

Institution: Edinburgh Napier University
Unit of Assessment 3: Allied Health Professions, Dentistry, Nursing and Pharmacy
a. Context

This Unit of Assessment (UoA) covers staff drawn mainly from the Faculty of Health, Life and Social Sciences (FHLSS). The research presented in the impact case studies is representative of the breadth of research undertaken within the two Schools making up the Faculty – School of Life, Sport and Social Sciences and the School of Nursing, Midwifery and Social Care.

Beneficiaries of our research: Researchers in Unit of Assessment (UoA) 3 actively engage with Government, the National Health Service (NHS), NHS Education Scotland, large organisations (such as the Ministry of Defence; MoD), small and medium-sized enterprises (SMEs), and the third sector. This is done in a variety of ways, including Knowledge Transfer Partnerships (KTPs), Innovation Vouchers, contract research, commissioned reports, consultancy, establishment of ‘spin out’ companies, and research collaborations. Our staff partner and engage with small (for example, Andersen Caledonia on novel disinfectants) and large (for example, GlaxoSmithKline, on the safety of nanomaterials) companies using our knowledge and expertise and contribute to the development of a skilled workforce by the training of researchers (at the graduate level). The KTP with GlaxoSmithKline (GSK; presented as an impact case study) arose out of contract research carried out with this company by Hutchison, the Director of the Centre for Nano Safety. Hutchison has also engaged with stakeholders in Hong Kong and Singapore through the presentation of ‘Master-classes’ on the safety of nanomaterials to Higher Education Institutes, pharmaceutical companies, such as Pfizer and Novartis, and contract research organisations, such as ClinTec. Staff in UoA 3, for example Elliott, also contribute to policy in areas such as sexual health (another of our Case Studies) and survivors of psychological trauma (our third Case Study); see section d.

Commercial activity: The commercial activity that derives from our research is coordinated by an Assistant Dean, a Head of Business and Administration, and the Faculty Director of Research, supported by an Innovation Manager and a Business Development Executive. Edinburgh Napier University has an excellent record of business engagement spanning the transfer of new and existing knowledge, achieved through joint appointments, consultancy, and the establishment of new companies, which act as vehicles for the commercial exploitation of research. In addition, the University has adopted growth in business engagement and income, and graduate employability, as key strategic objectives. We consult and listen to industry needs and demand for innovation and skills, and this feedback is channelled through to the academic community via an effective ‘innovation pipeline’. A 2012 report, commissioned by the Scottish Funding Council (SFC), entitled: ‘*Analysis of the Knowledge Transfer Grant Strategies and Annual Reports*’ produced by Public and Corporate Economic Consultants (PACEC), cited Edinburgh Napier as an exemplar of best practice in Knowledge Transfer Grant investment strategy to support business engagement. Researchers within UoA 3, and other staff not submitted here, carry out contract research commissioned, for example, by companies including BAE Systems. This arose as a result of a Framework Procurement Agreement, signed in 2012, which allows Edinburgh Napier University to be part of an approved supplier network for BAE Systems and, ultimately, the Ministry of Defence (MOD)/Defence Science and Technology Laboratory (DSTL). BAE Systems are the prime contractors for the MOD/DSTL, and use the approved supplier network to commission contract research around the DSTL’s Human Capabilities Research Programme (HCRP); we are one of only two Scottish Universities currently participating in this agreement. The HCRP is split into five key areas: Personnel, Tri-Service Training and Education, Health and Well-Being, Influence and Stabilisation, and Humans in Systems. One of these areas closely aligns with one of our four research themes, Health and Wellbeing. This programme runs for four years, with funding calls and tenders for consultations released on a weekly basis. There is a core ‘BAE team’ at the University, who manage client relations; this team was set up to match BAE’s structure, ensuring that we were regarded as a true industrial partner. A current project coming from this business interaction is focussed on understanding why the MOD are not recruiting and retaining diverse ethnic groups in the three cadet forces.

