

**Institution: Cardiff University**

**Unit of Assessment: 19 – Business and Management**

**a. Overview**

Researchers are organized into five academic Sections, whose titles denote their main disciplinary base and form the primary organising unit for research: Accounting & Finance (AF), Economics (ECON), Human Resource Management (HRM), Logistics & Operations Management (LOM), and Marketing & Strategy (MS). Research groups then bring researchers together to focus on specific areas, operating mainly within Sections but also linking across them. The submission also covers Business School researchers who contribute to cross-disciplinary University Research Institutes and Centres which operate across Schools: the Centre for Business Relationships, Accountability Sustainability and Society (BRASS), Centre for Local and Regional Government Research (CLRGR), the Centre for Advanced Manufacturing Systems at Cardiff (CAMSAC), the Research Centre on Skills, Knowledge and Organizational Performance (SKOPE), the Welsh Institute for Social and Economic Research Methods and Data (WISERD), and the Sustainable Places Institute (PLACE), one of three University Research Institutes.

Research strategy is developed by the School's Senior Management Team with significant input from its Research Committee via its Chair, the Associate Dean (Research). The Committee is constituted by both senior and elected representatives from each Section, plus two research staff representatives, the Doctoral Programme Director, the Chair of the Research Ethics Committee, and senior members of professional services. In the latter stages of the REF period, under the leadership of the new Vice Chancellor Professor Colin Riordan, Cardiff University was re-structured into three colleges each led by a Pro-Vice Chancellor. Research work carried out in UoA 19 is now within the College of Arts, Humanities and Social Sciences. The School's Associate Dean (Research) meets regularly with other Directors of Research in the College and the University as a whole, as well as with the College Dean of Research.

**b. Research strategy**

The School aims to attain research excellence in breadth and depth. The defining feature of the School's research strategy is a clear and consistent commitment to the production and dissemination of social science knowledge of the highest international standards across the full range of disciplines, founded on a strong and vibrant multidisciplinary research culture. This knowledge, which spans mainstream and specialist areas, is generated through a range of approaches, drawing on multiple methods of conducting empirical research and a variety of ways of theorizing. The School is marked by its commitment to engaging with the full spectrum of actors within the economy, including large corporations, small businesses, regional and national governments, trade unions, third sector organizations, and transnational agencies.

The period from 2008 to 2013 has seen Cardiff Business School build on its strong position as one of the UK's major social science centres for business and management research. Research lies at the heart of the School's mission and strategy. The quality of research enables the School to attract faculty of international repute and high quality students, and to win research funding from the full range of funding providers. Its researchers produce around 550 research outputs each year. Independent assessment by the *Times Higher* put Cardiff Business School in the UK Top Ten for combined Business & Management and Economics citations per paper over the period 2000-10. Researchers from across the School also make direct contributions to practice, including: policy advice to government, non-governmental organizations and international organizations (such as the European Commission and International Labour Organization); professional guidance documents and articles in the professional press; and, individual reports for companies or networks of commercial collaborators. These dissemination activities contribute to the wider impact of research.

Research at Cardiff Business School has key features that give it a distinctive character:

**A focus on innovative theoretical and conceptual development** - for example, the post-structuralist and critical realist theorizing of the Cardiff Organization Research Group (CORGies) and the work of the Interdisciplinary Perspectives on Accounting research group (IPARG) on the social and organizational aspects of accounting and control.

**The application of critical social science to the examination of key issues in economy and society** - for example, the research on labour transnationalism by the Employment Research Unit (ERU) and on sustainability in the context of the flows that occur between places by Business School faculty situated in PLACE.

**A long-term commitment to interdisciplinary and multi-method empirical research** - for example, the multidisciplinary and empirical organisational performance research of the CLRGR and marketing and economic psychology research of the Consumer Behaviour Analysis Research Group.

**An emphasis on international comparative research** - for example, the research on comparative management and the implications of globalisation in the areas of International Management and Japanese Management.

**Long-standing engagement with policy debates and practical applications through the production of high quality academic research** - for example, the Julian Hodge Institute for Applied Macroeconomics (JHIAM) research on the interplay between the UK economy and those in Europe and the rest of the world, and interdisciplinary research on manufacturing management and engineering by the CAMSAC.

Consistent with the strategy outlined in RAE2008, **a strong commitment to the recruitment, development and retention of outstanding research staff has been central to activity in the REF period.** Through investment the School has continued to support research in areas of key strength, including Public Management, Critical and Interdisciplinary Accounting, Critical Management Studies and Employment Relations. These have been augmented by considerable success in attracting research fellowships, including an ESRC Advanced Institute of Management Research (AIM) Mid Career Fellowship (Joe O'Mahoney), a European FP7 Marie Curie International Outgoing Fellowship (Andrew Crawley), a Health Care Foundation Improvement Science Fellowship (Sharon Williams), an ESRC Future Research Leader award (Marco Hauptmeier) and three ESRC/SAMS Management and Business Development Fellowships.

