

<p>Institution: University of Leeds</p> <hr/> <p>Unit of Assessment: C19 Management and Business</p> <hr/> <p>a. Overview</p> <p><u>Structure</u></p> <p>Leeds University Business School (LUBS) comprises six discipline-based administrative and teaching divisions (Accounting and Finance; Economics; International Business; Management; Marketing; and Work and Employment Relations), each with its own divisional director of research. Academic leadership is provided by a LUBS professoriate of 36. Research is managed through multidisciplinary research centres, which fall under four thematic headings: Decision Making, Economic Sustainability and Finance; International Business and Marketing; Technology and Innovation; and Leadership, Work Organisation and Employment (see section b). LUBS runs a dedicated Faculty Research and Innovation Office, and Graduate School Office (with nine full-time-equivalent staff), which manage the research function for staff and research-degree programmes respectively. This support is complemented by that provided within the university's Research and Innovation Service.</p> <p><u>Governance</u></p> <p>As a unitary faculty, LUBS sets its own strategy and controls its own finances, with overall guidance provided by the Dean and Faculty Executive Group. Plans and budgets are approved annually at the university's Integrated Planning Exercise. In 2011, the university integrated responsibility for research and knowledge transfer by appointing a single Pro-Vice-Chancellor for Research and Innovation. LUBS mirrored this shift, appointing a Pro-Dean for Research and Innovation who works with the Faculty Research and Innovation Committee (FRIC) to set research strategy and policies. Meeting monthly, the FRIC consists of divisional research directors, research-centre directors and the Director of the Faculty Graduate School.</p> <hr/> <p>b. Research strategy</p> <p>LUBS' academic leaders have identified both external and internal strategies. Our external strategy has been to build academic and business partnerships, and integrate these into the production and dissemination of world-class research. Our internal strategy has been to pursue three objectives: (1) provide a stimulating and supportive research environment; (2) develop early-career researchers (ECRs) and PhD graduates whose innovations will shape agendas and activities within our research community; and (3) convert academic research into practice to make a major impact on regional, national and international economies.</p> <p>Seeking to achieve objective (1) helps guide LUBS towards international excellence in business research. Objective (2) signals LUBS' commitment to staff development and sector capacity-building. Objective (3) links its research accomplishments to engagement with non-academic users, beneficiaries and interlocutors, including UK/European governmental bodies, global corporations and smaller firms, trade unions, professions, third-sector organisations and social movements.</p> <p><u>Developments and progress since 2008</u></p> <ol style="list-style-type: none"> 1. Following RAE 2008, the FRIC refreshed its strategic plan, in particular emphasising impact cases and institutionalising key partnerships with companies and third-sector organisations. To do so, a new Business and Professional Services (BPS) Hub was established, composed of faculty from all LUBS divisions and from across the university. The hub enables interdisciplinary and interfaculty involvement and collaboration, and provides support for the interdisciplinary Leeds Social Science Institute (LSSI), led by a member of the LUBS faculty. 2. LUBS research centres have widened their scope to connect researchers and research students to their user communities, a move strengthened by new appointments (see section c). Centres identify research topics that lead and inform their fields; disseminate their work; promote their impact through multiple routes; create links with national/international academic partners; publish excellent research; and provide a vibrant research environment for students, ECRs and staff. Progress is monitored through annual reports to the FRIC on publications, engagement and

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income generation. Evidence of achievements during the period includes the following:

- *Research outputs* have increased in quality and quantity (see REF 2), visiting/fractional posts (often international) have strengthened mentoring and enabled individual career advancement, and a system of rewards for publications has been instituted (see section d).
- *Annual research income* has grown by 80% from £866k to £1.56m in the REF period; this has built the capacity of research centres to respond to societal, global and corporate needs, resulting in innovative funding applications to interdisciplinary large-grant programmes, and ensuring we increase and diversify our sources of research income (see section d).
- *Impact and engagement* have been guided by LUBS' research strategy (see REF 3a), and knowledge has been disseminated widely (supported by external funding). Impact case studies and other examples of good practice are embedded in the centres (see REF 3b).
- *Collaborations* have been strengthened with research institutions, industry and users (see section e).
- *Capacity-building* has accelerated. We have redesigned our doctoral programme, act as pathway lead for management/business in the White Rose Doctoral Training Centre (DTC), and collaborate regionally, nationally and internationally in doctoral training and ECR development (see section c).
- *The scale and quality* of the Graduate Research School has increased, integrating recruitment and activities within LUBS' overall research strategy (see section c).

In LUBS, research is organised under four themes, which act to focus our research as well as to signal our expertise to third parties. They also assist in interdisciplinary research.

THEME ONE – DECISION MAKING, ECONOMIC SUSTAINABILITY AND FINANCE – is a long-standing strength, using theory from psychology, economics, finance and geography.

- *Centre for Decision Research (CDR)* engages in multidisciplinary, international collaborations using behavioural economics to research individual decision making to provide evidence-based advice to policymakers and practitioners. Major projects include attitudes to pensions, losses and savings; preparedness for climate change (with the Faculty of Environment); and a knowledge-transfer partnership (KTP) on customer lifetime values. PhD completions: 3.
- *Credit Management Research Centre (CMRC)* directly informs policy by studying the functioning of credit markets in consumer and corporate lending, focusing on commercial lending, including private-equity finance, consumer credit and risk scoring. The research directly informs policy. Major projects include private-equity/venture-capital financing for the British Venture Capital Association; debt management for large volume lenders and HMRC; and a regional study on business growth with the Welsh Assembly.
- *International Institute for Banking and Financial Services (IIBFS)* focuses on bank risk, regulation and governance. Major projects include drivers of state aid in European banks during the financial crisis in collaboration with the Italian Deposit Insurance Fund; bank resilience to shocks and the stability of banking systems; and bank governance and bailout expectations, with the Stockholm School of Business.
- *Centre for Advanced Studies in Finance (CASIF)* focuses on asset pricing, auditing, banking and financial services, behavioural finance, corporate governance, credit management, financial accounting, financial mathematics, pensions and insurance, and finance for small and medium-sized enterprises (SMEs). It is the PhD school within the Accounting and Finance division (see section cii). PhD completions: 24 (including CMRC and IIBFS).
- *Applied Institute for Research in Economics (AIRE)*, created in 2012, brings together economics expertise on a cross-divisional/faculty basis from health, economics, transport studies, and earth and the environment.

