

<p>Institution: University of Strathclyde</p>
<p>Unit of Assessment: 19 Business and Management Studies</p>
<p>a. Context</p>
<p>Engagement with research users has been at Strathclyde's core since its founding in 1796 when it was established as a "place of useful learning" by John Anderson, a leading figure of the Scottish Enlightenment. Anderson's vision was for a place of learning which would operate "for the benefit of mankind". This imperative remains central to the University's mission and was referred to in its award of the THES 'UK University of the Year' in 2012. The judges praised Strathclyde's close links with business and its commitment to making an impact on the global economy. This commitment to practice is reflected within SBS where there is a firmly held belief in the importance of knowledge co-production and research excellence through active engagement with practitioners. We work closely with a range of partners in applied research, policy analysis, consultancy and executive education. Engagement takes place through department-based research groups and applied research centres such as the Strathclyde Institute for Operations Management (SIOM), the Scottish Centre for Employment Research (SCER) and the Fraser of Allander Institute (FAI), as well as through SBS's Centre for Corporate Connections (CCC). The main non-academic users and audiences for SBS's research are:</p> <p>Companies: across a range of industry sectors including manufacturing (e.g. Highland Spring, Wm Grant & Sons, Weir Group), energy (e.g. Iberdrola, SSE, Sgurr Energy), finance (e.g. Standard Life, RBS), aerospace & defence (e.g. Babcock International Group, BAe Systems); and across a range of company sizes from new start enterprises to multinational corporations.</p> <p>Government agencies: including NASA and the European Space Agency; the Department of BIS; The Scottish Government; Scottish Enterprise and Scottish Development International.</p> <p>Public & third sector organisations: including the NHS, Saltire Foundation, Social Innovation Scotland and the Scottish Voluntary Sector Network.</p> <p>Trade unions: during the REF period, unions such as UNITE and UNISON have wholly or partly funded a number of research projects concerning employment issues.</p> <p>Professional associations: including CIPD, CIMA, ACCA, the Contact Centre Association, the International Association of Offshoring Professionals, and the Health & Safety Leadership Forum.</p> <p>b. Approach to impact</p> <p>SBS has a long history of producing research which has an impact on wider society using a well-established, integrated approach to dissemination, engagement and staff participation, underpinned by infrastructural developments and external funds. This approach has been strengthened through the management of such activities through structures and strategies focused on knowledge exchange.</p> <p>Working with companies: SBS works with a range of organisations from multinationals to new start enterprises. While some company relationships are forged at departmental level, there are also a number of Faculty-level strategic relationships (e.g. with Babcock International Group). Much of the impact outcomes stem from long-term research collaborations (e.g. SIOM has worked with Highland Spring since 1995). Working with SMEs is a core aspect of the School's engagement strategy, and over the REF period SBS has secured over €8M in EC funding directly linked to supporting SMEs. In SIOM (MacBryde et al.) the FutureSME project involved 28 collaborators in 8 countries and assisted over 200 SMEs, the project outputs are being rolled out over the 8 countries and is expected to impact over 500 SMEs in the next 3 years. In the Hunter Centre for Entrepreneurship (HCE), training was delivered to 160 graduates working in Scottish SMEs through the Talent Scotland programme between 2010 and 2013. An independent review of this programme (Cambridge Economic Associates 2013 – Executive Summary page iv) attributes £73,548 of additional GVA per organisation to the programme, concluding that "organisations are benefiting from an enhanced level of innovative behaviour in product, and to a lesser extent, process development". SBS researchers engage extensively with public and third sector organisations, advising and influencing policy. The risk & reliability group in the Department of Management Science work with organisations including the Office for Nuclear Regulation, Department of Energy and Climate Change, Defence Science and Technology Laboratories (DSTL), European Space Agency (ESA), Maritime Coastguard Agency and the Ministry of Defence (MOD). The Department of HRM's projects on the restructuring of employment relations in the</p>

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voluntary sector has also led to impacts for the Scottish Voluntary Sector HR Network, the trade union UNISON and the Voluntary Sector Social Services Workforce Unit.

Organisation of and participation in public forums also play a key role in creating opportunities for impact. Public events organised by SBS staff provide opportunities to interact and engage with external audiences. Departments regularly host events featuring guest speakers from industry to address audiences comprising students, staff, alumni and the public. Often such interactions and engagements with public, private or third sector organisations provide project opportunities that in the future lead to impacts. SCER organised an ESRC seminar series, “Making Bad Jobs Better”, between 2009 and 2011, including academics from UK and international institutions, policy makers and practitioners to discuss existing research, generate policy proposals and identify new research agendas. More recently, in 2012 SCER organised an employer seminar for the CIPD at which SCER and its research partners presented the role of the HR function in improving job quality. SBS also participates in university initiatives such as “Engage with Strathclyde” a week-long series of events aimed at developing relationships with external organisations.

