in July 2020 to join a high-level working group 'Trust in Public Institutions' focusing on COVID-19 areas of research interest, organised by Government Chief Scientific Adviser, Professor Sir Patrick Vallance and the Executive Chair of the Economic and Social Research Council, Professor Jennifer Rubin. **Parry** was Parliamentary Office for Science and Technology (POST) on a research project 'Understanding the outcomes and impact from PhD Fellowship Schemes', evaluating policy internship across Westminster and devolved administrations.

In academic settings, **Brown** was a member of an expert panel assessing the quality of research and impact at Aalto Business School in Finland, in 2018. **Wolfe** was invited to join the multidisciplinary Business Research Unit of Instituto Universitário de Lisboa (Portugal) as a member of the International Scientific Advisory Board in 2018 and 2019, and further, became a member of the Academic Board of the London Institute of Banking and Finance (LIBF) in May 2019.

Since 2014, SBS colleagues have refereed research proposals for national and international funding providers, e.g. ESRC (**Ma**, **Hanoch**, **Wolfe**), EPSRC (**Brailsford**), NIHR (**Brailsford**, **Klein**), Health Foundation (**Brailsford**), British Council (**Brailsford**, **Frei**), Royal Society (**Brailsford**, **Ma**), UKRI-NERC (**Brito**), NSERC (**Brailsford**), ZonMW (**Brailsford**), Science Foundation Ireland (**McGroarty**), INRC (**Ma**).

SBS colleagues hold membership roles for Research Councils, both nationally and overseas, e.g. National (British Academy, British Council, Carnegie Trust, EPSRC, ESRC, Josef Rowntree Foundation, Leverhulme Trust; NERC) (**Baden, Baruch, Brailsford, Brown, Costanzo, Kunc, Mishra, Mues, Nisar, Ntim, Nguyen, Onggo**), European (CNRS-France Research Funding, France, Georgian Science Foundation, Georgia, Leibniz Association, Germany, National Science Centre, Poland, Netherlands Organisation for Scientific Research) (**Kizys, Mishra, Ntim**), and International (Social Sciences and Humanities Research Council, Canada) (**Costanzo, Ntim**). In addition, **Nguyen** contributed to the EPSRC Workshop on Strategy for Mathematical Sciences. **Nisar** is a member of the ESRC Funding Commissioning Panel Member and **So** is a member of ESRC Peer Review College.

SBS colleagues have won prestigious prizes, honours and esteem awards since 2014: **Brailsford** received her third Goodeve Medal from the Operational Research (OR) Society and is the first person to have been awarded three times and **Brailsford** also received The Companionship of Operational Research (2016). **SBS** won the 3rd annual SSRN/WRDS Innovation Award for the EMEA region in 2019 (a plaque and \$10K cash prize for outstanding financial research). **Baden's** embedding Sustainability in Hairdressing research won the ESRC Outstanding Impact in Business and Enterprise Award (2018). **Karatas-Ozkan** was elected Fellow of the European Academy of Management (EURAM). **Nguyen** won a 5-year EPSRC Early Career Fellowship award worth more than £400K. **Bravo** was appointed as Fellow of the Turing Institute in 2018. **Baruch** was appointed Fellow of the Academy of Social Sciences (2015) and Fellow of the British Academy of Management (2016). **Baruch** and **Bektas** were ranked in the Stanford University exclusive top-100 list of business and management researchers based in Europe for world-leading research outputs appearing in discipline journals in 2017.

Research produced by several colleagues in SBS is regularly covered by the specialised press and policy portals. For example:

- Newspapers: Financial Times, Guardian, Independent, Sunday Times, Daily Mail. (**Kizys, Ntim, Ramoglou, Shukla**).
- Radio: BBC Radio, BBC 5Live, BBC Solent, Cape Town Radio, City Am (**Baden, Baruch, Hidayah, Kizys, Mishra, Ntim, Shukla**).
- Television: BBC News, CNBC, CCTV, US, TRT News, Sky News, UK, South Korean TV News, Ugandan TV News (**Baden, Baruch, Ntim, Tauringana**).

Blogs/Magazines/News Portal/Social Media: Business Week, Conversation, Dow Jones, Financial Director, European Business Review, Investment Weekly News, Investment and Pensions Europe, LSE Review, National Post, Times Higher Education, Reuters, Washington Post, EuroNews, MSN, World Economic Forum (**Baden, Kizys, Kunc, Nisar, Ntim, Ramagloul, Shukla**).