There are a number of large, distinct interdisciplinary economics projects, such as Financialisation, Economy, Society and Sustainable Development (FESSUD), an €8.8m, 14-partner project funded by the EU Seventh Framework Programme (FP7) and led by economists at LUBS, which aims to understand how finance can better serve economic, social and environment needs. I-BUILD (Infrastructure BUbusiness models, valuation and Innovation for Local Delivery), with funding of £3.5m from the Economic and Social Research Council (ESRC)

and Engineering and Physical Science Research Council (EPSRC), is a cross-institutional project bringing together LUBS economists and engineers from Leeds, town planners and environmental scientists from Newcastle, and management academics from Birmingham (see section d). PhD completions: 15.

THEME TWO – INTERNATIONAL BUSINESS AND MARKETING – is also long-standing. Since 2008, research agendas have developed and broadened in international business and marketing.

- *Centre for International Business at the University of Leeds* (CIBUL) investigates policy-relevant international business issues. Key areas include foreign direct investment by European and emerging-economy firms, multinational firms and the global supply chain. Major projects include a collaboration with Nestlé examining how investment decisions create shared value for societies; and hosting the Leeds International Business Confucius Institute, with the University of International Business and Economics in Beijing. Peter Buckley, the centre founder, received an OBE in 2012 for services to higher education, international business and research. PhD completions: 7.67.
- *Global and Strategic Marketing Research Centre* (GLOSMARC) contributes to theory and practice in core strategic and international marketing, extending into brand management and retailing. Major work includes drivers and performance effects of global marketing strategy standardisation; the management of brands through customer experiences; and best-in-class international franchising (with CIBUL), awarded £190k from the ESRC as part of its Retail Sector Initiative. PhD completions: 11.

THEME THREE – TECHNOLOGY AND INNOVATION – is growing, deepening knowledge of the dynamics and context of innovation and technological change.

- *Centre for Technology, Innovation and Entrepreneurship* (C-TIE) conducts large-scale collaborative research on commercialising science and engineering innovations and related socio-cultural approaches to technology innovation and entrepreneurship. Major projects include ManETEI (Management of Emerging Technologies for Economic Impact), a Marie Curie Initial Training Network (ITN) to explore how emerging technologies are strategically managed, involving Bayer, Intel, Lux Research and Oxford Advanced Surfaces Group; and the Medical Technologies Innovation and Knowledge Centre, funded by the EPSRC. The AIMTech Group (within C-TIE) has also conducted research on two EU collaborative technology projects (IMReal and Acropolis). PhD completions: 13.30.
- *Centre for Operations and Supply Chain Research* (COSCR) analyses supply-chain resilience and sustainability, digital-economy network analysis and performance management. Major projects include the ESRC-funded Green Supply Chain Integration, EU-funded Marie Curie Network of Northern Business Schools, EPSRC-funded Zooniverse on new models of online volunteering, and a Marie Curie Incoming International Fellow (Torres). PhD completions: 5.
- *Socio-Technical Centre* (STC) is a University Transformation Fund centre that brings together business, engineering and environment researchers to analyse, design and predict socio-technical systems, resulting in better infrastructure and workplaces, including research co-production with Rolls-Royce. Major projects include: a work package for the SILOET (Strategic Investment in LOw-carbon Engine Technology) project, funded by the Technology Strategy Board (TSB), on design processes in Rolls-Royce; TSB-funded work on tele-health with industrial suppliers and NHS users; sustainability research with Arup, the Royal Institute for British Architects and others (EPSRC and ESRC); and ESRC-funded work on crowd behaviours. PhD completions: 1.

THEME FOUR – LEADERSHIP, WORK ORGANISATION AND EMPLOYMENT – encompasses expertise in employment relations, human-resource management, leadership and organisation theory to produce a critical understanding of change in employment skills, work roles, and leadership within contemporary organisations. Main highlights are as follows:

- *Centre for Employment Relations, Innovation and Change* (CERIC) researches regulation, practice and experiences of work/employment, and their changing dynamics – with work on employment contracts/conditions, skills formation, training/learning, restructuring/redundancy, equality/diversity, migrant labour, unemployment/welfare regimes, sex work, union modernisation/renewal and public services management reform. CERIC has extensive international links across Europe, North America and Australia. Major projects include analysis

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of union-led learning and the Union Learning Fund; FP7 COST (European Cooperation in Science and Technology) Action Network on clinicians in management; community alliances in London and Sydney (ESRC); and the impact of global recession on employment, funded by Worldwide Universities Network (WUN). PhD completions: 10.

- *Leeds University Centre for Interdisciplinary Leadership (LUCILE)*, established in 2013, conducts research on how to improve knowledge and understanding of leadership in organisations, with a specific focus on ethics, gender, and leadership development. The centre collaborates closely with the Faculty of Education, Social Sciences and Law, and the Centre for Innovation in Health Management (CIHM), on leadership in the changing NHS.