Further progress in recruitment has been underpinned by a dual-track approach, which involves the continuing support of established strengths while new areas of research are selectively developed. In this regard, **new strategic investments during the REF period include the following Professorial appointments:** Corporate Finance (Marc Goergen), Corporate Social Responsibility (Adam Lindgreen), International Management (Glenn Morgan), Operational Research (Aris Syntetos), Strategy (Costas Andriopoulos) and Supply Chain Sustainability (Helen Walker). A number of the post-doctoral Fellows have been allocated to emergent areas of research, particularly where this work encourages cross-sectional activity. These include corporate governance and finance, sustainable supply chains, strategic entrepreneurship, microeconomics and monetary policy. In addition, the long-established Section and Research Unit seminars and meetings have been augmented by a newly (2011) created series of School-wide Cardiff Research Workshop Series (CReWS) featuring presentations by leading international visitors, editors of major journals from within the School, and also topic-focused discussions, to promote new research themes and enhance multidisciplinary activity.

As anticipated in the RAE 2008, **the School has developed its links with other parts of the University through its significant involvement in a number of research centres.** Major RCUK centres have continued to be supported and remain integral to the School and University's research profile. The ESRC-funded BRASS research centre was central to the University's establishment of PLACE, providing a model for cross-School collaboration and demonstrating the value of an interdisciplinary approach to researching sustainability. Within PLACE the research agenda and legacy of BRASS has been sustained and developed. Similarly, the work of the EPSRC-funded Cardiff University Innovative Manufacturing Research Centre (CUIMRC) has been taken forward in a multi-school research centre (CAMSAC) that, as well as bringing together management and manufacturing engineering, has incorporated research involving medicine, chemistry and construction. The School also plays a major role in WISERD which has continued to develop over the REF period, providing a model of all-Wales Higher Education Institution collaboration that was instrumental in the successful establishment of the ESRC Wales Doctoral Training Centre (DTC). The School's involvement in the ESRC DTC has been particularly

beneficial in terms of integrating doctoral training across the social sciences.

**The School's doctoral programme has continued to develop very successfully within the interdisciplinary DTC.** A total of 113 PhDs were awarded within the current REF period with some outstanding scholars amongst them. For example, Uzma Javed won first prize in the European Doctoral Programmes Association in Management and Business Administration (EDAMBA) European Doctoral Thesis Competition in 2012, Sarah Hurlow won best thesis at the Academy of Management Conference (Critical Management Division) in 2010 and Yingli Wang won the Chartered Institute of Logistics and Transport award for PhD research that makes an original contribution in 2009.

There are two further key aspects to how research activity has been augmented during the REF period. The *first* is that **the engagement and impact elements of research have been given greater prominence through a variety of means**, starting with the introduction of advisory boards at both School and Section level (see Section e). The School has invested significantly in its external relations and engagement capabilities, increasing staff numbers in the Engagement Office from two to five and providing academic leadership through both an Associate Dean, and a Deputy Associate Dean, for Engagement. In addition, the appointment of the School's first Research Impact Officer has assisted in connecting academic research with various potential beneficiaries. The *second* has been **a more proactive approach to the support and development of individual staff**. This has included a concerted enhancement of the School-level appraisal scheme and a number of innovative new schemes to further support researchers (see Section c). These arrangements have been developed as part of the School's strategy for Human Resources and in support of its commitment to equality of opportunity. The School has also benefited from, and been a full participant in, the University's extensive efforts in this area (see Section c).

**The School is currently three years into a five year strategy to achieve 'balanced excellence'** across its activities that builds on and complements its research. Independent assessment by the AACSB in 2012 commended the School for, amongst other things, its commitment to this strategy. The AACSB panel in particular highlighted the ways in which excellence in research drives excellence in teaching and engagement; the strong support for the research mission provided by the organizational structure; the collegiate environment where people are valued and students are an integral part of the School's culture. They also noted the School's continuous improvement philosophy provides a strong foundation for further development.

Two key **areas for strategic development are i) the extension of the School's cross-disciplinary research activity, and ii) the development of collaborative relationships** with major international research partners.

i) The University is undertaking major investment, in the region of £250million, in staff, post-graduate research (PGR) students and capital development to support the delivery of research excellence and impact. Cardiff Business School will play a significant role in this through the University's commitment to develop a new social science research park (SSPARK) which will co-locate research centres and third party users. SSPARK will be a major capital investment in bringing together researchers from across the disciplines along with policy makers and practitioners in order to promote the design, conduct and evaluation of high quality cross-disciplinary research with impact.

ii) Within the School, we will develop a programme of targeted strategic research collaborations with leading and developing universities around the world. Activities will include the establishment of new research networks on specific themes and collegiate support, such as annual international peer-review. These developments will complement the School's existing links with the Universities of Bath, Bristol and Exeter via Cardiff University's membership of the GW4, a formal collaboration aimed at bringing together a high concentration of research expertise and capability in the South West of England and Wales.

At an operational level, **further enhancements are planned with the doctoral programme and in winning research income**. With regard to the doctoral programme these include: stronger alignment between students' research plans and staff research interests; development of strategic partnerships with a number of internationally leading business schools to promote student mobility

and access to thought leaders; and, enhancement of performance indicators to monitor the quality of doctoral students and their achievements subsequent to graduation.

In terms of research income, while the School has generated a considerable level of external income through researchers who are exemplars, a series of workshops and group activities are planned as a first step in developing a more collective and shared culture to generating funding. The developmental aspects of the internal peer review process will also be enhanced. Key measures of success will include the volume of multidisciplinary research income and the quality of research outputs that result.

