

Institution: 10007822

Unit of Assessment: 19

a. Context

With a research mission “to improve the practice of management”, we conduct high quality research that has both immediate and enduring impact on **organisations** and **individuals**. Since 2008 Cranfield researchers working individually, in transient cross disciplinary teams or more permanent research centres have co-created knowledge to the benefit of more than 250 different organisations in the **private, public (including government)** and **Third sectors** world-wide. Private sector beneficiaries include Rolls Royce, HP, GSK, BP, BT, IBM, TATA Global Beverages, HSBC, RBS and P&G, while UK public sector beneficiaries include 12 NHS Hospital Trusts, 5 Fire & Rescue services, 10 County and Borough Councils and various government departments including DWP, FCO, MoD, HM Treasury and DEFRA, and agencies including Environment Agency and National Audit Office. There is also impact on Third sector organisations such as English Heritage Barnardos, and Oxfam GB. These and many other organisations and individuals have benefited from our research through engagement in our six ‘**Pathways to Impact**’.

Since 2008 research income from industry and commerce continued to rise (total £6m), exceeding sector norms. A significant proportion of this is recurrent, coming primarily from repeated successful competitive tendering, or from renewal of fees for organisations participating in our research clubs. Organisations gain both immediate benefit and lasting impact for example through improved service delivery, increased efficiency, or the development of new products and processes. Supporting an agenda that prioritizes the challenges faced by managers internationally, we deliver **economic, commercial and organisational** impact by examining thematic issues; Teams from our Supply Chain Research Centre and the Centre for Business Performance conduct research that creates supply chain efficiencies and exploits advanced technologies through novel work methods and service strategies. This type of impact complements the impact we make on **public policy** or on **practitioners and professional services** through the work of individual researchers (e.g. Kelliher) and more permanent research centres (e.g. International Centre for Women Leaders), which stimulate policy debate and ultimately effect changes in legislation.

b. Approach to impact

We achieve impact through excellence not only by disseminating and translating findings and assisting with their adoption, but by engaging with research users in an interactive, collaborative and transformative process. Managers, front-line employees, policy makers are involved as knowledge co-producers in all stages of the research, performing four roles: **contributors** of research questions, ideas and intellectual content, first **evaluators** of project outputs, **brokers** of the research into field work and test sites, and **advisors** on dissemination and exploitation of the work in practice and policy.

Over several decades we have steadily evolved a number of ‘**Pathways to Impact**’. Currently 6 are firmly established:

1. **Bespoke public and private sector funded research projects.** For over ten years the level of research funding from industry and government has exceeded £1.0m p.a. Our research findings make a tangible difference to organisations as shown by our reverse logistics case and result in high quality outputs (see Bernon and Mena - REF2). Research Council funded research projects also have significant impact, for example Denyer’s ESRC/AIM Fellowship was selected by both the Academy of Social Science and ESRC as an exemplar of social science research that has made a difference to policy and practice.
2. **Research Clubs.** There is an established tradition of industry sponsored research clubs. Currently there are 8 involving >50 different companies. Organisations pay an annual fee and collectively support a commonly agreed research agenda aimed at providing academically robust solutions to practical problems and outputs satisfying the highest academic standards. More than 2750 manager-days have been devoted to Cranfield research through research

clubs (e.g. KAM Club, Global Manufacturing roundtable) since Jan 2008, generating >£1.7m research income in the REF period and leading to high quality knowledge outputs (e.g. Goffin's JPIM papers - REF2).