Objectives for 2014 to 2020

- Invest further in research centres as sources of expertise, energy and development.
- Strengthen the mechanisms through which we engage with users and achieve impact by: (1) further refining impact objectives into staff duties, training and promotion criteria; (2) building an infrastructure to support impact via the newly-expanded BPS Hub and improved communication of our research; (3) embedding impact training for all students, e.g. through placement opportunities, internships and professor-of-practice workshops; (4) employing user-relevant research to develop curricula relevant to society; and (5) harnessing post-doctoral researchers to produce material to inform public understanding. This will connect with the LSSI student-placement scheme and the White Rose DTC Collaborators Club (run by **Pandza**) in management and business, both dedicated to enhancing the experience levels of PhD students through industrial practice.
- Develop strategic partnerships with an enlarged number of corporates through the BPS Hub, under the Deputy Dean and through the LSSI. Rapidly developing areas include 'smart cities', the digital economy, new economic models, retailing, big data and food security.
- Invest in international research collaborations at institutional and individual levels, through developing strategic partnerships using mechanisms such as WUN, while capitalising on the energy of research centres. Areas to be targeted include the Zhejiang/LUBS Joint Research Centre, and building links with FGV-EAESP Brazil (**Cunliffe, Dymski**), Georgia State (**Cavusgil**), Michigan State (**Buckley, Lenway, Hult**), Penn State (**Pandza**), Sydney (**Tomlinson**) and West Virginia (**Bruine de Bruin**).
- Extend our doctoral provision to respond to the findings of the Association to Advance Collegiate Schools of Business (AACSB) Task Force report, examining innovation, sustainability, relevance and quality in doctoral education, and the 2015 DTC re-accreditation exercise.
- Invest in shaping and anticipating the trajectory of social-science research through large cross-disciplinary collaborations involving natural sciences and technology, as outlined by the EU's Horizon 2020 and Research Councils UK (RCUK) cross-council initiatives. An example of this includes the recent White Rose bid to host the next ESRC National Centre for Research Methods (NCRM), in which LUBS staff played a major role.

c. People, including:**i. Staffing strategy and staff development**

LUBS' staffing strategy consolidates and expands areas of strength, developing future leaders and promoting cross-disciplinary links. We provide an excellent, supportive environment for career progression and development, underpinned by strong mentorship within our research centres, a formal staff-development scheme and a broad range of training programmes for academic-staff development (e.g. the university's leadership and management programmes).

Recruitment, retention and leadership capacity means we attract and retain high-quality staff with national/international reputations. The composition, qualifications and well-being of our faculty are key success factors. Appointments have been made to address issues of succession planning and to support the continuation, strengthening and development of our key research areas, including chairs in international management (**Devinney** – Sydney), decision research (**Bruine de Bruin** – Carnegie Mellon), operations and supply chain (**Wong** – Hull), accounting (**Toms** – York), leadership (**Ford** – Bradford), organisational theory and qualitative research methods (**Cunliffe** –

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New Mexico), work and skills (**Grugulis** – Durham), economics (**Dymski** – California) and marketing (**Robson** – Cardiff).

Internal promotions to Chair illustrate strong mentorship within LUBS, including **Brakus, Forde, Holgate, Kafouros, MacKenzie, Pandza, Robinson, Spencer** and **Tomlinson**. Promotions have also secured talented mid-career staff, e.g. **Clarke, Cook, Davis, Hultman, Karanasios, Leach, Roberts** and **Voss**. A number of these staff began their careers within LUBS as doctoral researchers, evidencing the success of our ECR development programme. We have also recruited staff on fractional contracts to help build capacity or mentor junior faculty, including **Cavusgil** (Georgia State University), **Wu** (Zhejiang) and **Morgan** (Indiana), and high-profile visiting professors such as **Hinings** (University of Alberta), **Morris** (Oxford Saïd) and **Short** (University of Sydney). Appointments of visiting practitioner professors enhance corporate links, knowledge translation, and impact – including in leadership and social media (**Yates, Dunnhumby**), technology (**Phillips, GlaxoSmithKline**) and employment relations (**Clough, Trades Union Congress**). We have also secured Marie Curie International Incoming and Intra-European Fellows, including **Pandza** (now LUBS Professor), **Torres** and **Loibl**.

Support for research development is important, with all research-active staff receiving allocations within their workloads and being eligible for one semester of study leave every three years. An annual academic review drives development needs, and ECRs have extra support through probation. Divisional heads are responsible for line/workload management. Details of the many internal research support schemes can be found in section d.

Training and development opportunities support ECRs and help to build capacity. We initiated and administer an advanced training seminar series, the ESRC-funded Northern Advanced Research Training Initiative (NARTI). LUBS has a Doctoral Research Fellow scheme that guarantees teaching income and personal development for doctoral students (**Ciupijus** and **Munjal**, appointed Lecturers in 2013). Since 2008, we have also recruited a number of our own high-performing PhD students into research roles (e.g. **Amini, Bozos, Chari, Clacher, Cook, Davis, Hughes, Leonidou, Vallascas, Veronesi, Zhang**) and led/participated in national initiatives to bring new capacity into the profession. Examples include the ESRC Advanced Institute of Management Research (**Clarkson**, Lecturer at LUBS; **Healey**, Lecturer at University of Manchester); ESRC/Society for the Advancement of Management Studies (SAMS)/UK Commission for Employment and Skills (**Roberts**, Lecturer at LUBS; **Sigaroudi** and **Aulakh**, currently Fellows at LUBS); RCUK Academic Fellows (**Ng**, Reader at University of Roehampton; **Holt**, Professor at University of Liverpool; **Voss**, Lecturer at LUBS); Foundation of Management Education (FME) Fellowships (**Antoniou, Forsans, Gajewska De Mattos**); and the ESRC Post-Doctoral Fellowship Scheme (**Kafouros**, Professor at LUBS; **Clarke**, Associate Professor at LUBS). Our commitment to supporting post-doctoral faculty is reflected in a formal post-doctoral development programme initiated in 2012. This extends the provision previously supported through **Roberts'** funding to train and mentor Fellows as they advance into research and academic roles. We are also involved in ESRC Researcher Development Initiative (RDI) initiatives and a Vitae project on engagement. Further support is provided via LSSI and the university's Staff and Departmental Development Unit, both dedicated to supporting the development of research skills and careers.