### c. People, including:

#### i. Staffing strategy and staff development

The School's research strategy relies on the recruitment, development and retention of excellent researchers. The School has a strong track record of recruiting early career researchers and nurturing their development through to scholars of international standing. Examples of people who joined Cardiff Business School as doctoral students or early career researchers and have progressed through to professorial positions include Professors Annette Davies, Rick Delbridge, Stephen Disney, Martin Kitchener, Mohamed Naim, Emmanuel Ogbonna and Robyn Thomas. Recruitment at more senior levels is used strategically to sustain and extend established research strengths or to promote emergent areas of new research, as well as provide intellectual leadership (see Section b). As evidence of the supportive internal environment, the School experiences low levels of staff turnover and has seen the burgeoning of many research careers; 34 staff were promoted in the REF period including seven to full Professor and ten to Reader.

The vast majority (83%) of the School's academic staff are employed full-time on open-ended Teaching & Research (TR) or Teaching & Scholarship contracts. All TR staff benefit from the same basic conditions and are allocated similar workloads for teaching. The exceptions are probationers who have a reduced workload of 10 per cent while they are completing probation and also receive additional credits under the workload formula for delivering new lectures. There are also allowances against the teaching workload for staff with very significant administrative responsibilities. These provisions are made as part of the School's commitment to producing a context of equality and support for all research-active staff at any stage of their career. Benchmarking on the basis of Association of Business Schools (ABS) data with other comparable research-intensive business schools indicates the School has amongst the lowest number of students per FTE staff member in the Russell Group.

#### **Staff development**

All staff are members of one of the five Sections, which provide the main intellectual home and support network, giving access to other experienced senior colleagues but also early and mid career researchers who can offer advice and insights from their own experiences. **The School provides an environment where researchers can thrive by protecting their creative space, investing in research through various schemes and initiatives, and actively promoting communication and collaboration** within and across the School and beyond. A central part of the formal induction process undertaken by all new staff includes an introduction to the School's research culture, the various Research Committee schemes and relevant ethics procedures. All research projects that involve human participants whether internally or externally funded are reviewed for ethical issues and signed off by the School's Research Ethics Committee. A regularly updated Research Handbook, available online to all staff and at induction, provides details of activities that both support research and promote research through School structures and external opportunities. The School has a long-standing commitment to the support and development of staff at all stages of their career. **The School implements the principles of the 'Concordat to Support the Career Development of Researchers', part of an integrated approach promoted by Cardiff University.** The University has been recognized by the European Commission for its efforts in improving the working conditions and career development opportunities for researchers through the *HR Excellence in Research* accreditation, which was renewed in 2012 in recognition of the University's progress in implementing the Concordat.

Regular reviews, plus annual appraisals, with senior line managers provide the opportunity for staff to discuss training and developmental needs, either through existing schemes or external provision. The appraisals, typically with the appropriate Head of Section (Principal Investigator or



Research Centre Director for research staff), provide the opportunity to discuss achievements, objectives and priorities for the year ahead, and areas where further support or advice may be required. In addition, all new recruits are assigned a senior member of staff to act as their formal mentor with the responsibility of supporting and guiding them through the early stages of their career and also a 'buddy' for informal advice.

As outlined in Section b, **the School retains a firm commitment to recruit and develop 'home-grown' talent as outstanding scholars from the initial stage of their careers.** The newly developed post-doctoral research fellow scheme has further complemented this approach in the REF period. With five internally-funded post-doctoral research fellowships, three ESRC/SAMS Management and Business Development Fellowships appointed during 2011 and 2012, and a successful ESRC Future Research Leader award, the School has created a cadre of post-doctoral staff who benefit from working alongside each other as well as from engaging with existing training programmes. The training and development needs of these and other early career researchers in the School are provided through a combination of University-, School- and externally-led (e.g. ESRC) initiatives.

**The University promotes a culture of continuous personal learning throughout a researcher's career.** There are a wide range of courses and online modules available as part of its 'Cardiff Researcher Programme'. The Researcher Programme is structured around the Vitae Researcher Development Framework (RDF), endorsed by RCUK, which encourages researchers to aspire to excellence through achieving higher levels of development. Opportunities are also provided through the Welsh Crucible Scheme, a programme of professional development for future research leaders. The Scheme is run collaboratively by the Welsh universities to promote interdisciplinary working across institutions. Each year the scheme selects and supports a small number of the most promising researchers from across Wales. Leanne Cullen Unsworth and Yingli Wang were in the inaugural 2011 cohort. Yingli Wang was also the first academic from the School to join a new University scheme, Cardiff Futures, designed to support early career staff to develop their career path and to explore how they might contribute to shaping the future of the University. More recently, Deborah Hann has joined the programme.

The School draws on the very considerable **expertise and experience of its own staff** to provide discipline-specific support and development to early career researchers, some of which is delivered through its Cardiff Research Workshop Series (CReWS). For example, Mike Wallace, who has held a number of positions providing support for researchers with the ESRC including AIM Lead Fellow for Capacity Building, has led a number of workshops on winning research income, developing research proposals and training research trainers. The School's other AIM Fellows (George Boyne, Rick Delbridge, Joe O'Mahoney and Robyn Thomas) have all initiated and/or participated extensively in bespoke training and workshop sessions for staff on a range of issues including securing ESRC research funding, writing for top journals, delivering research-led teaching and producing research impact from excellent academic research. **International visitors have also contributed** to the CReWS School-wide development workshops, including Professors Kwaku Atuahene-Gima (CEIBS), Cynthia Hardy (Melbourne), Denise Rousseau (Carnegie Mellon) and Andrew van de Ven (Minnesota).