3. **Knowledge Transfer Partnerships (KTPs).** Supported by the University Business Development Office, our Demand Chain Management community has secured 6 KTPs valued at >£1.4m since 2008. The TSB-specified reporting tool for these projects requires that impact is identified and organisational changes have been made. A KTP with MESH Planning Tools resulted in their developing 3 analytics products, and increasing their revenue (£0.75m to >£2.3m) and staff numbers (3 to 35). It also resulted in a Harvard Business Review publication (see Macdonald - REF2). Similarly the KTP with BAT plc has reconfigured their supply chain strategy saving £13.5m during the project and with projected savings of £93m within 3 years.
4. **Benchmarking Practices.** Focussing on issues pertinent to both practitioner and policy audiences we are committed to producing several high-profile empirically grounded annual reports reflecting trends in current practices (e.g. Best-Factory Award reflecting practices in UK manufacturing). These reports provide the basis for high quality research outputs (e.g. IJOPM papers by Szwejczewski - REF2), and encourage organisational improvement, e.g. Siemens Traffic Solutions won the Best Factory Award in 2010 having reduced running costs by £1m and increased turnover to £21m from £15m in 2008, when they had previously entered. Two-thirds of a sample of organisations re-entering in 2013 had improved scores on more than half of the performance indicators.
5. **Executive Doctorate.** By recruiting senior executives (c.12 p.a.) onto our International Executive Doctorate (DBA) programme we work directly with senior leaders of international organisations. These students conduct research that directly impacts their organisations through addressing pertinent practical problems, for example action research allowed one executive operating in a fast-moving brand business to reduce seasonal product range size by 23% and increase cash margin per product by 50%. This work will be published in 2013. Other contributions to knowledge include papers with Alvarez by Pilbeam and Wilding, or with Bailey by Baines (REF2).
6. **Executive Education.** World leading customised executive development (ranked 1st in the UK, 8th in World in 2013 by FT) with a £10.8m p.a. turnover complements our open executive programmes (£5.8m p.a. turnover). Together they reach approximately 4250 managers per annum allowing faculty to generate relevant research agendas, refine their language through constant dialogue with managers and policy makers, modify on-going research activities, provide early visibility of research findings and permit rapid feedback of the individual and organisational impact. Thus there is a synergistic relationship between executive teaching and research, ensuring immediate impact.

This reputation for engaged scholarship is grounded in an organisational culture that values and respects practitioner knowledge remaining attentive and responsive to changes in the practitioner context. This is manifested in a set of well-developed practices, including:

- Building sustainable links and networks with practitioners (e.g. through research clubs);
- Communicating in accessible language through appropriate media (e.g. in executive education and benchmarking practices);
- Being responsive regarding the focus of the research study (e.g. KTPs and DBAs);
- Engaging in an iterative exchange of ideas throughout the research process (e.g. projects).

These processes of collaboration, dissemination and engagement benefit from extensive **institutional support**. Engagement with policy and practice is not just expected but required of academic staff. Individuals can tailor their own unique blend of research, business engagement and impact activities and are supported to do so through coaching and mentoring schemes and the staff management system. **Expertise and resources** are provided by Cranfield Management Development Centre, a Business Technology Group (BTG) and a Press Office.

Impact template (REF3a)

We have a dedicated 186 bed hotel and conferencing centre graded to a 4* industry standard providing an attractive venue for engaging with practitioners and policy makers for knowledge exchange. A key feature of the conference centre is the Knowledge Interchange, which showcases research to residents. Nine different exhibitions have been displayed since Jan 2008, including innovation management, entrepreneurial performance, branding and corporate responsibility and sustainability. Its on-line counterpart facilitates global engagement with our latest research by anyone. These facilities enable constructive interaction both formally and informally with known organisational stakeholders, and provide a suitable setting for inviting future leaders.

The BTG (11.8 FTE) supports faculty to engage with research users through the use of social media, networked learning, instructional design, project portals and discussion forums. Our press office (2.8 FTE) ensures that research outputs are widely disseminated through regular press releases (>30 p.a.). They also foster a positive link between business journalists and faculty, ensuring that leading edge thinking can influence and inform public debates both nationally and internationally. Since January 2008 the female FTSE has had >1000 mentions in national newspapers, including The Sunday Times, Daily Telegraph, The Guardian, Financial Times and The Observer. Within 12 months of the publication of the Walsh Review the press office had facilitated 56 mentions in the media. Such links can result in awards in the practitioner arena: Vinnicombe's 2013 TIAW award for contributions to the economic empowerment of women; Denyer was acclaimed the most influential UK thinker by HR magazine in 2012 for the "profound practical effect" of his research, especially on public sector HR directors; Wilding won the 'Distinguished Service Award for Thought Leadership and Service to Supply Chain Management' in 2008 – an award sponsored by the World Trade Group - and the 'Individual Contribution Award' in 2010 at the European Supply Chain Excellence Awards, sponsored by two leading practitioner magazines.

c. Strategy and plans

The School's research strategy for 2020 builds upon our 6 '**Pathways to Impact**', augmenting them and extending the emphasis on business engagement with impact to all future research activities. Specifically, the strategy focuses on four goals:

1. To publish high quality research outputs that have demonstrable impact on practicing managers and policy makers;
2. To be internationally recognised for delivering and assessing research impact;
3. To expand the capacity of our active research base for engaged research with impact;
4. To sustain an appropriate volume and balance of research funding.