Developing academics with new skills is facilitated by linking studentships and fellowships to industry. In 2011, LUBS secured a project funded by the university alumni campaign. Worth £1.2m over five years, this funds ECRs, whose training includes a placement with partners such as Intel, Smiths, Rolls-Royce, and Marks and Spencer. Building on ManETEI, we are further strengthening research links with industry through planned industrial doctorates (see section e).

On *equality of opportunity*, strong professorial appointments that recognise research strength have helped us redress a previous gender imbalance (**Bruine de Bruine, Cunliffe, Ford, Grugulis, Holgate, Tomlinson, Wei**). In 2011, the university committed £23m to the *Building on our excellence – Investing in our future* scheme, to attract staff who combine internationally leading research and innovation with outstanding student education. LUBS made three Chair appointments through this scheme, in economics, international business and decision research (**Dymski, Devinney, Bruine de Bruin**). These, together with a new cross-faculty, campaign-funded Chair, have addressed succession planning and allowed us to respond to strategic priorities in terms of strengthening research-centre agendas (in CDR and CIBUL), and to bring together all economists across the institution (in AIRE).

To maintain quality and integrity, ethical review is required for all research involving human participants and their data, or having a potentially significant environmental impact. Training and strong mentorship ensure that authorship, quality and integrity are fully understood.

ii. Research students

LUBS has invested heavily in strategic changes to enhance the volume/quality of doctoral training. LUBS is the management/business pathway lead for the White Rose DTC. Our strategy since 2008 has been to create future academic leaders and researchers who contribute to challenges and opportunities. Currently, LUBS has seen significant growth in recruitment, with numbers rising from 73 to 106 – with 89.97 completions – between 2008/09 and 2012/13. We have made considerable investments in new facilities, including refurbishing and increasing office space, allowing us to cluster research students together. In recognition of the importance of conference attendance to career development, we give each PhD student a total conference allowance of £2,250 during their studies. Investments in training have also been significant. The Graduate School has developed three specialised pathways within the White Rose DTC (management and business, economics, and accounting and finance).

An innovative feature of the programme is that all students (including +3) undertake 60 credits of compulsory, assessed training specific to their pathway. Blended learning has been introduced to enhance provision, especially for part-time students. The mark of the quality of this training is participation in modules by students from other White Rose universities (York and Sheffield) and elsewhere in the region (Bradford and Hull) since 2011. In addition, LUBS students have access to advanced training masterclasses funded by LSSI, the DTC and NARTI (supported by two ESRC RDI awards – value £160k). Further advanced training is available through the British Academy of Management (BAM) and specialist doctoral symposia. LUBS also co-ordinates international training and development opportunities, including, for example, specialist networks relating to innovation and technology (Marie Curie) and the Nord-IB international business PhD network (hosted by LUBS in 2012). LUBS staff are active in delivering this training, with **Kirkpatrick** serving as director of the LSSI, and **Cunliffe** as Deputy Chair of the DTC Development Group to focus on qualitative methods.

Training and international networking opportunities for PhD students are also provided through research centres. For example, CASIF reinvests divisional surpluses to make major investments in financial databases to support research in the centre. CERIC and CIBUL have both developed strong connections with disciplinary agendas for training nationally and internationally.

Relationships with industry are essential to our strategy to ensure that knowledge makes practical differences to real-world problems. Alongside the formal impact and engagement training that forms part of the training programme, LUBS offers funded research internships with external organisations, with the aim of building future impact case studies (e.g. manufacturing SME Kingcraft, and Kate Nash Associates). During the REF period, we have invested in collaborative awards with organisations such as Cisco Systems Limited, OMD UK, The Clear Company, Balfour Beatty, Yorkshire Water and Arup.

Research training master's degree programmes exist for each training pathway, enabling us to directly recruit candidates from *undergraduate level*. We encourage undergraduate students between their second and third year who are interested in research by funding *year-in-research placements* (introduced in 2013, with placements in COSCR and CIBUL), alongside summer internships in our research centres for those at the end of the second year of undergraduate study.

LUBS and the university offer studentships and funding for UK, EU and international candidates. In the REF period, LUBS has invested £1.8m in studentships, including a substantial investment to match-fund ESRC quota studentships awarded through the White Rose DTC, doubling the number awarded in the previous three years (see section d). During the period, we have awarded 21 ESRC, 1 EPSRC, 57 LUBS and 10 university awards.