The School is also keen to enable its more experienced researchers to take on more senior roles and encourages them to continue their own professional development. Since 2008, ten members of the School's staff have completed the University's *Times Higher* Award winning 'Leadership & Development Programme for Research Team Leaders', while two staff members have completed the University's 'Practical Leadership for University Management' programme.

#### **Staff support**

New School Research Committee funding initiatives have been introduced to support research during the REF period; **overseas travel fellowships** allow individual researchers to visit leading international research institutions for an extended period; the **international visitor scheme** funds leading international scholars to spend time in Cardiff; **agenda-setting conference funds** provide resources to host major events in Cardiff; **policy and practice workshop** funding supports the wider dissemination of research findings beyond academia.

These new funding initiatives are run in conjunction with well-established provision: the Individual

Research Budgets (IRB) and Seedcorn Funding. The IRB provides £3K per annum for all research-active academics who have personal discretion over how they use these funds in support of their research. The Seedcorn Fund is a competitive scheme that provides resources for initial start-up or pilot projects with a view to promoting new research activity.

The support offered to researchers is the domain not just of the Research Committee but also the Staff Development and Equality and Diversity (E&D) Committees. The REF period has seen close working relations between these committees to augment and/or create policies in support of research. The three most notable of these are the establishment of: a Research Leave scheme; a more formal and proactive approach to mentoring; and, support for staff returning to work after extended periods of maternity, additional paternity or adoption leave.

The establishment of a **School-managed Research Leave scheme** is the most obvious example of how the School has acted to protect creative space for researchers. Cardiff University does not make automatic provision for sabbatical periods and the School has developed its own scheme to provide the opportunity for staff to undertake an intensive 12 month period of focused research. An application is required that explains how the period will provide an opportunity to take a major step forward in research terms, either as someone returning to research from a major academic management role, or as someone looking to make a significant breakthrough in their career. Applications are assessed by a small panel of experienced researchers chaired by the Associate Dean (Research). Successful recipients are required to maintain regular contact during the period and provide reports on the achievements and outcomes at the end of the leave and again one year on. All recipients are encouraged to spend time at a leading international research institution and a further budget up to the amount of a second IRB is provided in support of that activity. A School fund covers the costs of replacement teaching for the period.

**The mentoring scheme developed out of a Research Committee task and finish group** set up prior to the implementation of the aforementioned Concordat. It suggested the need for a more proactive encouragement of spreading isolated good practice within the School to ensure all those looking for advice had someone to turn to.

**The Maternity, Additional Paternity and Adoption Returner Scheme**, again prompted by the Research Committee, is the first of its kind in Cardiff University. It addresses the particular challenge that new parents can have in managing their research careers when they return to work. It provides a period of protected time of up to six months to complete or re-establish research projects that may have been interrupted by maternity, paternity or adoption leave. A School fund covers the costs of replacement teaching for the period.

**The School is committed to creating a fully inclusive research environment.** In 2012, the University introduced a mandatory online E&D module and associated half day workshop for all members of staff. In the same year, the School appointed its first E&D Officer, who in 2013, organised the School's first E&D celebration – a series of events aimed at raising awareness amongst staff and students of recent progress in E&D and priorities for the future. Focused support is available both at the School level and the University level via networks for research staff, female staff and for lesbian, gay, bisexual and transgender (LGBT) staff. The University has been in the Stonewell index of Top 100 Employers for three consecutive years, in recognition of its commitment to equality for LGBT. Staff in the School have received support from various networks including the Cardiff University Research Staff Association, which provides an opportunity for researchers to inform and influence institutional level policy and has two representatives from the School, and the Women's University Mentoring Scheme. In 2012, the School participated in a pilot scheme examining good practice in the employment of women academics in the Arts, Humanities and Social Sciences disciplines. The pilot was organized by the Equality Challenge Unit (ECU) with the aim of assessing the feasibility of introducing a system of awards within these disciplines, similar to those in the Athena Swan Charter for Women in Science under which Cardiff University has a bronze award. As part of this pilot, the School was required to demonstrate how, in addition to University-wide policies, it was working to promote good practice in employment and gender equality. **The School was commended on the strategic actions already implemented, on demonstrating a clear awareness of gender equality issues that need to be resolved and on having definite action plans for resolving them.**

## ii. Research students

The doctoral programme provides a strong multidisciplinary environment for around 150 postgraduate research degree students. The programme constitutes a pool of creative and talented researchers who make a vital contribution to a dynamic research culture and help to ensure that the freshness of the School's research is sustained. The REF period has seen a number of significant changes. Most notably, Cardiff University leads the ESRC Wales Doctoral Training Centre (DTC), established in 2011, in which the Business School is a major partner. Alongside ESRC funding, the Centre secured £1.5M from HEFCW to support the development of enhanced infrastructure across its partners in Wales. As well as ESRC-funded doctoral studentships, the School has been successful in winning open competition studentships and also funds an annual studentship competition which targets a particular area of research. The total financial commitment for the School over the duration of awards for a single cohort is in excess of £250K. Each student has dedicated office space and a computer, and is provided with funding of £750 in support of their fieldwork.

