

<b>Institution: University of Dundee</b>
<b>Unit of Assessment: UoA17 Business and Management</b>
<b>1. Unit context and structure, research and impact strategy</b>

### Introduction

UoA17 has developed rapidly over the REF2021 assessment period as a critical element in shaping the University of Dundee School of Business. The refreshed vision, structure and culture have yielded a step-change in performance since 2014 in respect of: i) number of new research-active staff, ii) vitality of the research, knowledge exchange and impact (RKEI) environment, iii) focus on peer-reviewed outputs in international journals, (iv) collaborations with external stakeholders, and (v) impact beyond the academy.

### Context and Structure

Business and management research has deep-rooted traditions of excellence in the University of Dundee (UoD) extending back to the 1930s when internationally significant economists like Duncan Black and Nobel-laureate Ronald Coase were in their first academic posts. Since then, business and management research and teaching have evolved through disciplinary identities in the form of **Accountancy & Finance (AF)**, **Economic Studies (ES)** and, latterly, **Management & Marketing (MM)**, which in recent years have increasingly converged to form the University of Dundee Business School (UDSB) in pursuit of collaborative advantage. Arising from University restructuring in 2015, UDSB was founded as a division of the larger multidisciplinary School of Social Sciences, then 160 FTE, before being granted stand-alone status in 2019 in recognition of its outstanding growth trajectory and central role in driving the enterprise culture of the University. UDSB's internationally inspired and connected research mission has always aligned closely with the University's vision of **transforming lives, locally and globally**.

Since REF2014, there have been significant improvements in RKEI capacity and performance in UoA17, achieved by **concentrating on strengths and an ambitious recruitment programme**, which has targeted excellent research-active academics, and the creation of an integrated and highly interconnected RKEI culture. A new management structure has enabled UDSB to: i) set its own strategic direction as a research-led School, pursuing mutual excellence in teaching, research, enterprise and impact, and ii) build interdisciplinary collaborations across the University, invest in recruiting, developing and retaining high-potential staff, and develop an infrastructure to achieve the School's ambitions.

UoA17 is a **rapidly growing unit reflecting the strategic importance** of UDSB to the University and has received significant investment to fuel further growth. There were 29 Category A staff (28.6 FTE) at the REF2021 census date in Teaching and Research roles (T&R), equating to 75% of the total academic staff base, with the remaining 25% holding Teaching and Scholarship (T&S) positions. There is an equitable balance across the disciplinary sub-units; 33% within MM, 30% in AF, and 37% in ES, including an energy economist from the School of Social Sciences. Further strategic investment in staffing in academic and academic-related roles is ongoing, with recruitment planning during the REF period leading to **10 additional T&R staff arriving in UDSB since July 2020**, and approval for five more appointments in financial year 2021-22.

**Research and Impact Strategy**

The vision for UoA17 is the *achievement of world leading impact through excellent research, engagement and partnerships that transforms lives and creates significant public value – locally and globally*. To achieve this, we set ourselves four strategic priorities and formulated a corresponding implementation plan:

- Developing a **vibrant and enabling research culture** across all UoA17's RKEI priorities, inclusive of postgraduate researchers (PGRs) and early career researchers (ECRs);
- Steering **attention to impactful, 'engaged' research**, involving Advisory Board members, practitioners and policy makers, creating societal outcomes of public value;
- Embracing **collaborative approaches** by bringing business and management perspectives into the University's interdisciplinary research themes; and
- **Recruiting, developing and retaining the best** academic and research support staff, taking a measured approach to capacity-building and ensuring sustainable growth.

Our strategic vision has been delivered through the following measures:

- Adopting a **thematic approach** for UoA17 constructed around three complementary cross-cutting clusters, which frame our drive for excellence and embed RKEI into daily activities.
- **Prioritising recruitment of established research-active staff** and introducing mechanisms to motivate, retain and build synergies across the research community.
- Inducting academic staff and PGRs into a **culture of high performance** in line with the University's strategic priority of excellence.
- Active participation and leadership of cross-school collaborative endeavour aligned to the University's vision of **Transforming Lives**.
- Orientating our **research and education mission** towards the UN Sustainable Development Goals (**SDGs**) and UN Principles for Responsible Management Education (**PRME**).
- Embedding a **culture of continuous improvement** in relation to research quality and impact by implementing the University Annual Research Review (ARR) and bespoke staff development plans.
- **Enhancing our reputation for RKEI** with practitioners, the professions and policy makers by building on existing disciplinary strengths.
- **Increasing our public engagement activities** to raise profile and impact on the national, regional and local economy.
- Realising **mutual** benefits between **research and teaching excellence**.
- Adopting the University's policies on **Open Research** and signatory status to the Declaration on Research Assessment (DORA).

**Achievements in the Current Assessment Period**

The ambition to grow the quality, volume and sustainability of world-leading and internationally excellent research in UoA17 is being realised by strengthening leadership and academic culture in UDSB. We have increased investment in academic staff numbers and increasing workload time allocated for RKEI activities and growth of the Post-Graduate Research (PGR) community. Over the assessment period, financial support for RKEI tripled and T&R staff numbers (FTE) grew by 53%, providing increased capacity and enabling research continuity as far as possible through the COVID-19 pandemic. The result is a much stronger pipeline of peer-reviewed publications in international journals, public engagement and impact, and growing esteem through public appointments, journal editorships, and international and professional recognition.

**Innovation and Interdisciplinarity**

Our engaged research and public value ambitions are furthered by interdisciplinary collaboration across the School and University. The School's challenge-orientated approach is congruent with the University's commitment to ***transforming lives, locally and globally***, as reflected in Dundee ranking in the world top 20 for delivering the UN's SDGs (THE Impact Rankings 2019). To contribute to ***transforming lives***, the School created three cross-disciplinary research clusters:

- **Health, Wellbeing & Education**
- **Entrepreneurship, Innovation & Creativity, and**
- **Markets & Governance**

The clusters bring together UoA17 staff with policy makers, practitioners and academics outside of business and management. As can be seen in Figure 1, they also interface with two larger research support networks. The first of these is the **Institute of Social Sciences Research (ISSR)**, established in 2017 to foster greater synergies and critical mass of RKEI activities across the Schools of Social Sciences, Business, Education & Social Work and Health Sciences. The ISSR research themes are all relevant to the ambitions of UoA17 (***Social Justice and Social Change, Health and Wellbeing, Governance Policy and Regulation, Innovation in Methods and Data Analytics, and Environment***), with representation on the management group through Schreven as Co-Director.