SBS academics are dedicated to **community, social and professional engagement**. Examples include the highly regarded and influential FAI Fraser Economic Commentary, first published in 1975 and now accepted as the authoritative and impartial analysis of the Scottish economy. In HRM, Taylor undertook a series of cutting edge sector audits for Scottish Enterprise and the Call Centre Association (CCA), which influenced companies’ location and employment strategies and regional policy, while Findlay (SCER) has contributed to programmes designed to improve employee’s working conditions. In Management Science, researchers work with organisations in the areas of Strategy (Ackermann) and Operations Management (MacBryde), and the work of the Risk Consortium (Quigley & Walls) is also contributing to professional, social and community life. In HCE, work on social innovation, public sector entrepreneurship, and women entrepreneurs (Carter) have informed UK Government policy, the latter resulting in a new £12M capital fund for women entrepreneurs. The Department of Marketing teams up students and industrial partners to solve a live problem in the ‘Marketing Works’ project, bringing direct impacts to companies such as Sgurr Energy, Thales, Strathclyde Police, Herald & Times Group, Barr Construction, DM Concerts and many more, while HCE places 3rd and 4th year students in SMEs working on growth projects.

Internal Mechanisms to Encourage Engagement and Impact

To ensure the continued emphasis on impactful research, SBS staff are encouraged to utilise the extensive range of initiatives that help build partnerships with external organisations:

Knowledge Exchange Professional: Strathclyde is the first UK university to establish a KE career pathway, recognising the importance of impact and engagement;

Strathclyde Links: funding for SMEs to receive direct support from an academic as the first stage of a longer engagement;

Emergent Companies Evaluation Grant: grants to cover academic time to evaluate the potential of a new product or process on behalf of an SME;

Research Exploitation Partnership (REP): postdoctoral researcher or company research staff funding for secondments of up to 12 months;

Senior Internships: senior academic or company staff spending time in the other organisation;

Engage with Strathclyde: an annual week-long event which attracted over 1000 people in 2013, including more than 400 businesses and organisations.

SBS has developed a number of training modules for staff to support engaging in knowledge exchange activities with external industry collaborators. SBS has also produced a knowledge exchange database, enabling us to improve our collective understanding across the School of activities resulting in research impacts with non-academic partners.

Infrastructure Mechanisms

Underpinning our ability to deliver benefits to wider society are broader mechanisms that play a part in creating interactions and setting out routes to engagement. These are discussed in turn.

- **Centre for Corporate Connections (CCC).** Formed in 2010, CCC serves as a hub for the management of SBS-Industry interface and is specifically tasked with developing corporate

relations and extending industry-based research connections. These include developing bespoke training programmes for companies such as the Babcock International Group, Weir Pumps, Wm Grant & Sons, Synergy and Standard Life (CCC generated £2.15M in executive education in 2012/12). CCC has generated numerous practice-oriented student projects, knowledge exchange opportunities and avenues for research and publication.

- **Market-facing research centres.** SBS strives to make it easy for users to work with research teams. As a result, SBS has a number of research centres that were established to respond more directly to the needs of policy and practitioner communities. For example:
 - FAI focuses its research on regional issues generally and particularly in the Scottish economy
 - SCER is one of the UK's leading centres producing high quality research for policy use in rapid response mode for public, private and voluntary sectors
 - SIOM undertakes practice-oriented research designed to assist organisations in the manufacturing, service and public sectors realise organisational goals and objectives through business processes
 - The Hunter Centre for Entrepreneurship undertakes research around business start-up and advises local, national and international policy-makers
 - The newly created ERDF-funded Centre for Workplace Innovation focuses on organisational transformation, creating more rewarding jobs and higher value products & services.

Innovative 'clubs' and collaborations. Bringing together groups of organisations for their collective betterment has been a fruitful stream for impact. For example the Risk Consortium, which includes the MOD, SELEX GALILEO, RSSB, Scottish Power, EDF, HSE, dstl, Scottish Water and Sellafield Sites, meets three times per year to share problems relating to risks, potential solutions and the current research in this area. The impacts from this Strathclyde initiated project are detailed in the case study on reliability and growth modelling in defence and aerospace companies. The Hunter Centre for Entrepreneurship organise a number of clubs including the Forum for Family Business Advisors (FFBA) and the Strathclyde 100, a network of leading alumni who meet quarterly to offer support and advice to new start spin-out companies. SBS has also established a Business Fellows network which meets several times a year, helping to increase engagement between researchers and the user community.