The School has two routes through the doctoral programme: Business & Management (B&M) and Economics. **The B&M route receives five ESRC Wales DTC studentships and up to two Competition studentships** (jointly funded with the DTC) per year. The B&M route involves one year of intensive research training followed by three years work on the chosen PhD topic (so-called 1+3). The training in the first year comprises participation in general and subject-specific modules which leads either to a Diploma or, if a dissertation is successfully completed, a Master's qualification in Social Science Research Methods. Successful completion of the research training part of the programme is required before students proceed to the research stage. In the last 12 months, following a Research Committee task and finish group review of the programme, steps have been taken to extend the formal training elements of the B&M route, providing highly tailored modules focused on the field of study and involving small class sizes with high levels of student participation.

The PhD in **Economics** is a four-year research programme with a 2+2 structure. It also has ESRC recognition and currently **receives two ESRC Wales DTC studentships** per year. This programme involves two years of advanced course work, the first at MSc Economics level in core subjects. In the second year, students must complete the MRes Advanced Economics, including advanced study in the core areas of advanced macroeconomics, microeconomics and econometrics, plus a variety of fields including finance, labour, public finance, monetary, applied macroeconometrics, international trade and international macroeconomics.

**The School provides high levels of supervisory support to all doctoral students.** Each has a panel of two / three supervisors. These will be experts in the students' chosen field. All primary supervisors are experienced research supervisors and have attended appropriate training in order to be fully cognizant of the University's regulations and codes of practice governing research degrees. The role of the panel is to ensure the student makes satisfactory academic progress and receives pastoral care but also to excite, nurture and guide their intellectual endeavours.

The School also supports annual submissions to the European Doctoral Programmes Association in Management and Business Administration (EDAMBA) thesis competition and encourages participation in European training opportunities particularly through the European Institute of Advances Studies in Management (EIASM) Doctoral Educational Network (EDEN) seminars. Opportunities are promoted centrally, with two places to the EDAMBA Summer Academy funded each year, and are also encouraged and supported financially at Section level to ensure that academic training and exposure to relevant opportunities are targeted effectively.

There are formal mechanisms in place to ensure that the student and supervisory panel meet regularly. **All research students are required to submit Self-Assessment Reports at the end of their first six months of study and then at four monthly intervals up until thesis submission.** Supervisors are also required to submit a Student Progress Report at the same intervals. All students make a presentation to staff members on their research design towards the end of their first year of study. Other more informal arrangements are in operation at research group and Section level, including participation in seminars, Section away-days, the aforementioned CReWS events, and the School's biennial Research Fair; these promote the integration of students into the body of the School. The School's procedures are in line with the

University's *Research Degrees Code of Practice* that requires the progress of every research student be formally reviewed on an annual basis, which includes: the submission by the student of a substantial piece of written work (e.g. a thesis chapter); a mechanism by which the student can be questioned about his/her work by those individuals assessing his/her progress; and a documented outcome of the review and the progression decision.

**A training and development needs analysis is also carried out on an annual basis.** Much of the training is provided under the auspices of the University's Graduate College (UGC), to which the School is an active contributor. UGC provides an extensive programme of training in a range of skills that contribute not only to the efficient management of student's research studies but also to their personal development and future employability. Over 200 different courses were attended by students registered within the REF period, with 80% attending at least one event. Crucially, the UGC programme links to the aforementioned RDF. The UGC also fosters an intellectually stimulating environment where students are encouraged to share and develop research interests with peers from other Schools. They offer funding, on a competitive basis, to students for interdisciplinary activities and through this initiative, six of the School's students have worked with peers from across the University. For example, Hadar Elraz from the HRM section joined with a student from the School of Social Sciences to set up an Interdisciplinary Approach to Discourse Analysis Group which holds regular seminars. The School also provides development opportunities, with students encouraged to attend all School workshops and seminars relevant to their areas. Doctoral students are invited to attend the aforementioned CReWS series, with some sessions specifically developed for them. For example, a session entitled 'Life after a PhD' saw a range of pathways beyond doctoral studies presented by our faculty based on their own post-doctoral experiences. The session was designed to encourage and support our students in planning their own professional development. The School also provides summer placements for Cardiff University undergraduates through the Cardiff University Research Opportunities Programme. This gives the next-generation of PGR the opportunity to experience the research environment.

**Students are encouraged to present their work** at academic conferences, and there is funding available to support this. In addition to the awards won by students reported in Section b, **a number of students have won conference prizes for their work**, including best student paper at the European Operations Management Association Conference (2011), and best paper at the Association of Researchers in Construction Management (2008 and 2011) and the 2013 International Purchasing and Supply Education and Research Association conference.