To achieve these four goals we will:

1. **Co-create** new knowledge by engaging with practitioners and policy makers. Their positive contribution to the Advisory Groups of recent projects by shaping research questions and designs, by evaluating and assessing potential impact and by advising appropriate dissemination routes, offers a robust mechanism to ensure impact. We will replicate this advisory group approach with larger research projects (>£100k) of longer duration (>18 months) in the next REF period.
2. Further strengthen research **collaboration** by deepening relationships with target organisations to work across a range of research related activities through joint appointments or secondments (2 p.a.). The value of working with practising managers to shape research agendas and ensure effective adoption was demonstrated in a recent NIHR-SDO project (P.I. Buchanan). A complementary approach will be to focus our existing 'Executive in Residence' scheme on target organisations, encouraging senior managers from these organisations to engage for a sustained period with Cranfield faculty shaping the breadth of our research agenda to ensure relevance and impact
3. Diversify the available channels of **communication** to reach practicing managers and policy makers with focused and targeted offerings. We will increase the number of articles we publish in leading practitioner journals (e.g. HBR, CMR, Sloan) to 12; an increase of 50% on our

Impact template (REF3a)

performance in this REF period, by drawing on the expertise accrued by faculty with publications experience. We will extend the use of research webinars leveraging expertise from our BTG. In addition to using traditional media (Press, TV and radio) we will further expand and develop our use of social media to publicise our research. Faculty will be offered appropriate media training to develop their “on-line presentation skills”. We aim for 25% faculty to initiate research blogs in the next REF period.

4. Extend the number and reach of our research **clubs**. We will achieve this by running ‘discovery days’ (2 p.a.) where research users are invited to learn about our latest research and explore ways of enhancing utilization. These events provide a safe space for early career faculty to engage with senior practitioners, where relationships can be nurtured. In particular we plan to launch a research club for senior professionals in HR.
5. Encourage **capacity building** for engaged research with impact through workshops and mentoring. This will provide faculty with support and guidance on how to prepare an impact plan, indicating how users will be engaged, outputs disseminated and impact promoted. An impact plan will be a requirement for all new research proposals.
6. Continue the **coaching** of faculty for business engagement with impact. Our Executive Development Directors have supported a small number of faculty in translating their research findings into materials and tools for practical use.
7. Develop and implement more systematic ways to **capture** and evaluate the impact of our research. We will establish mechanisms to collect evidence of business engagement, evaluate the impact of our research and produce a stream of impact case studies *as a matter of routine*.
8. **Capitalize** on our excellent and enduring relations with practitioner networks to increase the volume of research funding from corporate partners in a sustainable manner. An indirect form of research income will be achieved by exploring more effective ways of transforming research into evidence-based teaching and learning interventions that improve our postgraduate and executive education offerings.

d. Relationship to case studies

The submitted cases demonstrate the significance and reach of our impact in both the public (Flexible working and Female FTSE) and private sectors (Key Account Management, Waste in Supply Chains and Reverse Logistics). The table below indicates how our submitted cases make use of our 6 different ‘Pathways to Impact’: (1) Projects, (2) Research Clubs, (3) KTP, (4) Benchmarking, (5) DBA, (6) Executive education. These pathways are interdependent and mutually reinforcing. While impact may be developed through a primary pathway (black square), it is quickly amplified by other routes (grey square), especially 2, 5 and 6, which involve practitioners and policy makers. Our research characteristically is non-linear engaging research users throughout the process thereby maximizing impact.

N.B. KTPs (3) only impact a single organisation and so their ‘reach’ is curtailed. They are therefore not included as an exemplar case in our submission.

Impact Cases (abbreviated titles)	Pathways	1	2	3	4	5	6
Flexible working for all							
Transforming corporate boards							
Return to sender							
Global implementation of Key Account Management							
Waste not, want not							