Underpinning Impact using External Funding

Financial support is critical to establish, maintain and develop long-term relationships. Two main funding streams have been utilised in this respect: **Knowledge Transfer Partnerships (KTPs)** and the **Strathclyde KTA Company Escalator**. The University of Strathclyde is one of the top 5 participants in the KTP programme (by number of live projects). Within SBS there are a number of KTP projects involving the Departments of Marketing, Management Science, Management and HRM. Several involve inter-disciplinary research collaborations with departments in Science and Engineering on issues such as risk management and job quality. The Strathclyde KTA Company Escalator was part of an EPSRC knowledge transfer account award that the University used to facilitate partnership creation between the University and external organisations. SBS participated in a number of these projects, for example the Department of Management Science (Walls) worked with both Scottish Power and Scottish Water looking at performance based maintenance and this KTA resulted in a computer based tool to support maintenance decision making for both organisations. Although the funding via the KTA Company Escalator has now ended, SBS staff may access funding via the University's Impact Accelerator Accounts, which will also support engagement with companies to develop impact from EPSRC research.

c. Strategy and plans

The SBS strategy is strongly collaborative, reflecting our distinctive engagement with a broad range of stakeholders in business, government and civil society on issues that matter. In order to expand our contribution to wider society SBS plans to:

- Establish and grow strategic alliances with world class academic institutions and organisations with a global approach to research and KE, and develop mechanisms for transferring useful knowledge and technologies to leading international companies. Processes have been set up to do this and a number of new agreements have already been signed with international

research institutions such as SKEMA and international companies such as those (e.g. SSE Renewables, Scottish Power Renewables and Technip Renewables) collaborating through the low carbon energy programme of the new Technology & Innovation Centre.

- Develop definitions of success to ensure that knowledge and technologies within the University have maximum impact in the real world. SBS has recently developed a performance measurement system to measure progress towards our knowledge exchange ambitions, which include doubling consultancy income and executive education income by 2017.
- Continue to create networks to bring researchers together with contacts in industry, business and the public sector. New interdisciplinary groupings, e.g. the emerging Strathclyde Innovation Group and the recently formed Workplace Innovation Centre, are a key part of this strategy.
- Continue to realise and deliver wider benefits for the University, its partners and society at large. The Faculty performance measurement system for knowledge exchange measures and has targets around impact, not just income.
- Support the increase of consultancy services and promoting our expertise within and beyond the University. With an ambitious target of doubling consultancy by 2017, SBS's strategy includes utilising fully funding mechanisms (e.g. Innovation vouchers) that enables SME access to university consultancy services.

To structurally embed these goals, SBS appointed a Vice-Dean Knowledge Exchange (VDKE) who leads a team of departmental KE Directors. Together they make up the SBS KE Team, which has responsibility for monitoring and delivering the Faculty's strategy for knowledge exchange.

d. Relationship to case studies

SBS's impact case studies demonstrate how our strategy of supporting impact has resulted in significant improvements in external organisations. Collectively the cases demonstrate SBS's commitment to **engaged scholarship** and the co-production of knowledge through active engagement with research users. The cases demonstrate how SBS utilises **external funding** to work with users in ways that develop research collaborations of benefit to a variety of stakeholders.

- SIOM has a long history of cross-disciplinary collaboration with key companies, exemplified by the MacBryde case drawing on funds from the EPSRC, EU and KTP. Insights from an integrated performance management model have led to direct benefits for a number of firms.
- **Innovative 'clubs' and collaborations** have also led to impact. The Quigley/Walls case on reliability and growth modelling in defence & aerospace companies exemplifies this approach. Drawing on funding from the DTI and an industry consortium, a robust theoretical model was first generated then operationalized with data meaningful to users. This case also illustrates the **potential global reach** of our applied research as the model has explicitly informed international standards, in this instance of the International Electrotechnical Committee.
- The MacBryde and Eden/Ackermann cases demonstrate a variety of distinctive in-depth **impacts across particular organisations** (with respect to performance measurement systems) and across **groups of organisations** (group decision-making in negotiation in management teams in the UK private and public sector).
- The Taylor case on the employment consequences of business process offshoring has involved continuous collaboration with large firms, government agencies and professional bodies such as the International Association of Outsourcing Professionals and Unite the Union, demonstrating SBS's approach to **advising public and third sector organisations**.
- SBS's role in **influencing policy and practice** is exemplified by the Carter/Shaw case which shows how policy debates are framed and informed by research. Backed by ESRC and DTI funding, researchers worked with banks, policy-makers and SMEs, **co-producing knowledge** leading to new policies on training, lending practices and access to finance.
- Finally, a distinctive characteristic of the SBS cases is **multi-level policy impacts** on governmental organisations arising from long-term research programs, as well as **community, social and professional engagement**. This is exemplified in the Cunningham/Nickson case on changing policy concerning voluntary sector employment relations, McGregor/Swales on economic modelling for enhanced policy evaluation, and Findlay on workplace learning.