Florida-James has been working very closely for the last two years with Scottish Enterprise, Scottish Cycling and the Forestry Commission to establish a mountain-biking Centre of Excellence at Glentress, in the Tweed valley, in the Scottish Borders. The purpose of this, in addition to establishing a focus for mountain-biking in Scotland (including training and performance testing), is to engage with SMEs, and grow all aspects of the mountain biking market in Scotland; the value of

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this market to the Scottish economy was estimated, in 2009, by Scottish Enterprise, to be £119 million. An example of an SME, with which Florida-James has worked, is Scottolier (see: <http://www.scottoiler.com/>) where Edinburgh Napier helped to develop, test and market a new oil lubricant/protectant (see: <http://www.scottoiler.com/uk/cyclesolutions/ubsstory.html>).

b. Approach to impact

The University has adopted, and is effectively delivering, against the Easy Access Intellectual Property model, required by the SFC, to the Scottish SME base. This is being achieved via the Business Innovation Exchange (BIE) Programme, a collaborative SME innovation/knowledge exchange venture led by Edinburgh Napier University in partnership with Queen Margaret University and the University of St Andrews. Through this initiative, the University is proactively engaged in developing and delivering innovation-based solutions for Scottish businesses with a view to improving their competitiveness and profitability. The success of this collaboration is demonstrated by Edinburgh Napier University being the leading practitioner in the use of Innovation Vouchers (primarily funded by the SFC, but also BIE and Sporting Chance). These provide up to £5,000 to enable academics to devote time to undertake short projects with industrial or public sector partners. Over the past two years, the University has generated 87 new innovation-based relationships with Scottish businesses. For example, the relationship with Scottolier was initiated by the award of a Sporting Chance Innovation Voucher; a BIE Innovation Voucher was also awarded for work with Panton McLeod, which involved microbial testing to establish the efficacy of a proprietary disinfectant.

Edinburgh Napier University led the investment in two significant initiatives to improve communication with business and industry. Firstly, working with Queen Margaret University and the University of St Andrews, and regional Colleges, a common University to business marketing strategy, 'Business Tailor', was developed to meet individual partners' requirements. Management of the generated activity is handled by a Customer Relationship Management system ('Salesforce'), thereby avoiding multiple points of contact with external parties, thus reducing business frustration. The University is investing in increasing impact-driven research via adoption of 'Strategic Account Management' (SAM). Where the profile of activity is conducive (for example, large volume and/or value of business or company size), SAM seeks to explore the 'whole company' needs, and meets demands with a 'whole University' response. The University is also funding industry-defined placements, which provide financial assistance for 12-week internships for students to gain work experience, leading to employment, while simultaneously transferring 'know-how' between the company and the University. This is a truly 'joined up' engagement, and resonates strongly with Recommendation 4 of the 2012 Wilson Review (A Review of Business-University Collaboration -

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32383/12-610-wilson-review-business-university-collaboration.pdf). Researchers in UoA 3 also regularly respond to enquiries from Interface (<http://www.interface-online.org.uk/>), which is a 'Brokerage' that connects businesses with Scotland's 24 Higher Education and research institutes to stimulate innovation and growth. For example, an Interface request led to Foley and Taylor helping Devro plc solve microbial contamination problems in their products (sausage casing) and plant.

Academics work in partnership with the Chief Nursing Officer of Scotland to explore opportunities for funding, and increased postgraduate and Continuing Professional Development (CPD) opportunities. CPD is delivered by the Centre for Wellbeing and Healthcare, and focusses on the up-skilling of the NHS workforce. Changes in healthcare management mean that the NHS requires customised training, and Edinburgh Napier University has provided comprehensive evidence-based programmes in Positive Behavioural Support, Insulin Pump Therapy, Epilepsy Management, and Stroke and Autism. Staff research expertise has led to international clinical research organisations, such as ClinTec and Covance, commissioning bespoke training for their workforce to ensure patient safety, and the Singapore Government asked Edinburgh Napier University to provide an educational training infrastructure for their clinical research workforce.