To *retain talented researchers*, LUBS has greatly increased its fellowship opportunities, as described above. Employability for our students is also excellent, with destinations reflecting the quality of the LUBS research programme. Most postgraduate research alumni secure employment in academia, including at UK Russell Group and international universities, and in government organisations, banking, consultancy and top-level management. Notable examples include Hagedorff (Professor in Finance and Investment, University of Edinburgh) Liu (Head of Global

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Risk Solutions – China, BNP Paribas), Zbychorski (Global Head of Transfer Pricing, Garmin), Aikhunaizi (Economist, International Monetary Fund) and Binh (Deputy Director-General of International Cooperation, Ministry of Natural Resources and Environment of Vietnam).

d. Income, infrastructure and facilities

Research income has increased by 80% since the start of the current REF period (see REF 4a). A deliberate policy has sought research income from larger grants, reflecting the relevance of our research to the wider world, and our ability to engage successfully with research users at the outset of research design. We have secured grant income from over 50 different funders, including:

- research councils (ESRC, EPSRC, Medical Research Council, Art and Humanities Research Council, FP7 and Natural Environment Research Council)
- BAM, EU and UK government bodies – including KTP income and joint government/industrial funding (TSB), which directly benefits industry, regional development agencies (e.g. Yorkshire Forward), the NHS and charities (e.g. Nuffield; Leverhulme; FME; Advisory, Conciliation and Arbitration Service (ACAS); Low Pay Commission; and SAMS)
- private sector (e.g. Rolls-Royce, Yorkshire Bank, Nestlé, Yorkshire Water and Network Rail).

A notable feature of our strategy to secure research income has been collaboration through large multidisciplinary projects. Recent examples include projects focusing on the following:

- *Medical technologies*: in partnership with the Faculty of Engineering's Medical Health Therapies and Devices Group, this project focuses on new, improved processes to commercialise innovations from science research, with funding from the EPSRC, TSB, Biotechnology and Biological Sciences Research Council, and industry.
- *Tele-health*: in partnership with three NHS trusts, over 20 industrial collaborators, and economists and social scientists from the University of Sheffield, this TSB project focuses on the deployment of tele-health systems to support patients with long-term medical conditions.
- *FESSUD* is led and managed within LUBS, with the Faculty of Environment making a contribution to the research project. Led by Sawyer, Fontana, **Brown** and **Spencer**, FESSUD is funded by FP7 (€8.8m). This five-year study focuses on the impact of financialisation on economy, society and environment, and involves partners from 14 countries, 14 universities and one non-governmental organisation. The award is the equal-largest ever awarded by the EU in social science and humanities.
- *Regenerative medicine*: staff from C-TIE are working with the Faculty of Engineering on the EPSRC (£10m) Innovation and Knowledge Centre in regenerative medicine and devices.
- *Modernising infrastructure*: economists at LUBS (led by **Brown**) are working in partnership with the Faculty of Engineering and Faculty of Environment (and University of Newcastle and Birmingham University) on the four-year i-BUILD project, funded by a £3.5m grant from EPSRC/ESRC.
- *Infrastructure procurement*: with the Engineering Project Academy (in the Faculty of Engineering), we are developing an infrastructure procurement route map, which is being deployed on large-scale projects, e.g. Crossrail, the Thames Estuary Project, London Underground's station stabilisation programme and Anglian Water's investment strategy.

The focus on multidisciplinary research has also been fostered by major university investment through the *Transformation Fund*, in which LUBS has played a central part. Notable examples are:

- *STC*: under the direction of **C Clegg** (within LUBS) and working with the Faculty of Engineering and Faculty of Environment, this project focuses on the design of complex systems, aiming to produce a step change in how organisations design their services and systems. STC has secured funding of over £5m in the period, from a wide range of sponsors including the ESRC, EPSRC, Rolls-Royce, TSB, Arup, Yorkshire Water and Network Rail.
- *Building Sustainable Societies (BSS)*: CERIC plays a major influential role in this project in partnership with the Faculty of Education, Social Sciences and Law, and Faculty of Environment. Focusing specifically on work, care and global transitions, the project explores the challenges posed by an ageing population and global economic uncertainties for systems of work and care, with funding from the ESRC, EU, government departments, charities and

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trade unions (Low Pay Commission and ACAS).

- *AIRE*: established in 2012, AIRE (directed by **Dymski**) responded to a strategic need to bring together economists from transport studies, environment geography, medicine and health to facilitate interdisciplinary work. To support this new research institute, internal funding of £40k has been allocated in 2013/14.

Building on these successes, and recognising the relevance of our research to end-users, we forecast further growth in our external research income. These projects provide excellent opportunities for succession planning and a wider inclusion of staff, with junior staff working alongside more senior staff to gain valuable experience (see section c). Notable examples include **Clarke** (post-doctoral researcher in C-TIE) and **Ingold** (Research Fellow on the BSS project), who won ESRC *Future Leaders* awards in 2012 and 2013 respectively.

One of our challenges in this REF period has been to broaden the pool of staff applying for and securing external research income. Through the research centres, staff are proactively identified and supported for particular schemes to ensure that the strongest and most appropriate applications are submitted. This approach has proved successful with the ESRC Future Leaders scheme and Marie Curie International Incoming Fellowship Scheme (**Huatuco, Bruine de Bruin**).

Although large grants and programmes have been the focus of concerted effort, LUBS continues to recognise that smaller grants can also facilitate internationally important research for staff at various career stages (e.g. British Academy Small Grants scheme, and funds from ACAS and the Commonwealth). Consultancy and other sources of knowledge-transfer income are used to advance LUBS' aims in terms of research excellence, impact and career development. LUBS has hosted seven KTPs during the current REF period, a notable example being CDR and Clydesdale Bank, awarded the ESRC award for the Best Application of Social Science in a KTP. The university as a whole regularly supports some of the highest numbers of KTPs in the sector.

Infrastructure and facilities

There has been significant growth during the current REF period, resulting in the need to expand our physical space. £910k has been invested in refurbished office space in additional locations on the main campus, with a further £1,244k investment planned by 2016/17. This has allowed us to cluster researchers and research students from the same areas together.