ISSR has driven considerable capacity building through supporting interdisciplinary research via seminar programmes, incubator grants, hosting an annual research forum and supporting a Global Scholars initiative, promoting international exchange visits. The second support network with which UoA17 is prominently aligned is the University's interdisciplinary themes of ***Health and Wellbeing, Social Justice, Innovating Technology*** and ***Creativity and Design*** achieving strategic alignment and connectivity with the University's preeminent research within the Schools of Medicine, Life Sciences and Art & Design (DJCAD). Clusters are open to academic and research staff beyond UoA17 and staff can join more than one cluster.

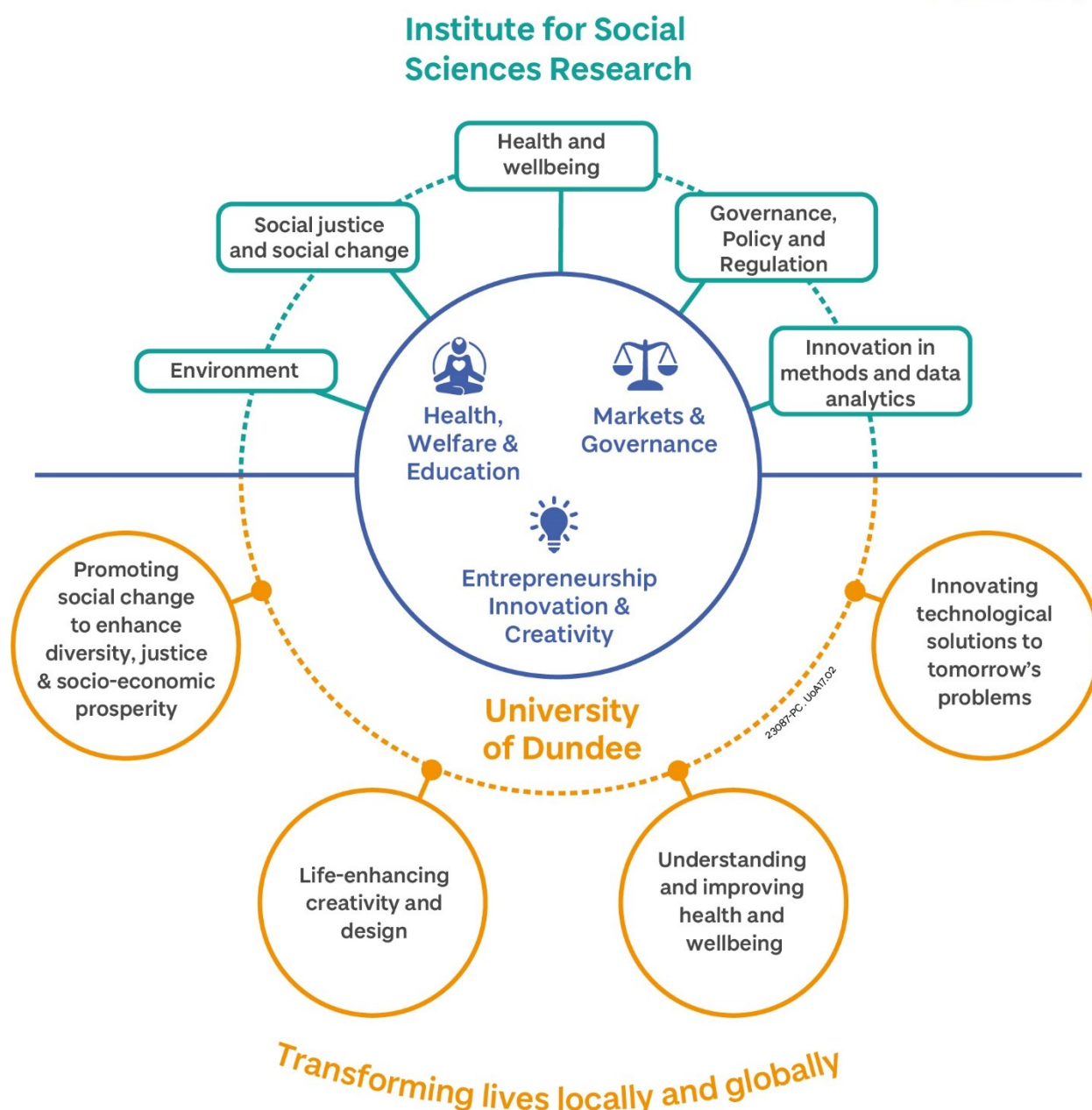


Figure 1: Alignment of UoA17 within ISSR and University interdisciplinary research themes

**Health, Welfare and Education**, led by **Martin**, integrates the work of nine staff (**Allanson**, Beech, Bushfield, Fearfull, **Farooqi**, **Morelli**, **Ulus** and **Zhu**) with interests in healthcare management, well-being and education, and in working with practitioners and policy makers. For example, **Allanson** has played a lead role in the Scottish Health Economics network, which brings together health economists from Scotland's Universities, the NHS and Scottish Government to explore the development and application of health economics at the national scale. British Medical Association-funded research into changing leadership roles for hospital consultants resulted in **Martin's** appointment to Vice-Chair of the Board of NHS Tayside (NHST) and his co-development of the clinically-led, managerially-enabled strategy, subsequently adopted by Leeds and York Foundation Trust, the Academy of Medical Leadership and Management and a Swedish hospital group. **Zhu's** research on the graduate premium was extensively cited in the 2019 Augar review of Post-18 education, followed by invitations to participate in expert panels for the Department of Education, Department of Business, Innovation and Skills and the Resolution Foundation. **Morelli's**

research on funeral poverty led to his appointment to an expert panel of the Scottish Government on Social Security and membership of the Dundee Commission on Poverty, while **Ulus'** research linked psychoanalysis to learning improvement in organisations. This research cluster reflects and amplifies the themes of **Health and Wellbeing** and **Social Justice** of ISSR and their wider University interdisciplinary equivalents and **Innovating Technology**.