#### **d. Income, infrastructure and facilities**

Cardiff Business School has continued to pursue a research funding strategy that generates sustained investment from the full range of potential sponsors. This involves a portfolio approach designed to meet the needs of both individual sponsors and the researchers and research units of the School. During the REF period researchers at **Cardiff Business School brought in research income totalling over £10.4million including more than £4.3million from Research Councils.** These figures compare well with other leading UK Business Schools. The latest available independent ABS analysis puts Cardiff in the top six Schools for total research income in 2008/9 and 2009/10, and University analysis of HESA data (2008/9 to 2011/12) shows the School in the top quartile of the Russell Group for both total income and average income per FTE per year from RCUK sources, and fifth for overall research income. However, in common with the UK business school sector as a whole, the figures do represent a decline from the RAE2008 period and the School has undertaken an assessment of grant applications and awards in order to develop its support mechanisms. This evaluation, conducted by a Research Committee task and finish group, showed that there is a mix of approaches from researchers. A minority are serial applicants, often generating significant funds in aggregate through fairly small individual awards linked directly to their ongoing research interests. For example, researchers in the Welsh Economy Research Unit won over 40 awards during the REF period totalling around £650K. Another group of researchers apply irregularly in order to fund a specific project or support a particular development in their research activities. For example, Joe O'Mahoney's ESRC AIM Fellowship allowed him to develop and extend his research profile as he moved into mid-career, building on his initial work on management consultancy to examine innovation in the sector. A number of researchers have won major sums of money over an extended period in order to establish and/or sustain major



programmes of research. Examples include researchers in BRASS, CAMSAC and CLRGR research centres and the JHIAM.

**The School gives full autonomy to researchers to fulfil their own research agendas** and therefore, whilst the University assesses the School against an annual target, there are no individual or research group targets for income. Experience over several research assessment periods has shown that for many social science researchers in business and management, little or no research funding is required in the production of high quality research outputs. That said, there are numerous benefits to individuals and groups from securing research funding and the School has a proactive policy of identifying research funding opportunities and of supporting staff through the research application process and beyond.

During the REF period, a number of key developments have improved the School's support for researchers in generating income. *First, the School appointed a Senior Research Development Officer (SRDO)* whose responsibilities include both highlighting research funding opportunities in a proactive manner and working with potential applicants to produce high-quality applications. *Second, under the coordination of the SRDO, the School has significantly upgraded and extended its own Internal Peer Review (IPR) scheme.* This is an example of how the School benefits from, and draws on, the experience of its leading researchers. There is a panel of 10 internal reviewers from across the five Sections who provide detailed and constructive comments on proposal drafts in order that these may be revised and improved as appropriate in advance of submission. These developments have been particularly valuable in ensuring the School meets the increasing expectations of the Research Councils for institutional demand management. This has contributed significantly to the School's continuing strong performance with the ESRC. *Third, the costings of any proposal are drawn up by the applicant in consultation with the School's Research Office and the University's Research, Innovation and Enterprise Services team* to ensure these are accurate and appropriate for the research planned. It is important to note that, over the REF period, the School has continued its high level of reinvestment of overheads. After a University topslice of 10% on indirect costs, the grant holder(s) receives either 90% (in the case of Research Council and equivalent funding) or 75% (all other funding) of the remaining overheads back into a research account for future use. These overheads are in addition to the IRB and have been used to buy-out time or invest in further researcher capacity which helps to ensure that successful areas of research activity are sustainable. This approach has been particularly successful in adding value to research groups within the School. For example, overheads have been used by the Welsh Economy Research Unit to part fund two core staff – including one at managerial grade, and by CUIMRC (2004-2010) to employ a Professional Tutor for two years, giving Mohamed Naim the time to fulfil the role of Centre Director.

**The School remains committed to supporting and promoting external funding bids.** All applications to the Research Committee's initiatives (see Section c) are encouraged to develop opportunities for external income generation and any School funded research posts hold a requirement for research bids to be developed as part of the role. Since 2008, the School has invested over £600k supporting such 'pump-priming' activity. Developmental workshops have been held regularly over the REF period, to encourage and support those keen to apply for external funding, and the School Research Office provides a point of contact providing advice and ideas for future research and external funding opportunities. Workshop leaders have included School based AIM Fellows, drawing on their significant experience, and colleagues' expertise across the institution's wider social science Schools to help identify cross disciplinary opportunities.

**The School recognizes that a central feature in successfully delivering on research funding is to widely disseminate the results and produce further impact from the research.** To these ends it has invested very significantly in both the external engagement activities that promote the dissemination of research findings and more specifically on delivering on the impact potential of the School's research. Engagement has been led by the School's Associate Dean (Engagement) and the Director of External Relations who work with a team of four staff on various mechanisms for promoting the School's research including the website, press releases, events and the production of various publications. These include *Synergy*, a magazine for alumni, stakeholders and other external audiences with a distribution of 10,000, *Where Research Leads*, for academic and wider audiences with a print run of 2,000, and the recently established *Research Briefings* series that

summarises the key findings of specific research projects and highlights the wider implications of these for practitioners and policy makers. This work is supported by the Research Impact Officer whose responsibilities include working with researchers to identify the (potential) impact of their research, organizing events and activities that further sustain and develop that impact, and promoting the research impact agenda more widely.