Capacity-building

Over the last four years, we have invested approximately £4m per annum in research activities across LUBS. This includes support for international conference attendance for all academic staff, and a reward-for-publication scheme, which recognises the achievement of publishing in internationally recognised journals. Funds from the latter are transferred to the individual staff member's Personal Development Account to be invested in future research projects. A seedcorn scheme and a research centre fund assist with pump-priming new projects, emerging themes and developing impact agendas. The long-term intention of these schemes is to lead to larger grant submissions to external bodies and to develop links with research users. Staff also have access to a visiting international scholar fund, with colleagues from overseas institutions supported to spend time in our research centres working with academic colleagues on joint papers and external funding applications, and contributing to workshops for research and taught students. Post-doctoral fellowships have been supported during the current REF period, allowing us to recognise and retain talented individuals from our PhD programme, and attract scholars from elsewhere. £1.8m has been invested in research scholarships for PhD students to further support capacity-building. An annual investment of £4m also allows 40% of the workload to be ring-fenced for research activity, with staff in receipt of external funding able to protect additional hours for research. This investment also contributes to the costs of PhD supervision.

- *Fund to support international collaboration*: LUBS has benefited through the WUN Leeds Fund for International Research Collaborations scheme (e.g. the Greening Organisations and Work network, bringing together international public and private-sector organisations to explore how employees can be encouraged to act more sustainably).
- *Investment in databases* is supported by training and specialist staff, facilitating quantitative empirical research and research methods training. The ability to develop students at the highest level is a consequence of major investments in a staffed datahub hosting financial databases

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including Amplify Trading, Bankscope, Binleys (for NHS data), Bloomberg Professional, Compustat, Creditsafe, CRSP, CSMAR Information Database, Datastream, Execucomp, EconLit, Euromonitor Global Market, FAME, Global Insight, ICC, Key Note, London Share Price Database, Mintel, Nexis, SNL Financial, Stocktrack, Thomson One Banker, Thomson Reuters Spreadsheet Link, Wilmington Publishing Information Ltd, Worldscope and WRDS.

- *Support for grant writing:* A position to support funding applications was made in 2011. The role-holder has considerable experience as a management researcher, and provides valuable support in building relationships for large-scale collaborative bids, often attending briefing sessions by major funders to support bid development, offering peer review and facilitating wider review. Large-scale collaborations are facilitated through this resource (ESRC Enterprise Centre, ESRC Large Grants and Centres, Administrative Data Centre and NCRM), contributing to £24.6m worth of grant applications being submitted over the last two years.

e. Collaboration or contribution to the discipline or research base

LUBS staff have engaged extensively with the wider academic community and organisations, nationally and internationally.

Collaboration

Our external engagement and collaboration take various forms, including:

- *Participation in learned societies:* for example, **Summers** is President Elect of the European Association for Decision Risk Governance Council, and **Bruine de Bruin** is Science Adviser. **J Clegg** and **Thorpe** are council members of BAM, while **J Clegg** jointly leads the international business special interest group of BAM and the US Academy of Management (AoM). LUBS staff serve on research-council boards, committees and grant-commissioning panels (see below), participate in and lead debates that affect our field (e.g. AACSB Task Force on Doctoral Training, and Association of Business Schools (ABS) Task Force on Innovation in Business Schools), and help shape government policy (e.g. ESRC's move to centres for doctoral training, and the concerns of the Department for Business Innovation and Skills and the House of Lords about support for SMEs, local enterprise partnerships and health authorities). **J Clegg** is Vice President – Administration, Academy of International Business (AIB) Executive Board, and **Kafouros** is Membership Secretary, AIB UK & Ireland Chapter Executive Committee, **Cunliffe** was Division Chair of the AoM's Critical Management Studies Division, and **Buckley** was President of the European International Business Academy.
- *Participation in research councils, panels and committees:* LUBS has contributed extensively to the ESRC Peer Review College (**Burgess, Clarke, Holgate, Kafouros, Munjal, Stuart**).
- *Editorship and associate editorship of journals:* staff have a direct influence on the academic agenda through journal editorship, with LUBS academics serving on the editorial boards of 23 journals or having held editorship roles during the period. High-profile examples include the editorships of *Academy of Management Perspectives* (**Devinney**), *Journal of International Marketing* (**Katsikeas**), *Management Learning* (**Cunliffe**), *Journal of Management Studies* (**Cornelissen**), *Business History* (**Toms**), *Work, Employment & Society* (**Grugulis, Stuart**) and *Journal of Health Organization and Management* (**Ford**).
- *Organisation of major conferences and seminars:* LUBS staff have taken the lead in organising a number of major international research conferences and other events. **Katsikeas** co-chaired the 42nd Academy of Marketing Science Annual Conference, in Monterey in 2013, to coincide with becoming an American Marketing Association (AMA) journal editor. GLOSMARC also hosted Professors Lusch, Moorman and Varadarajan at an event attended by 54 marketing academics from 13 research-intensive universities worldwide. CIBUL regularly hosts conference and workshops sponsored by bodies such as the European Commission's Jean Monnet academic network, e.g. Jean Monnet conference on 'European Integration and Chinese Foreign Direct Investment in the EU' in April 2012 (**J Clegg** and Voss) and the UK-China SME Forum. Meanwhile, seminars organised by LUBS on engagement have attracted a wide audience, with speakers such as Van de Ven.
- *International networks:* LUBS staff lead and participate actively in a wide variety of international academic networks. We have used WUN, and worked with academics in Australia (Sydney, Monash, Griffith, Perth), Brazil (Fortaleza), Canada (Alberta), China (Beijing, Zhejiang,