**Entrepreneurship, Innovation & Creativity**, led by **Arshed**, unites seven UoA17 staff and their PGR community (**Chen I-S**, **Cordina**, **Dinnie**, **Geesin**, **Pathak** and **Schreven**) in RKEI activity, enabling entrepreneurship and innovation in start-ups, scale-ups and large-scale organisations. **Cordina** has explored early stage venture capital investment in SMEs in collaboration with the University's Centre for Entrepreneurship to develop its research priorities. **Arshed** was appointed as independent advisor on women's enterprise policy to the Scottish Government Minister for Business, Fair Work and Skills. Her research with female entrepreneurs and enterprise agencies informed new structures of support being introduced nationally in 2020-21, and also resulted in her being awarded a prestigious nine-month Scottish Parliamentary Fellowship in September 2020. Expertise in place-based marketing fuelled **Dinnie's** advisory role with 'Brand Scotland', a joint initiative between the Scottish Government, Scottish Enterprise and VisitScotland, on innovative practices in service development and construction of new national narratives. He is now leading regional marketing within the £300 million Tay Cities Deal, in which UoD features prominently with £40 million of investment in biomedical and forensic science innovation. **Pathak** has raised his international profile showing how psychology and experimental design produces significant practical value for food marketing and packaging companies. Collectively, the cluster aligns to the University's themes of **Social Justice** and **Innovating Technology** and to the ISSR themes (Co-Director **Schreven**) of **Social Justice and Social Change**, **Governance, Policy and Regulation** and **Innovation in Methods**.

**Markets and Governance**, led by **Burton**, integrates the largest cluster of UoA17 researchers (**Ahmed**, **Allanson**, **Altman**, **Auxtova**, **Chen Y-F**, **Cordina**, **Dunne**, **Emvalomatis**, **Fifield**, **Kwiatkowski**, **Lambert**, **Mazibas**, **Mu**, **Paramati**, **Power** and **Rambaccusing**) in the pursuit of knowledge and impact on how firms operate in markets, their governance arrangements and effectiveness. **Burton**, **Fifield**, **Kwiatkowski**, **Mazibas**, **Power** and **Rambaccusing** have common purpose examining the efficiency of financial markets and the pricing of securities individually and as part of a portfolio. The cluster has also adopted a sector focus analysing performance in the tourism sector (**Cordina** and **Paramati**), efficiency in the banking sector (**Kourtzidis**) and promoting optimisation techniques in agriculture and energy markets (**Emvalomatis**, **Allanson** and **Mu**). Funding through the EU Horizon 2020 programme enabled **Burton** and Bergmann to examine the potential of alternative-finance (or crowdfunding) on renewable energy markets. **Burton**, **Dunne** and **Lambert** have examined governance in business, the third and public sectors. Their work has impacted upon EU policy on the role of crowdfunding in financing renewable energy investment, and on the corporate governance and sustainability reporting of the finance industry. **Altman's** work on behavioural economics and ethics in market economies and the role of cooperatives has been highly cited. The cluster is elucidating linkages between markets and social media (**Burton** and **Power**), and through **Rambaccusing's** work predicting gambling outcomes drawing on social media, which has featured extensively in the UK press and radio. **Auxtova** is examining the impact of advertising governance on marketing ethics and is organising the PRME network in UoA17. This cluster has strong links to the University themes of **Social Justice** and **Innovative Technologies** and to the ISSR themes of **Social Justice**, and **Governance, Policy and Regulation**, **Innovative Methods** and **Environment**.



Promoting collaboration across the social and economic sciences, UoA17 staff have been active participants in the **ISSR**, co-chaired by **Schreven**. Business and Management themes have featured prominently in the ISSR annual conference, attracting internationally renowned speakers, including Robert Gray (St Andrews) on accounting ethics, Colin Mason (Glasgow) on entrepreneurship, and Will Harvey (Exeter) on management. It also fostered collaborative proposals involving interdisciplinary teams, for instance to study the effects of COVID19 on the local region. Drawing from a wider academic community has had many positive outcomes for UoA17 staff and PGRs, particularly in relation to novel research methodologies in social sciences such as autoethnography. It has also led to successful applications for seed funding for impact work (**Arshed, Martin**) and to successful joint bids for PhD funding (**Morelli** with Searle from Geography). UoA17 staff have also been invited speakers in the ISSR seminar series and annual conference (**Altman, Arshed, Martin** and **Schreven**).

### How UDSB's Strategy will be taken forward over the next five years

UoA17 seeks to extend the reach of our impact further to achieve an increasingly significant contribution to the UN SDGs. We believe our ambitions are best achieved through working together in our porous thematic clusters, gaining greater critical mass through engagement with ISSR and the University's interdisciplinary themes. We are prioritising staff development and will intensify engagement with external business and practitioner networks locally, nationally and internationally to strengthen the impact of our research and create public value for society.

Beyond our growing interdisciplinary profile, we remain committed to advancing our RKEI strategy by driving depth in our disciplinary domains. UoA17 will grow our research and consultancy income over the next five years to support the sustainability of Business & Management. We will respond to new opportunities in UK, EU and other international funding to contribute to the priorities of the UK Government Research & Development (R&D) Roadmap and the Missions-led approach of UKRI and Horizon Europe. Examples of opportunities supported by our research networks underpinning the future direction of our strategy, include:

- As part of the **Scottish Universities Entrepreneurship Network**, we are extending our research on nurturing scale-ups and the importance of place-based innovation (**Arshed**). In collaboration with the University's Centre for Entrepreneurship, we maintain strong links with local employers and offer a wide range of dedicated services to assist SMEs with their training and skills needs. A suite of research-led Taught Post-Graduate Programmes were initiated in 2017; these draw on the University's experience in life science and other spin-outs with UoA17's expertise in innovation and company formation, thus enhancing Knowledge Exchange and impact.
- Extend international collaborations through the **Centre for Qualitative Research in Finance** (CQRF), wherein **Burton** and colleagues (e.g., **Power** and **Dunne**) are pioneering the use of qualitative methods in financial market research, including the CQRF seminar series and the world's first conference devoted to this research field in Dundee in June 2019.
- Deepen collaboration with NHS Tayside and the local Joint Integration Health and Social Care Boards through key Board appointments as non-executive Director (Beech) and Vice-Chair of the Board of NHS Tayside (**Martin**) and aim to establish a **Centre for Medical Leadership and Engagement** with NHS Tayside's clinical directorates and UDSB.
- Cultivate **international research networks** to extend our global reach through collaborative RKEI, academic exchange and advisory services. Productive collaborations currently include

Tsinghua University's International Advisory Panel (China), Centre for Global HRM at the University of Gothenburg (Sweden), the School of Business at UTS (Australia), the Business School at the University of Twente (Netherlands), Bergamo University (Italy), Monash and Macquarie Universities (Australia) and the International Cooperative Alliance (Brussels).

- Create a post-Covid-19 international alliance on **cooperatives and employee-owned enterprises**. This emerged as a strategic opportunity following a highly engaging two-day *Workshop on Institutions and Sustainable Socio-economic Development*, led by **Altman** in July 2020 with contributing international HEIs connected with UoA17 through joint-educational programmes. The initiative will focus on social entrepreneurship as a driver for sustainable and equitable economic regeneration.