**Researchers receive computing support from the University's Information Services group (INSRV) and a small number of dedicated computer staff within the School.** As well as the standard suite of software provided by the University network, the School has licenses for over 50 academic and scientific packages for research. The School has its own dedicated library with 18 staff who offer support on a wide range of matters. The library houses some 60,000 books and several hundred journal titles in print format, as well as providing full-text electronic access to over 1800 journals. In line with the University Library Service's collection development policy, the School's library is increasing its electronic journal provision wherever possible. The School's library also subscribes to key disciplinary databases and houses a number of specialist collections such as the European Documentation Centre, an Annual Reports Collection, with an archive, and an international statistics collection. This is supplemented by Datastream which provides electronic access to international economic statistics, company and financial markets data, and SourceOECD, the OECD's online library.

**e. Collaboration or contribution to the discipline or research base**

As befits a large school of international standing, researchers from Cardiff Business School are prominent contributors to the development of their respective disciplines and related professional associations. Amongst the key examples of these contributions are:

- Staff have acted as Editor or Associate Editor to over 20 peer-reviewed journals during the REF period, including Rick Delbridge as the only European-based editor of *Academy of Management Review*, Keith Robson as Associate Editor of *British Accounting Review*, Michael Poole was the (Founding) Editor of the *International Journal of Human Resource Management* until his death in 2012, Adam Lindgreen as Associate Editor of *Journal of Business Ethics*, Tony Ellson as Associate Editor of *Journal of Business Research*, Marc Goergen as Associate Editor of *Journal of Corporate Finance*, Stephanie Slater as Associate Editor of *Journal of Marketing Management*, Ken Meier (Editor-in-Chief) and George Boyne (Editor) of the *Journal of Public Administration Research and Theory*, Aris Syntetos as Associate Editor of *Journal of Operational Research Society* and Mike Reed (Founding Editor), Glenn Morgan (Editor), Robyn Thomas (Editor), Rick Delbridge and Hugh Willmott (Associate Editors) of *Organization*, Mohamed Naim (Associate Editor) of *International Journal of Logistics*.
- Staff are editorial board members for over 125 international journals.
- George Boyne served as Chair of the Public Management Research Association and Head of the Public & Non-Profit Division of the Academy of Management during the REF period.
- Rick Delbridge and Mike Reed served on the British Academy of Management Research and Development Committee and Rick Delbridge is also on the ABS Research Committee.
- George Boyne and Ken Peattie have served terms on ESRC grant panels since 2008 and eight staff are on the ESRC's peer reviewer panel.
- Mohamed Naim is a member of the EPSRC Peer Review College and has served on the Innovative Manufacturing Research Centres Directors Group, and grant panels.
- Tony Ellson was named *Journal of Business Research* Exceptional Associate Editor (2009).

A number of staff have been the recipients of prestigious awards since 2008:

- Dick Edwards won the 2010 British Accounting Association lifetime achievement award.
- Mahmoud Ezzamel won the Hourglass Award for outstanding contribution to accounting history research in 2009.
- Ken Meier received career achievement awards from both the American Political Science Association and the American Society for Public Administration in 2010.
- George Boyne, Rick Delbridge, Mike Reed and Hugh Willmott were elected Academicians of the Academy of Social Sciences during the REF period.
- Kent Matthews and Peter Morgan are members of the Violence and Society Research Group awarded the Queen's Anniversary Prize for Higher and Further Education in 2009.

- Stephen Disney won the Best Paper Award from *Production Planning and Control* in 2008.
- Trevor Boyns won the Best Paper in *Accounting Historians Journal* in 2008.
- Pauline Found won the Shingo Prize for Research and Professional Publications, 'Outstanding contributions in knowledge in operations management' in 2009.
- Ken Peattie won Business Book of the Year from the German Academic Association for Business Research in 2010 for *Sustainability Marketing: A Global Perspective*.
- Rick Delbridge was made a Fellow of the British Academy of Management in 2013.

In addition, staff have won 17 conference paper awards during the REF period, including those for papers presented at Academy of Management, Academy of Marketing, British Accounting Association and British Academy of Management Conferences.

The School has extensive and productive relationships with practitioners and policy makers. These have been the subject of considerable development during the REF period with the advent of a School International Advisory Board (IAB). The IAB includes: the Chief Executives of Wesley Clover, the Principality Building Society and the Welsh Rugby Union; Directors from multinational corporations, such as BT plc; and, the Chair of the Wales Employment and Skills Board. The Board has been particularly influential in developing the School's impact and engagement agenda, for example through the establishment of the *Research Briefings* series of publications. The advisory board structure has been mirrored at Section level, allowing for more specific research agendas and for further engagement with companies, including Deloitte Consulting, Nokia, Rolls Royce, Royal Mint and Innocent Ltd., and other research users.