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Nanjang), France (Toulouse), Hong Kong, Italy (Bologna, Milan), Japan, Netherlands (Tu Delft), Spain (Salamanca) and the USA (Cornell, Georgia, New York, Penn State, Carnegie Mellon University, RAND Corporation, MIT). CIBUL members work systematically with leading academics from around the world. Established in 2012, the Leeds International Business Confucius Institute is one of only three European business-focused Confucius Institutes. These international links have also been strengthened by various EU-funded projects, including a major COST Action on health management (involving 21 countries), the FESSUD project (see section d) and the four-year ManETEI project. Having started in 2010, ManETEI is a LUBS-led network of eight nations and research institutions, and six companies, which examines how emergent technologies influence growth in the EU, and is one of the largest Marie Curie grants awarded to business schools (€3.8m). The project has already impacted on the research policy for Horizon 2020, and led to a strong collaboration, enabling engagement of companies with doctoral training. It includes academic partners from Finland, France, Germany, Ireland, the Netherlands, Slovenia and Spain, and industrial partners, including Lux and Intel.

Our distinct contribution

In addition to the contributions already outlined, we would stress six key areas where we believe LUBS has added value and made a distinctive contribution to the field:

i) THEORETICAL ADVANCES: examples include the following:

- *The performance of supply-chain networks:* members of COSCR have developed and tested a contingency theory that explains the moderating effects of environmental uncertainty on the relationships between supply-chain integration and performance outcomes. Published in the *Journal of Operations Management*, it integrates contingency/organisational information-processing theories with supply-chain research, and corrects the widely accepted views related to the universal effects of supply-chain integration and moderating effects.
- *Outward direct investment decisions and outcomes:* building on the *internationalisation* approach (developed by **Buckley**, 8,500 citations), research in CIBUL has challenged current concepts of international business costs, benefits and motives associated with outward investment. Contributions include original theory on the endogenous inter-cultural costs of transacting international business (**J Clegg**), novel metrication of urban location advantage for foreign investors (**Buckley**), and identification of the mechanisms through which multinational firms create and appropriate value in the global economy (**Kafouros**).
- *Employment change and regulation:* researchers within CERIC have developed a distinctive approach towards investigating change in contemporary work and employment. This highlights how micro-level employer strategies are shaped by wider macro forces that lead to diverging trajectories of spatial and labour-market mobilities. Examples of its application include research on workplace learning (**Stuart**), employment agencies (**Forde**), and the politics of union organising (**Holgate**), described as 'enlightening' by Nissen (*Review in Work and Occupations*, 2013). **MacKenzie** and **Forde's** research was included as one of ten cases in the BAM report *The Public Value of the Humanities and Social Sciences*.
- *Cultural approaches to innovation and entrepreneurship:* straddling sociology, entrepreneurship and cognition, work by C-TIE has developed a distinctive perspective on the practice of entrepreneurship (Mitchell et al, 2011). The initial research led to papers in the *Academy of Management Review*, *Journal of Management Studies* and *Organization Science*, in turn leading to a WUN collaboration with Penn State (Garud) and Alberta (Lounsbury).
- *Firm ownership and performance:* members of CMRC developed innovative research on the impact of private-equity investment and venture capital on corporate performance and growth. The study combines approaches from corporate finance, economics and entrepreneurship to explain small- and family-business survival, performance and governance. It has been widely disseminated by the British Venture Capital Association and Nesta, and cited by the Rt Hon Vince Cable.
- *Theorisation of export venture management.* **Morgan** and **Katsikeas** received the AMA Global Marketing Special Interest Group's 2013 Excellence in Global Marketing Research Award for their *Journal of Marketing* article, 'Antecedents of Export Venture Performance: A Theoretical Model and Empirical Assessment'. The award recognises an outstanding research article, published within the last ten years, which has significantly influenced the direction of global

marketing research. At the time of publication, there was a lack of a comprehensive theory base for explaining firms' export performance. Members of GLOSMARC have built on this study to integrate exporting insights from different theories.

- *Socio-technical systems*: members of the STC have developed a new theoretical framework for the analysis of complex systems, including, for example, the circumstances under which they fail, including historical disasters (such as at the Hillsborough Football Stadium) and more recent examples (e.g. the Deepwater Horizon oil rig). Historically, the dominant theories have characterised such disasters as the result of unique factors coming together in unanticipated ways. By contrast, the STC approach attempts to identify these factors systematically, using that knowledge to predict the circumstances under which disasters may happen in the future.

ii) NEW INNOVATIONS IN RESEARCH METHODS AND METHODOLOGY: LUBS staff have made significant contributions to the development of methodology, being central to recent White Rose bids to host the ESRC Administrative Research Data Centre and NCRM. A prime example of this is the work of **Wilson**, who has many years' experience in processing, managing and analysing corporate population data in both academic and corporate environments. Central is the development of new ways of linking and combining insights from data sources, such as financial statements, annual reports, filing histories and Companies House statistics, with insolvency and county-court data. These advances have generated novel ways to profile family businesses and other forms of governance-ownership.