To enhance our PGR environment, led by Director of Doctoral Studies **Dunne**, we will increase the alignment of UoA17 with the University's recently established Doctoral Academy (2019) and the Scottish Universities Doctoral Programme in Management to complement existing involvement in the Scottish Graduate Programme in Economics, for which **Emvalomatis** is the PhD Director and Convenor of Executive Committee.

### The Business Advisory Board

RKEI activities will benefit greatly from the establishment of our Business Advisory Board in 2020, comprising members with academic, corporate, public and third sector backgrounds, many of whom are appointed as Honorary Professors and Research Fellows of UoD. The Board meets four times a year to discuss and advise on RKEI and other issues and has recently established a series of short-life groups to examine how impact can be enabled. Individual members will work with academics to co-develop pathways to impact and contribute to impact seminars. Existing relationships with the members of the Board have led, for example, to joint PhD funding from NHS Tayside and Getinge AB to research post-COVID leadership and work organisation implications.

### Open Research

UoA17 works within the University's open research policy and follows the guidelines of the *Concordat on Open Research Data*. All outputs and datasets are recorded in the University's **Discovery Research** Portal, enabling access to research beyond basic REF compliance. For example, this involves, publishing reports and discussion series papers via Discovery and assigning them DOIs to boost discoverability and reuse. UDSB has a Working Paper programme providing public access to working papers authored by UoA17 staff and students. Staff are also encouraged to liaise with the library and publishers to ensure that book chapters, otherwise out of scope with the REF OA policy, are made openly available whenever the publisher permits. For unfunded research, where funding for open access articles is not available, the School has worked with library staff to make increasing use of read and publish deals, so that work that would otherwise be hidden behind a subscription paywall can be published via open access. UoA17 welcomed the University becoming a signatory to the *San Francisco Declaration on Research Assessment* (DORA) principles for selection and assessment of staff. **Martin** contributed in 2020 to a short-life working group of the British Academy of Management to examine the potential role of the Chartered Association of Business School's Academic Journal Guide in supporting open research.

### Research Integrity

Consistent with the University's strong support for the Concordat to Support Research Integrity, UoA17 is committed to embedding good research practice in all its activities. A Research Integrity Lead supports the School jointly with the School of Social Sciences and is responsible for

promoting a culture of research integrity and provides an independent and impartial source of advice on the responsible conduct of research, including any concerns about potential research misconduct. The University's online research integrity training, '*Responsible and Ethical Practice in Research and Publication*', is provided for all staff and is mandatory for PGRs, who must complete the training successfully before their PGR registration.

All research involving human participants by staff and students is subject to ethical review, ensuring that all interviews, surveys and observations are undertaken to appropriate standards. Ethical review is undertaken by a School Research Ethics Committee (joint with the Schools of Social Sciences and Humanities), which reports to the University Research Ethics Committee.

## 2. People

### 2.1 Staffing strategy and staff development

Our staffing strategy aims to build a sustainable high-performance research community focused on our research clusters to support our research strategy.

#### (i) *Balancing recruitment and development*

Our strategy is to grow UoA17 RKEI capacity by recruiting and retaining research-active academic staff with four characteristics: potential and proven research excellence; potential and proven collaborative and interdisciplinary working; a spirit of collegiality and concern for researcher development; and potential and proven expertise in impact and knowledge exchange. Over the assessment period, UoA17 welcomed 14 new lecturers: **Ahmed, Auxtova, Chen-S-C, Farooqi, Geesin, Kim, Kourtzidis, Li, Mazibas, Schreven, Ulus, Wang and Wu**. **Paramati** and **Pathak** were part of this cohort and promoted to Senior Lecturers. **Arshed, Dinney** and **Emvalomatis** were promoted to Senior Lecturers, whilst **Dunne** and **Mu** were promoted to Readers. Two professorial appointments were made through Grant and **Altman**, as Director and Dean of UDSB, respectively.

Our recruitment strategy aims to develop and maintain a healthy diverse demographic to underpin our future sustainability and succession planning. On 31 July 2020, the profile of our Category A staff was as below (Table 1).

Table 1: EDI profile (age, ethnicity, gender) at census date

Age	30-39	40-49	50-59	60+
	24%	45%	24%	7%
Ethnicity	white	BME	other	
	62%	35%	3%	
Gender	male	female		
	69%	31%		

Recruitment planning for longer-term sustainability in the REF period reflected our commitment to equality and diversity; 50% of the 10 new appointments made in August 2020 are female and 80% from BME backgrounds. All Category A staff are on permanent contracts. Further plans are in place to strengthen our strategic research areas over the next three years with five new posts



committed for 2021/22, including SL/Reader/Professor and preliminary approval from UoD to appoint new T&R staff in 2022/23 (see section 2.3).

### ***(ii) Developing capabilities***

To nurture and retain the talent we recruit, our research environment is designed to be supportive throughout people's careers. The annual Objective Setting and Review (OSaR) is the centrepiece of our staff development process and all staff have an annual meeting focused on identifying their development needs. All new starts have a 36 months' probation in line with University policy, during which they are provided with clear objectives, resources and support.

The University is compliant with the **revised Concordat to Support the Career Development of Researchers** and has held the **HR in Excellence with Research Award** since 2011. This has informed the comprehensive Occupational and Professional Development (OPD) programme mapped to Vitae's Researcher Development Framework. ECR and PGR communities benefit further from a programme of UoA17-specific writing workshops established in 2015. All ECR and mid-career academics seeking support are assigned a mentor. ECR staff can be assigned two mentors if they wish, one of whom is externally appointed through the **cross-institutional Teaching, Research & Academic Mentoring (TRAMk)** Scheme, now in its 14<sup>th</sup> year.

Discipline RKEI leads provide support networks to help staff deal with decisions from journals and review grant applications. These seminars continued online during the period of COVID-19 related closure. A series of impact seminars was introduced in early 2020 to help develop an impact culture and encourage staff to focus on impact in their work. Both series, delivered online, achieved high levels of staff and PGR attendance and will be continued in this format post pandemic.

### ***(iii) The Annual Research Review (ARR)***

Since 2016, Schools in the University conduct an ARR to ensure transparent and consistent management of research excellence across the University. The ARR panel, appointed and overseen by UDSB RKEI committee, evaluates output quality, funding profiles, impact, PhD supervision, public engagement and esteem. Convened by the Associate Dean for Research (ADR), the panel comprises six members drawn from UoA17, including the Impact and Public Engagement Champion and an external ADR. EDI considerations inform the membership the panel.

