

Impact template (REF3a)

Institution: University of Essex

Unit of Assessment: 4 – Psychology, Psychiatry and Neuroscience

a. Context

Psychologists at Essex conduct research into social, sensory and cognitive psychology, addressing a range of challenges across society. This research informs decision-making in health, education, public service and policy contexts. Outputs are also routinely employed to develop and enhance commercial activities and products. To maximise the external value of its research, all three of the Department's research groups – *Cognitive and Sensory Neuroscience*, *Social and Health Psychology* and *Cognitive and Developmental Psychology* – engage in active dialogue with a range of non-academic users, beneficiaries and audiences, including:

- **Public organisations** such as the NHS, Defra and WHO, and hospital trusts responsible for delivery of healthcare. The Unit of Assessment's (UoA) research in sensory, social and cognitive psychology helps to develop policies that promote human health and wellbeing and provides a robust basis to inform public health policy and decision-making, both through direct commissioning and successful application to publicly-funded schemes.
- **Commercial research and development organisations** involved in technology development; for example, the US Defence Advanced Research Projects Agency, the European Office of Aerospace Research and Development, Docklands Light Railway (DLR) and Givaudan UK Ltd.
- **Trade associations and professional societies** such as the UK Cards Association, the Sign Design Society and the British Institute of Radiology which, for example, applied social psychology research on decision-making in the context of controlling radiation risks.
- **Charities** such as Age UK, WWF, the RSPB, Great Ormond Street Hospital Trust, Deafness Research UK, the RNID, Hearing Link, and Action on Hearing Loss. Essex psychologists have also interacted with the Colchester Hospital University NHS Foundation Trust, the British Dyslexia Association, Action Medical Research for Children, and the Dr Edwin Doubleday Fund.
- **Private sector organisations** for which research underpins the production and distribution of products and services. For example, sensory psychology research into the reduction of perceptual distortions has benefitted Cerium Visual Technologies, Crossbow Education (tinted lenses and overlays) and Colour2c.co.uk (Dyslexia and Coloured Filter Service to schools).
- **Direct not-for-profit engagement with the public:** for example, members of the sensory group have developed a revolutionary hearing aid app that is freely available worldwide through internet download. This makes use of computational models of hearing developed at Essex. Other direct engagement includes provision of consultancy workshops on alcohol abuse, eating disorders, visual stress, Meares-Irlen Syndrome and migraine, as well as seminars for parents and teachers, and at events such as the Autism Anglia conference.

The UoA's broad engagement with research users and collaborators is reflected in its 2012 HEBCI data. During the period 2008/09-2011/12 the Department generated more than £1m via collaborative research involving non-HE partners, contract research, and consultancy and CPD courses.

b. Approach to impact

Groups within the UoA have clear strategies to ensure that research is effectively shared with users and informed by their needs. Supported by University-wide mechanisms, a range of approaches are used to generate impact from research:

- **Interactive:** Researchers form relationships with key individuals in user organisations and develop a continuing dialogue about specific research needs. For example, the 2011 usability study for FWT Studios and the DLR recommended a route diagram that is now in use on all DLR trains. Many UoA staff also interact with users through membership of external networks. Orbell is a member of the Primary Care Clinical Studies Development Group and Temple has spent three years as a non-executive director of Colchester General Hospital and Essex County Hospital. The University Development and Alumni Relations Office supports the UoA's interaction with user groups by raising matched PhD funding (with the Winton Fund for the Public Understanding of Risk and the NHS Increasing Access to Psychological Therapy (IAPT) programme for students whose research has direct impact. University Research and Business Partnership Managers, who help academics to design and deliver impact plans, also support

Impact template (REF3a)

the unit's interactive approach.

- **Responsive to the identified needs of users:** Much research is specifically targeted towards addressing user challenges. This can occur via: i) response mode funding, as in the case of the Department of Health (DoH) funded research which investigated the effects of mobile phone use on human cognition; ii) involvement of users in funding applications and projects themselves; and iii) collaborative engagement with RCUK grand challenges. UoA staff engage with a number of University Centres that facilitate knowledge exchange such as the National Institute for Health Research Design Service for the East of England and the Essex Biomedical Sciences Institute. Essex's Ageing and Assisted Living Network also funds research that is interdisciplinary and collaborative with users, and currently supports three UoA projects.
- **Direct engagement with beneficiaries:** Impact is also achieved through the Unit's direct public engagement. For example, Meddis' group have developed a freely-available iOS app that transforms a mobile phone or iPod into a hearing aid. Working with the University's Communications and External Relations Office they made [an explanatory vodcast about the research](#), which received 4,479 plays within 2 months of its launch, helping to increase uptake of the app. By the end of July 2013, 8 months after the app's launch, >20,000 downloads in 94 countries were recorded. In another example, directly informed by user need and developed with feedback from Parkinson's sufferers, Essex Psychologists and Computer Scientists produced and evaluated a device for home computers to reduce drug-resistant tremor. The project was funded by the University's Ageing and Assisted Living Network.
- **Dissemination:** The Department is proactive in sharing research findings both with key users and the wider public, through channels including industry conferences and public lectures. This is done to increase the visibility of research to external audiences and to maximise its potential for application in non-academic contexts. Dissemination, through vodcasts, digital media and newspaper articles is also undertaken to inform research users and strengthen pathways to impact. The Faculty Communications Officer helps researchers to write articles for policy-relevant outputs. For example Wilkins' research featured in 82 news items from 2008-13, both in the UK (including *The Independent*, *The Mail on Sunday* and *This is Money*) and overseas (including the *Sydney Morning Herald*, the *Washington Post* and the *Huffington Post*). To support dissemination activities, the UoA used a University 'Knowledge Transfer Innovation Fund' (KTIF) grant to launch a Café Scientifique in Colchester, which has hosted 28 public talks in the REF2014 Impact period.