More broadly, economists have significantly contributed to interdisciplinary methods and heterodox economics, developed through the work of **Brown**, Fontana, Sawyer and **Spencer**, and central to the FP7 FESSUD project. The project goes beyond economics to incorporate insights from geography, sociology, environment studies and law to provide a holistic perspective on the nature and impact of finance. This work has placed LUBS at the forefront of recent debates about the future of economics, with **Brown**, Sawyer and **Spencer** being asked by the British Sociological Association to co-organise its 2012 Presidential Event, 'Understanding the financial crisis: sociology, political economy and heterodox economics'.

iii) DEVELOPMENT OF INTERDISCIPLINARY RESEARCH AGENDAS: over the past five years, LUBS has been at the forefront of efforts to push the boundaries of management and business research through participation in interdisciplinary research projects. This reflects the environment at Leeds, with strong support for cross-faculty collaboration (e.g. through the LSSI and Transformation Fund investment) and our own belief in the value of interdisciplinary working. These conditions have ensured a unique flavour to LUBS research, one illustration being the i-BUILD project, which has fostered new ways of working between economists, engineers, town planners and environmental scientists. This project has generated new insights into financing, delivering and evaluating modern infrastructure investments, with benefits for both academic and policy communities. A second example is that of STC research, which combines insights from organisational psychology with those of engineering and ergonomics to develop new ways of understanding how organisations work, and inform the design of physical space, crowd-control policies, and the implementation of new technologies. In 2010 STC won the AoM's *Making Connections prize* which recognises the symposium submitted to the Academy of Management Annual Meeting that best creates bridges across boundaries between individuals or groups (practitioners and academics, international and domestic scholars, academic disciplines).

iv) PIONEERING CO-PRODUCTION IN RESEARCH: a further distinctive feature of LUBS research has been to invest in new ways of co-producing research through actively engaging external corporate, government and third-sector users. This objective is central to the various KTP projects that have been run from LUBS, and underpins a faculty and university investment of over £6m in sector hubs, which are used as a focused, strategic gateway to developing research partnerships. Within LUBS, the BPS Hub has adopted this approach to kick-start a number of new research projects focusing on governance of social enterprises, clinical commissioning groups and law firms (also funded by SAMS/ESRC). External stakeholders (including Leeds City Council, chambers of commerce and private firms) have been central to articulating research aims and priorities. This model has also been central to the work of CIHM. A distinctive approach has been to use national inquiries, involving a wide range of stakeholders, including policymakers, managers and academics, to review developments and scope particular research questions. Recent inquiries have focused on the relationship between doctors and managers, the governance of health

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organisations, leadership and social value.

v) **TRAINING AND RESEARCH CAPACITY-BUILDING**: emerging from our commitment to research capacity-building (see sections c and d), LUBS has significantly contributed to training and development in our field. The framework for user engagement/knowledge translation, developed collaboratively with AIM/BAM Fellows, informs national researcher-development programmes, including workshops for the BAM/ABS Development Programme for Directors of Research, to help research managers to impact wider business-school strategies. LUBS staff designed and delivered training on engaged research in Belfast, Cardiff, Derby, Edinburgh, Leeds, London and Plymouth – funded by grants from Vitae, ESRC and the White Rose DTC. LUBS researchers helped produce booklets in the Academy of Social Sciences series, *Making the Case for Management* and *Making the Case for Social Sciences*. Aimed at politicians and the public, these showcase examples of social research put to productive use, including two LUBS impact case studies.

LUBS also contributes to regional, national and international research training through activities, including the publication of major monographs, textbooks and journal articles on research methodology. Examples include co-authored books on management research (**Thorpe**, 2008, 2012, 2013), and highly read and cited articles on qualitative methods (**Cunliffe**, 2008, 2010, 2011, 2013). Staff are also involved in presenting seminars and webinars, such as **Clarke's** NARTI workshop on visual methodologies (2013), **Kafouros's** seminars on writing for the AIB, and **Cunliffe's** BAM workshop on research perspectives (2012) and international webinar for the Center for the Advancement of Research Methods and Analysis in Detroit, USA (2012). Events such as the annual CERIC doctoral conference (involving over 50 students from across the UK in 2013) have also attracted attention. Forums have been created to support the career development of ECRs. **Cunliffe's** major role in expanding the international reach of qualitative research methods has been important here. She organises and runs the biennial international Qualitative Research in Management Conference, where ECRs converse with senior academics, and has contributed widely to White Rose DTC advanced training. A further example of how LUBS has promoted international forums for PhD students is the FP7 COST Action, focusing on health management. This project, involving 21 countries (including Australia and South Africa), organises annual training schools for PhD students and other ECRs around Europe, with strong input from academics and practitioners. Other examples of international training networks include ManETEI (see International networks, in section e).

vi) **WIDER CONTRIBUTIONS TO THE DEVELOPMENT OF THE ACADEMY**: influential roles taken by our staff include CERIC taking over the British Universities Industrial Relations Association, with **Stuart** elected as President. **Thorpe** was President of BAM, chairs SAMS, and was Dean of Fellows at the BAM. **Katsikeas** is Vice President for International Memberships for the Academy of Marketing Science. The traction gained within the community through engagement has enabled us to participate in influential policy debates on the impact of business schools and social research. **Tomlinson** contributed to the influential ESRC/British Sociological Association's International Benchmarking Review of UK Sociology. At the level of government policy, **Thorpe** co-lead the ABS's Task Force on Innovation in Business Schools, reporting to David Willetts, which focuses on business-school engagement with users.

Shaping of significant developments in doctoral training has also been achieved through **Kirkpatrick's** role as Chair of the Academic Quality Committee of the White Rose DTC, and **Thorpe** and others' membership of the ESRC training board. The latter contributed to restructuring doctoral training in the social sciences (ESRC-commissioned research on the future of the recognition process and accreditation of research provision), which led directly to the establishment of DTCs in social sciences, and involvement in the preparation of version 5 of the ESRC research training guidelines. LUBS was also invited to join the Task Force of the American Association of Collegiate Schools of Business, examining the nature of the doctoral qualification, and delivering sessions on a programme for directors of research run by ABS and BAM.