Our approach to the audit of outputs and advising staff on which outputs to submit to the University's ARR process is deliberately wide-ranging and in line with DORA. These outputs include peer reviewed journal articles, research monographs, book chapters in research collections, refereed full papers published in the proceedings of prestigious conferences, a series of discussion papers in Economic Studies, policy documents and published reports.

Over its period of operation, the ARR has evolved, focussing on staff to reflect on the previous year's performance and set goals for the future. Feedback is provided to staff to incentivise outstanding performance and build capabilities of ECRs and other staff who benefit from extra support, including further mentoring, making links with established researchers and additional time in the workload allocation to get their research careers back on track. The ARR provides important contextual information for the OSaR and informs the triggers for rewards or for developmental support.

**(iv) Workload Modelling**

A consistent workload allocation model (WAM) was implemented across the University in 2017-18. WAM sets a baseline of 30% research time for all staff on T&R contracts. The ARR informs decisions on additional research time allocation to incentivise staff with outstanding performance and potential to achieve excellent outputs with additional time, or to enable staff to focus on research and impact activities at times when they require extra support.

**(v) Impact**

Encouraging and facilitating impact forms part of UDSB's staffing strategy. The Impact and Public Engagement Champion (**Dinnie**, then **Arshed**), has a 33% workload allocation for this activity, and leads on the development of an impact culture to enhance the School's reputation for locally and globally engaged research. The *University's Public Engagement Forum* provides wider support for this activity and our excellence in Public Engagement was recognised by the award of a **Gold Engage Watermark** from the National Coordinating Centre for Public Engagement. The Impact and Public Engagement Champion provides advice to colleagues seeking to maximise the impact of their research, invites external trainers, and oversees a seed-fund to incentivise impact activities. Examples of seed-funding leading to potential impact case studies included work by **Zhu, Burton, Martin, Arshed** and **Morelli**, three of which were selected for submission to REF2021, along with impact activity involving **Patak** and **Dinnie**.

To incentivise the focus on RKEI, a seed fund for research and impact activities is available which was increased from £1,500 to £4,000 per member of T&R staff per year. It supports conference attendance, small seed-corn funding for new staff, and impact related activities (e.g. building networks and public engagement). It aims to facilitate engaged research and recognises the importance of staff presenting papers and networking at conferences, ranging from specialist practitioner-oriented events such as professional accounting, Chartered Management Institute and Chartered Institute of Personnel and Development conferences to refereed full papers at prestigious international conferences in the US such as the Academy of Management. This increase has allowed more staff to attend such conferences, which are key to developing a RKEI excellence culture and networks with academics and practitioners.

**(vi) RKEI performance**

Research performance (outputs, income and impact) is a key criterion for promotion for all staff on T&R contracts. The University has an annual round for staff to apply for promotions, which is supported by a process within UDSB. The Dean, in conjunction with the Associate Dean for Research and relevant Discipline Lead, is required to assess candidates' potential for promotion and to support appropriate candidates through the University process. Prior support and mentoring are given to staff who seek promotion. Based on the OSaR and ARR performance, staff are encouraged to apply and EDI profiles are monitored. Four UoA17 members were promoted during the assessment period - **Patak, Paramati** and **Emvalomatis** to Senior Lecturer, and **Dunne** to Reader.

**2.2 Postgraduate Researchers (PGRs)****Strategy for Enhanced Vitality and Sustainability**

UoA17 embraces the view that vibrancy and vitality in its research culture are strongly contingent on the recruitment and development of postgraduate researchers (PhD and Professional Doctorate). Through the establishment of its Doctoral Academy (DA) in 2019, UoD has positioned growth in quality and volume of its PGR community as a key strategic priority, along with enhancing University-wide support for PGRs and supervisors. Dunne led UoA17's involvement

with the DA and associated initiatives, including the introduction of the Doctorate in Professional Practice, which incorporates the Doctorate in Business Administration (DBA). It is aimed at experienced practitioners wishing to extend their professional development with a practice-oriented doctorate. We aim to grow PGR numbers further, consistent with the growth of T&R staff numbers outlined earlier.

### Postgraduate Researcher Community

In UoA17, all postgraduate researchers (PhD and Prof Doc) benefit from a bespoke **training programme** involving Research Methods, Quantitative and Qualitative Analysis and Directed Reading. PGRs can also choose from a range of modules from our taught postgraduate masters portfolio based on an Individual Training Needs (ITN) assessment.

During the assessment period, 67 PhDs were awarded, equating to 66.5 FTE within UoA17, including one shared supervision with another UoA (see Table 2).

*Table 2: Annual PhD completions (FTE) in during REF2021 assessment period*

Year	2014	2015	2016	2017	2018	2019	2020	Total
PhDs	16	12.5	9	10	8	9	2	66.5

There were no research-based professional doctorates awarded in the assessment period.

At the census date, we have a buoyant community of 66 PGRs evidencing increased recruitment activity throughout the REF period and a healthy pipeline of talented PGRs for future completions. We are a member of the **ESRC's Scottish Graduate School for Social Sciences (SGSSS)** Doctoral Training Partnership (DTP) and currently have one PhD candidate on that programme. Most of our PGRs are self-funding; five are funded through University studentships and one by NHS Tayside.

**Dunne** is the Director of Doctoral Studies, spanning disciplinary PhD pathways and the Doctorate in Business Administration (DBA). The academic lead position has a 30% workload allocation to manage strategic and operational performance supported by the UDSB's RKEI administrative lead. Currently, we have 14 students on the DBA programme, with ambitious plans to expand our external partnership network. Disciplinary pathway coordinators - **Kourtzidis**, **Pathak** and **Rambaccussing** provide specialised domain-specific support and bring the community together in regular seminars.

### Support for PGRs

- a) UoA17 provides high levels of supervisory support to all PGRs, enhanced by the University-wide support for the student experience and training for supervisors through the Doctoral Academy. All PGRs are allocated two (occasionally three) supervisors with expertise in their area of study. All first supervisors are **committed and highly experienced**, with successful completions, are EDI trained and well versed in the *University's Research Code of Practice* and the *Research Degrees Quality Code* which is reviewed annually. Second supervisor roles are a vital means by which early career staff gain experience. Each student meets with the **Thesis Monitoring Committee (TMC)** on a bi-annual basis to monitor progress and address any concerns or problems that the student is experiencing at an early stage. They also seek to provide pastoral care and nurture and inspire students during their academic journey. All full-time, self-funded students are provided with dedicated office space in the same building as

their supervisors, high-spec computers, a conference allowance of £600 annually which they are encouraged to supplement with external funding and a £250 allowance for research-related expenses, such as training, field work and consumables. On arrival, new students meet with their supervisory teams and complete a **Training Needs Assessment** form, which guides much of their training and development needs. This form is designed to be a live document and is formally reviewed at all TMC meetings.