Staff also hold positions on external bodies and disseminate their findings in ways that promote the development of research and its impact. Examples include:

- Various roles with the Institute of Chartered Accountants in England and Wales (Carla Edgley, Marc Goergen and Jason Xiao), Chartered Institute of Logistics and Transport (UK) Cymru Wales (Andrew Potter, Chair), and the Wales committee of the Chartered Institute of Purchasing and Supply (Jane Lynch).
- Expert witness input to: various Parliamentary Committees on Europe (Patrick Minford); the House of Lords Science and Technology Select Committee on Behaviour Change (Sue Peattie) and its enquiry into the Barnett Formula (James Foreman-Peck); the Welsh Government Communities and Culture Committee cross party enquiry into major events and their impacts (Calvin Jones).
- Various roles within organizations, including United Nations World Tourism Organization (Calvin Jones), Advisory, Conciliation and Arbitration Service (Ed Heery and Peter Turnbull), and the Shadow Monetary Policy Committee (Patrick Minford and Kent Matthews (Secretary) are founder members).
- Research conducted for external organizations including Amnesty International (Ed Heery) and Peter Turnbull's research for various labour organizations including the International Transport Workers' Federation, the European Transport Workers' Federation, and the European Cockpit Association.
- Membership of think tanks, for example, Mohamed Naim and Jon Gosling are members of Costain's Blue Innovation Trust, a think tank on future developments, and JHIAM researchers have representation in the Adam Smith Institute, The Taxpayers Alliance, Reform, Open Europe, Institute of Economic Affairs and the Centre for Policy Studies.

**The School has developed a number of strategic partnerships that have led to significant joint research activity.** These include a collaboration between Cardiff Council, Cardiff Business Partnership and the School which saw the appointment of a jointly funded research fellow between 2011-2013 and a research-based relationship with the Federation of Small Businesses. Another example is the formal agreement the School has with the International Labour Organization (ILO). Led by Peter Turnbull, this is the first such multi-sector cooperative agreement the ILO has signed with any university in the world.

**The School has also benefited from close working relationships with other schools** within Cardiff University. The BRASS ESRC research centre, that yielded three phases of ESRC funding

totalling £11M and involved the Business, Law and Planning & Geography Schools, has recently been completed. Another example is ASTUTE, a £27M Wales Government investment involving collaboration between eight Welsh Universities to support the growth and sustainability of manufacturing. It is run in Cardiff under the auspices of CAMSAC and involves researchers from the Business School and the Schools of Engineering, Medicine and Chemistry. A further valuable 'joint venture' has seen the appointment of Ian Hargreaves to a shared position between the Business School and the School of Journalism, Media and Cultural Studies.

**The School runs its own conferences and workshops and also regularly hosts major events working in conjunction with professional associations.** Examples of the former include the annual ERU conference organized by the HRM Section since 1986. Key examples of the latter include the Interdisciplinary Perspectives on Accounting Conference in 2012, the British Academy of Management annual conference in 2012, which saw a new record number of participants, and the Logistics Research Network Conference in 2009, jointly organized with the Chartered Institute of Logistics and Transport. This is one of the largest logistics conferences in Europe and also saw a record attendance in Cardiff.

As indicated previously, the development of international collaborations has been identified by the School as a key area for strategic development. As such, during the REF period, **the School has developed a more proactive and strategic approach to some of its collaborations with international institutions.** While the School remains a welcoming host to a diverse range of international visitors and a partner in numerous Memoranda of Understanding for international collaboration, the REF period has seen a concerted effort to promote links with specific research partners, building from existing productive research relationships. One example has been the developing collaboration with Meiji University in Japan. This has been built from Cardiff Business School's long-established reputation for research into Japanese management and been facilitated by its Japan Studies Centre. Over the last three years, the two institutions have both hosted Doctoral Workshops, which has seen a number of doctoral students and staff visit Cardiff and Tokyo respectively. Meiji has hosted a PhD student from Cardiff and supported their research, Cardiff has hosted several members of staff from Meiji and there has been joint research conducted leading to publications in international journals. In 2013, Meiji funded visits by six Cardiff researchers to further joint research activity and another round of visits will take place in 2014.

Another example is the International Centre for Research in Organizational Discourse, Strategy and Change. This is a multi-institution network that brings together some of the leading centres for research in these areas, including the CORGies researchers at Cardiff. The network has facilitated visits to Cardiff by, amongst others, Cynthia Hardy who holds an Honorary Professorship, and has also seen a number of Cardiff staff, including Robyn Thomas and Hugh Willmott, visit international members of the Centre. One outcome of the collaboration has been an Australian Research Council funded project.

These collaborations have been supported through the use of the **International Visitor and Overseas Travel Fellowships** schemes (Research committee initiatives, see Section c.i). These have been enhanced with successful external applications to **Fulbright and Commonwealth Fellowship schemes** that the School has supported. For example, Bidhu Mishra was successful in a 2012 application for a Commonwealth Fellowship funded visit to the School which is currently being hosted by Maneesh Kumar. This collaboration is strengthening a developing relationship with institutions in India. The School also has a **Montague Burton Fellowship Scheme** with funding to support international visitors working in the area of Industrial and Employee Relations. Recent visitors under the scheme include Marian Baird (Sydney), Michael Burawoy (Berkeley), Bradon Ellem (Sydney), Sarosh Kuruvilla (Cornell), Ruth Milkman (CUNY) and Nicola Smit (Johannesburg). At any one time, the School typically has 8-10 visitors from overseas and the schemes have helped promote tangible outcomes from these visits. Further evidence of productive international collaborations can be seen from the extensive number of joint-publications with international collaborators, such as universities of: New Mexico, California, Melbourne, Groningen, Leuven, Chalmers, Lund, Linkoping, Boston, Monash, Massey, and CSIR South Africa. The next period will thus see Cardiff Business School continue to develop its international networks in support of research excellence within and across its various disciplines.