Alongside these approaches, to encourage staff to achieve maximum impact from their research, the Department provides practical and financial support, and career incentives, including:

- The UoA's Research Strategy Committee (RSC) reviews grant applications and advises on the inclusion of end-users as Co-Is or consultants. Notifications of user-led research calls are disseminated to all staff via the Committee. Staff can also apply to the Committee budget for funds to undertake activities that may lead to impact, including open access publishing costs.
- Impact engagement is considered in applications for permanency and promotion at all levels. Annual research reports require staff to identify plans for knowledge exchange, and research leave may be used to develop impact. Wilkins' impact has already benefitted from financial assistance and use of research leave in this way. The UoA also operates a workload model to enable research active staff to spend more than 50% of their time on research and impact.
- UoA staff undertake in-house presentation and media skills training. Media skills are an important component of the 'Future Essex Leaders' staff development program (completed by 4 Early Career Researchers from 2008 to 2013).
- The Department's Director of Marketing and External Relations promotes research activities and media engagement via the departmental website, newsletter and [Facebook page](#).

c. Strategy and plans

The UoA's goal is that by 2018 all active researchers will conduct research that has achieved impact, and a twofold strategy has been devised to achieve this. The first emphasises maximisation of the benefits of *on-going research*. Secondly, the Unit seeks to *widen its 'impact engagement'*, sharing best practice across the Department and identifying emergent opportunities. As of summer 2013, the UoA is executing a number of plans in line with this strategy. In support of the first aim, existing Departmental, Faculty and University-level infrastructural provisions for supporting impact will focus on developing the early stage impact of on-going research. A number

of on-going or recently completed UoA projects are showing promise of substantial impact:

- The EPSRC funded *DANCER* project, in which Unit staff are collaborating with end-users British Gas and Croydon Council, aims to reduce domestic energy consumption behaviour.
- The EU funded *RECALL* project combines developments allowing for continuous, automated recordings of daily life, with memory psychology, to develop memory augmentation capability.
- Basic programmes in sensory psychology that have future impact potential include an on-going BBSRC project on binocular vision that could be used to inform virtual reality and robotics.
- On-going projects funded by the National Awareness and Early Diagnosis Initiative (NAEDI), a CRUK-DoH collaboration, continue to address improved provision of health screening services.
- Projects funded by the Ageing and Assisted Living Network include studies of the effectiveness of interventions such as tinted spectacles in the treatment of migraine in general practice and the further development of technologies to assist in everyday living with Parkinsons.
- ESRC-funded research is examining the motivational processes underpinning self-defeating beliefs and behaviours. This points towards possible intervention and treatment strategies for people with such beliefs and behaviours who seek help (e.g. self-injurers).
- British Academy-funded research with Great Ormond Street Hospital and the Children's Heart Federation is investigating the use of graphics to communicate the risks of major medical intervention. Medical decision-making is also the focus of the work of one of our PhD students, who is jointly funded by the University and the NHS-funded NE Essex IAPT Service.
- ESRC-funded research with the partner AFS Intercultural Programs has already disseminated findings regarding the impact of living abroad to educators and volunteer groups. The UoA now seeks to capitalise upon this and use research to inform users who support cultural transition.
- Designs arising from research on the cognitive psychology of maps are already in use on the Docklands Light Railway. Following the success of this project and the publicity generated, it is considered that there is significant potential for further impact from research in this area.
- Action Medical Research for Children has funded a 3-year project to investigate visual anomalies in children with Autism Syndrome Disorder. User engagement and impact will be central to the project, which builds on the previous research on visual stress in ASD.

With the aim of widening impact engagement, from 2014 the UoA's RSC will explicitly monitor the impact activities of research groups. A Director of Impact role will be established (who will also join RSC) and data gathering mechanisms will be used to more effectively capitalise on dissemination activities. The Faculty Impact Officer will support Unit staff in identifying opportunities and building partnerships with research users. Staff will be encouraged to include impact activity in research leave applications. The Postgraduate Committee will include an impact strand in training programs and the existing collaboratively funded PhDs will form the basis for building further interactive programs that include user involvement. The Unit will provide postgraduate consultancy experience, allowing students to engage with employers and supporting the translation of research towards user activities. Finally, the UoA will continue to use the University's KTIF to support private sector engagement (3 awards were used to support impact between 2008 and 2013).

d. Relationship to case studies

Visual Stress: The effective application of Wilkins' research, to realise impact for reading equipment manufacturers and healthcare practitioners, was achieved through long-term **interaction** with research users, complemented by extensive **dissemination**. Wilkins worked closely with multiple user groups, whose priorities informed the direction of his research. His proactivity in disseminating outcomes also led to the incorporation of research into practitioner guidelines.

BioAid: The Meddis case demonstrates how **direct engagement with beneficiaries** can generate impact from research. Meddis' group used their research to develop an iPhone app which, supported by a project website and online discussion forums, engaged directly with the public ensuring that research is quickly and clearly shared with users on a large scale. This allows users to inform the progress of research so that on-going activities remain relevant to impact.

Cancer Screening: Orbell's on-going **interactive relationship** with a research user and promotion of research visibility proved effective in catalysing collaborative activity. Based on her existing research, Orbell was awarded the psychosocial contract for a DoH-funded feasibility study of a novel screening intervention. The DoH later commissioned additional research from the group and subsequently rolled out the screening programme nationwide.