- b) The **ESRC Scottish Graduate School of Social Science** (SGSSS), gives all PGRs the benefit of the training and development provided by the DTP. Students and staff take part in and contribute to the annual SGSSS Summer School, allowing students to network with others from Scottish Universities. Discipline-specific events are also supported with, for example, accounting and finance students presenting at the **Scottish Doctoral Colloquium** (ScotDoc), the annual International **BAFA Conference**, and the annual conference of the **Scottish Graduate Programme in Economics** (SGPE). UDSB also organises a yearly weekend retreat for doctoral candidates. These advanced-level training events centre on a particular aspect of the doctoral experience such as writing for publication, exploring notions of theory, research dissemination and funding.
- c) UoA17 aims to ensure that **PGRs are an integral part of the research culture**. All are invited to the regular staff seminar programme and several have co-authored high quality research with Unit staff. PGRs are invited to showcase their work in several ways. The annual UDSB School Forum affords doctoral candidates the opportunity to present their work either by means of presentation or the creation of a poster. We also hold twice-yearly Doctoral Presentation days where students can present their research to **larger audiences** from across the social sciences under the aegis of **ISSR**; these events foster interdisciplinarity and expose students to theoretical conceptions and experimental methodologies that are new in the field. Plans are also in place to establish a student journal, complete with an editor from the staff. Going forward, our intention is to foster stronger interdisciplinary connections within UoA17 and realise the huge opportunities of working across the institution, with supervisors from different disciplines. Evidence of the growing appetite for such interdisciplinary collaborations is shown in active co-supervision of PGR projects by **Mu** and Macatangay (CEPMLP) on natural gas trading, **Morelli** and Searle (Geography) on funeral poverty, **Arshed** with Ianetta (James Hutton Institute) on transition to plant-based foods, and **Schreven** with Doherty (NHS Tayside) on clinical culture change.

### 2.3 Equality, Diversity and Inclusion (EDI)

UoA17 is **committed to promoting equality, diversity and inclusion for all our community** in line with the University's EDI policies. The University is a member of the **Race Equality Charter** and there is strong representation (35% of Category A) from BME staff in the submission. We **hold an Athena SWAN bronze** award received when part of Social Sciences and look forward to refreshing this part of UDSB's vision.

We will prioritise the drive towards gender equality in terms of career progression for our significant community of female Category A staff (31%). This is reflected in the appointments made between 2017 and the census date with females appointed to two of three senior lecturer positions and five of nine lectureships; BME staff are represented in four of these appointments. 50% of our ten new appointees in August 2020, which resulted from recruitment policy and activity predominantly in the REF period, were female and 80% BME.

To ensure we comply with the Equality Act (2010), and that inclusion and diversity are embedded within the working culture of the School, all staff must complete online modules on 'Diversity in the Workplace' and 'Disability'. Additionally, a module on Recruitment and Selection is taken by staff involved in those activities. EDI is a regular agenda item at School Research and Knowledge Exchange Committee meetings to ensure that all research and research-related matters are considered in that context. The School has appointed an EDI Officer (**Farooqi**), whose role is to promote EDI in all activities undertaken in the School, including RKEI. We also draw on our domain research, e.g. **Ulus**' powerful critiques of workplace emotions in postcolonial spaces to support our progressive ambition.

The OSaR and ARR processes ensure that research expectations are adjusted for individual circumstances (e.g., parental leave, caring responsibilities, long-term illness). This includes flexible working patterns, research leave, additional workload allocation and internal research funding. For example, research leave is available under the University's Periodic Leave ('research leave') policy to enable staff to further their research and impact activities and to build and support capabilities for early career researchers and staff returning from periods of absence, or who may need concentrated periods of leave to get their career back on track. This policy allows staff to apply for up to a semester leave every three years, with shorter periods possible on a more frequent basis.

In preparing its REF submission, UoA17's Planning Group was guided by the University's REF2021 Code of Practice, which framed our decision-making in the context of the principles of equality, diversity and inclusion. The Planning Group made its decisions on outputs and attributions in a manner that aimed to maximise the overall quality profile for the submission, based on a thorough process of internal and external evaluation. Comparisons based on protected characteristics suggest no bias in output selection. Staff were invited to propose potential impact case studies. The submitted case studies reflect the Planning Group's view of UoA17's strongest demonstrable research impacts during the reporting period. All members of the Planning Group completed mandatory unconscious bias and information security training prior to the decision-making process.

### 3. Income, infrastructure and facilities

Research income and investment in infrastructure and facilities are essential to the vision and sustainability of RKEI in the School and address our strategic objectives.

#### 3.1 Research income

All T&R staff are encouraged to apply for research funding. This is monitored through the ARR. We support the development of grant writing skills and encourage even small amounts of research income which enable staff to gain experience in applying for funding and have been translated into significant outputs, knowledge exchange and impact. Examples of awards, which generated significant academic and practical impact, include: £253,040 from the ESRC to investigate Chinese National Oil Companies and the Economic Development of African Oil Producers (Bergman), £214,779 from the EU as part of a consortium researching the potential of Crowdfunding for Renewable Energy (Klaes); £19,712 from Scottish Government for Tackling Funeral Poverty in Dundee through Social Enterprise (**Morelli**), which supported an influential report on alleviating funeral poverty, recommended Scottish Government and UK government regulation over the funeral sector, led to the establishment of the charity Funeral Link and a ESRC/SGSSS studentship; £31,356 from the British Medical Association Scottish Consultants Committee (**Martin**) resulting in three outputs, including an impact case study on medical leadership and engagement in the NHS, appointment to NHS Tayside Board and invited presentations to



academics and medical practitioners in England, Australia and Sweden; £119,229 from the AHRC for participation in the Creative Industries Cluster InGAME – Innovation for Games and Media Enterprise (**Beech**), an academia-industry consortium which aims to enhance the sustainability and innovation potential of the creative and computer gaming sector.

Our strategy for generating research income has been to capitalise on our discipline RKEI strengths and on wider RKEI collaborations. UoA17 has been successful in gaining research income of £667,780 over the REF period from the ESRC, Department of Education, the British Academy, the European Commission Horizon 2020 programme, British Medical Association, Scottish Medical Education Research Consortium and the Chartered Institute of Personnel and Development. Research funding is centrally supported by Research and Innovation Services (RIS) with advice on funding opportunities and support for bid development, and we have access to up-to-date funding opportunities via RESEARCHconnect. Training is provided by the University's Occupational and Professional Development (OPD) programme and application and award management is resourced by Research Finance Services (RFS).