Staff also participate in public engagement activities such as: i.) Kickstart, which is a collaborative project that involves three Edinburgh Universities and Scotland's Rural College, designed to provide a taster of studying at University; and ii.) High Flyers, a scheme designed to give schools, with low uptake to University, the opportunity to attend summer workshops. In addition, we have a number of Science, Technology, Engineering, and Mathematics (STEM) ambassadors, who have taken part in activities such as 'Lab in a Lorry', the Edinburgh International Science Festival, and

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the British Science Festival. One researcher (Taylor, not submitted here) was a scientific consultant to 'Rot Box', at Edinburgh Zoo, broadcast on the BBC (see: <http://www.bbc.co.uk/programmes/b012w66t>) on 10th October 2013.

c. Strategy and plans

One of the University's six strategic objectives is to be a 'preferred partner', and this applies particularly to knowledge exchange. The UoAs future plans seek to develop and increase impact from its research. For example, future bids for University seed investment for research funding must demonstrate tangible impacts. Part of the University strategy will mandate greater public engagement, and promotion of research activities via the media, public lectures, and Edinburgh Napier University's web-site. Research quality and quantity will also be increased, with the goal of submitting 50% of our staff to the next Research Excellence Framework (REF) exercise, by appointing high-quality academic staff, developing existing staff, and providing more research time. The University believes that by increasing our research reputation, it will increase its outward-facing interactions with agencies such as Government, the NHS, business and the third sector, thus delivering greater impact. In July 2013, the Faculty of Health, Life and Social Sciences held a 'Research Away Day' where impact was a major topic of discussion. The Faculty's (and UoAs) four research themes already provide internal reporting and monitoring structures for outputs and their impact, both academically and in the wider world. Over the next assessment period staff will be encouraged to decrease the number of articles submitted for publication, but to concentrate on publishing a smaller number of high-quality papers. In addition, the Faculty is currently discussing the appointment of an 'Impact Champion'.

The Faculty's future strategy includes the development of Consortia that will apply to the new European Union (EU) Horizon 2020 funding programme, which has as one of its major themes: 'Tackling Societal Challenges'. One of the seven areas highlighted by the EU, within this theme, is 'Health, demographic change and well-being', which fits well with the current and planned research within UoA 3. The increasing importance of impact beyond academia is acknowledged and this will be one of the major drivers of our future research strategy.

d. Relationship to case studies

The impact case studies are submitted in UoA 3, were chosen for their breadth and depth of impact and because they are representative of the outcomes of research carried out in this UoA. The first case study, on drug pre-clinical testing, demonstrates the UoAs ability to interact with industry. As a result of European Commission reports, evidence presented at committees and working groups and papers published in internationally-recognised peer-reviewed journals, the key stakeholder (GSK) commissioned contract research to test improved pre-clinical toxicity assessment. Success in this project led to a KTP that embedded the research into the stakeholder's business. This is one of two KTPs that researchers within this UoA held in the reporting period, demonstrating our commitment to partnerships where we can deliver real impact. The other two case studies were direct consequences of Scottish Government commissioned research into socially-important problems. The case study on psychological trauma demonstrates the University's commitment to applied, clinical research in the area of health and well-being. It describes the development and testing of novel interventions to aid recovery from psychological trauma. These have been applied to clinical practice by nurse therapists, psychologists, counsellors, psychotherapists and psychiatrists. The work has had widespread impact on policy, mental health guidelines, and clinical practice, with national and international reach. Importantly, it has had direct impact on the lives of survivors of psychological trauma and has improved the management of mental health conditions following exposure to adverse life events. The third impact case study on the sexual health of young people also demonstrates the UoAs ability to reach a number of audiences, ranging from policy makers to those involved in service provision and ultimately impacting on patients. By working closely with commissioners and other key stakeholders (for example, the NHS) we ensured that our research findings fed into the institutional policy-making cycle. The needs of these stakeholders were provided by accessible interim and final reports, evidence presented at committees and working groups and papers in international peer-reviewed journals. The impact is a direct result of the collaborative relationship between the research team and the key stakeholders. The last two impact case studies demonstrate that the UoAs priorities are shared with Governments across the world and demonstrate the international reach and significance of its research.