Going forward, UoA17 aims to diversify its funding streams and win a small number of larger collaborative grants by joining wider consortia with colleagues across the University and with external partners who are experienced in grant capture, including the Schools within the University's Health & Wellbeing Theme and the other Social Sciences Schools brought together under the ISSR. UoA17 staff benefit from the University's Dundee Interdisciplinary & Innovation Forum (DIIF), coordinated by RIS, which facilitates collaboration on major funding opportunities. The EU Horizon 2020 **CrowdFundRES** consortium (Klaes, **Burton**) is an example of successful ISSR collaboration, drawing energy economists (Bergmann, **Mu**) from the University's specialist energy centre CEPMLP into UoA17. We also aim to pursue Knowledge Transfer Partnerships as a vehicle to enhance our collaboration and impact with UK businesses, and are currently establishing a strategic partnership with NHS Tayside to co-fund PhD students and collaborate on research.

### 3.2 Infrastructure and facilities

**Physical infrastructure:** UoA17 is situated in a listed building in a prominent campus location, fully refurbished in 2019 to meet the expectations of staff, PGR and external collaborators. It contains high quality seminar and meeting rooms, and spaces designed to facilitate informal dialogue and knowledge sharing. It includes a **Financial Trading Lab** with Bloomberg data terminals and a **Decisions-Making Lab** to enhance research capabilities. To enable growth, advanced plans are in place to completely renovate and extend the existing buildings on the main campus.

Office accommodation plays an important role in creating integration among disciplines and in developing new ideas. All staff are given individual rooms located in the same building that has ample space for interaction. To encourage interdisciplinary working, we have allocated the space to mix up disciplinary backgrounds. PGRs share office space with staff in the same building to encourage interaction within our research community. Two coffee rooms provide informal meeting spaces and are widely used by staff and PGRs to discuss research-related issues.

Staff and PGRs have access to a state-of-the-art library, IT facilities and rooms for meetings, which are closely located near the existing UDSB building and the proposed extension to accommodate our rapid growth. The library is fully equipped with the necessary online databases relevant for business and management research and with dedicated study space for PGRs. They have access to specialist financial and economic databases to conduct secondary research. A dedicated Library

Liaison Officer to the School, provides advice on all aspects of library and information services. Each year, UoA17 undertakes a review of software, subscriptions and databases to reflect continuing and changing RKEI requirements and make a case for new journals, while proposals to purchase books are sought by the library on a continuous basis.

**Digital infrastructure:** UoA17 actively embraces the University's online Research Information System, **Discovery**, which is fully supported by the Library and Learning Centre (LLC) and provides a public open access institutional repository of outputs, data and activities, including media interactions and worldwide collaborations and impact, linked to staff and PGR webpages. We are guided by compliance with the **Concordat for Open Research Data** which is centrally supported by LLC and IT with tailored storage solutions and support for Data Management Planning underpinned by the *University's Policy to Govern the Management of Research Data*.

**Human infrastructure:** Research leadership is provided by the Research and Knowledge Exchange Committee (RKEC), chaired by the Associate Dean Research (ADR, **Martin**) responsible for shaping the RKEI strategy and overseeing researcher development and achievements of UoA17. The role forms part of the community of ADRs reporting to the University Research and KE Committee (URKEC), chaired by the Vice-Principal (Research, KE and Wider Impact) and member of the University Executive Group. The ADR is supported by a Research Administrative Lead, an Impact and Public Engagement Champion acting also as Depute ADR (**Arshed**) and a Director of Doctoral Studies (**Dunne**) to oversee the recruitment and leadership of PGRs. The ADR and Depute ADR have completed the CABS/BAM Development Programme for Directors of Research (DPDoR). The wider support includes a School Manager, Operations Manager, a Marketing Manager, and two senior administrators who focus on employability and knowledge exchange. The UDSB RKEC oversees the governance of RKEI activity including allocation of internal funding and support for PGRs. The ADR is a key member of the UDSB Executive, which meets on a weekly basis, and participates in the URKEC five times a year formally and, more frequently, through informal University ADR meetings.

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

##### Collaboration, Networks and Partnerships

UoA17 has engaged in extensive collaborative RKEI activities with colleagues across the University and externally. These include close relations with the Academy of Medical Royal Colleges' Faculty of Medical Leadership and Management; a Key Technology Partnership with UTS in Sydney for staff and PGR exchange; the Centre for Global HRM at the University of Gothenburg; the Centre of Entrepreneurship, Innovation and Strategy at the University of Twente; the University of Bergamo Business School; Newcastle University, New South Wales; the Dundee City Branding Group, the Scottish Universities Branding Group, NHS Tayside and the Tayside Health Sciences Institute, and the Cooperative College UK.

Our strategy to widen and deepen our partnerships has been supported by the introduction of the Industry Advisory Board. Academic collaboration with NHS Tayside is supported by the Academic Health Science Partnership (AHSP), established in 2014 as a catalyst to deliver healthcare improvement research in collaboration between the University and NHS Tayside. Discussions are currently ongoing to involve business and the social sciences more effectively in this partnership. Collaborations are evidenced by the high proportion of external co-authored papers submitted to REF2021 by UoA17, accounting for more than 70% of all outputs, and positions held which include, amongst others, visiting Honorary Professorships and Fellowships in Gothenburg, UTS, Monash, Macquarie and Newcastle NSW.

### Contributions to the Discipline

UoA17 staff have been engaged in a broad range of activities contributing to the development of business and management in Scotland, the UK and internationally, thereby enhancing public value. Research outputs have regularly been published in international journals, shaping and contributing to major debates and, in some cases, having important policy and practical impact. Notable contributions include:

- Organising/co-organising national/international conferences, including the British Academy of Management (BAM) annual conferences (Beech, **Martin**), Academy of Management and EGOS Symposia (**Schreven**, 2020), the Conference for Qualitative Research in Finance (Burton), UDSB international partners conference (**Paramati**, 2020), all of which have resulted in widened research networks and outputs.
- Keynotes on new developments in HR, including the Annual Conference of the Centre for Global HRM, University of Gothenburg and on medical leadership at the Centre for Innovation and Change, University of Twente and BMJ (**Martin**).
- Engaging in international research exchanges for collaboration over recent papers at UK and overseas universities, which have enhanced the reputation of UoA17 internationally and resulted in international cooperation (**Auxtova, Chen, Power, Mu, Schreven, Ulus**).
- Editing/co-editing/guest editing international academic journals e.g., *Qualitative Research in Financial Markets*, *European Journal of Finance* (**Burton**), *Journal of Organizational Effectiveness*, *European Management Journal* (**Martin**), *British Journal of Management* (Beech), *Journal of Business Models*, *Meditari Accounting Research*, *Business History* (**Morelli**), *Regional Studies* (**Arshed**), *Journal of Business Models*, *Medari and Accounting Research* (**Cordina**), *Review of Behavioural Economics*, *Perspectives in Behavioural Economics and Economics of Behaviour* (**Altman**).
- Serving on editorial boards, including the *Journal of Family and Economic Issues*, the *European Management Journal*, *Journal of Organizational Effectiveness: People and Performance*, *British Accounting Review*, *Accounting Forum*, *Accounting, Auditing and Accountability*, *Critical Perspectives on Accounting*, *Accounting Forum*, *Accounting and the Public Interest*, *Accountancy*, *Business and the Public Interest*, *Journal of Financial Reporting and Accounting*, *International Journal of Financial and Accounting Studies*, *Management Learning*, *Scottish Journal of Political Economy*, *European Review of Agricultural Economics*, *Journal of Family and Economic Issues*, *Review of Behavioural Economics and Journal of Economic Psychology*.
- Membership of scientific review panels for major international conferences, e.g. IHEA (International Health Economics Association) World Congresses (**Allanson**), International Workshop of Applied Economics of Education (**Zhu**), International Co-operative Alliance, Society for the Advancement of Behavioural Economics, International Association for Research in Economic Psychology, Western Economic Association International (**Altman**).
- Supporting disciplinary development through chairing and board membership of key associations. Notable examples include: Chair of BAM (Beech), BAM Council member (**Martin**), Advisory Board Member of the Centre for Global HRM, University of Gothenburg in Sweden (Martin), Research Advisory Board International Cooperative Alliance (**Altman**).
- Supporting the work of UK and overseas research councils and funding bodies, e.g. ESRC (**Dunne**, Beech) and Innovate UK (**Arshed**).
- Supporting the work of the Academy of Social Sciences (Beech).

- Visiting Professorships at Southern Denmark (Roslender), Gothenburg, UTS and Macquarie (**Martin**) and visiting Fellowships at UNSW (**Zhu**), Monash (**Allanson**). Nomination for Companionship of CIPD (**Martin**).

UoA17 has hosted visiting researchers from overseas to work with staff on research projects including Dr Hongliang Zhang of Hong Kong Baptist University, Prof Alfonso Miranda of CIDE Mexico, Dr Javier Vabuena and Professor Massimo Contrafatto (Bergamo University, Italy).

### Contributions to the Economy and Society

- **Arshed** was appointed as Independent Adviser to the Minister for Business Adviser to the Minister for Business, Fair Work and Skills; expert panel member for the Department of Business, Energy and Industrial Strategy; and Scottish Parliament Research Fellow.
- **Burton** and Bergmann secured grant income from the EU Horizon 2020 Programme for research into crowdfunding of renewable energy projects, which has led to the production of influential knowledge exchange events, for example, a European Policy Workshop for Crowd Funding Research, Brussels 2017, and published reports *Guidelines for Crowdfunding Platforms Interested in Hosting Renewable Projects*. This work is influencing policy makers and businesses who seek to use crowdfunding platforms for renewable projects, and to the production of high-quality journal articles.
- **Dinnie** was appointed Director of Visit Dundee Ltd, Member of Dundee City Branding Group; Member of Universities Scotland International Committee Branding Group; Member of Tsinghua University Internationalisation Advisory Panel (Tsinghua University, China), which provides the basis for further impact.
- **Martin** researched Getinge, a global medical supplies company based in Gothenburg, and Waracle, a local, scale-up company based in Dundee, over the period 2017-20. This led to strategic change in these organisations and further collaboration via Martin's appointments as Visiting Professor at the University of Gothenburg's Centre for Global HR and Chair of its Academic Advisory Board, collaboration with a large Swedish hospital and co-funding of a PhD with Getinge AB to evaluate changes in work organisations post-COVID19, as well as accolades of Academic Fellow and, more recently, nomination for Companion of the Chartered Institute of Personnel and Development in recognition of his contribution to research, policy and practice in HRM.
- **Martin** and Beech appointed as Non-executive Board members of NHS Tayside, and Chairs of its standing committees on Staff Governance and the Remuneration Committees, and non-executive Board members of both Dundee's and Angus' Health & Social Care Joint Integration Boards. These public appointments have resulted in extensive cooperation and joint research projects in the field of healthcare and clinical leadership and culture change.
- **Morelli** has Membership of the Scottish Government Expert Panel of Social Security and Dundee Community Commission on Poverty. His work has led to an influential report on alleviating funeral poverty, which recommended Scottish Government and UK government regulation over the funeral sector to protect vulnerable families. This work has resulted in the establishment of Funeral Link, a new charity in Dundee, and will be further developed by an ESRC/SGSSS studentship jointly supervised with Geography.
- **Power** and **Roslender** were awarded Lifetime Achievement Awards from the British Accounting & Finance Association (BAFA) in 2020. This recognition is given each year to one or more individuals who have made substantial and direct contributions to the UK academic accounting and finance community over the course of their careers. With the award, they join

just over 50 other academics that have been accorded this accolade since its inception in 2003.

- **Zhu** participated in and organized multiple knowledge exchange events, including expert panels for the Department for Education, the Resolution Foundation Private Roundtable on returns to higher education and the Graduate Labour Market Ministerial Roundtable for the Department for Business, Innovation and Skills. The knowledge exchange events led to influential published reports and academic articles on labour market returns to education for the UK Department for Education, and on the benefits of STEM skills for individuals, society and the economy for the Royal Society.
- **Zhu** undertook research for the Institute of Fiscal Studies and the Department for Education into the graduate premium, extensively cited in the **Augar** report.

UoA17 has experienced significant development over the REF period following a revised vision and prioritisation of RKEI in the strategy and activities of UDSB. Its new structure and culture have yielded a step-change in performance since 2014 in respect of: i) number of new research-active staff, ii) vitality of the research, knowledge exchange and impact (RKEI) environment, iii) peer-reviewed outputs in international journals, (iv) collaborations with external stakeholders, and (v) impact beyond the academy to create public value. UoA17 is well set up to achieve its future ambitions over the next REF cycle by investing significant resources in developing human, social and intellectual capital to further enhance its reputation for RKEI internally, locally and globally.