

Institution: University of Dundee
Unit of Assessment: 34: Art and Design: History, Practice and Theory
<p>a. Context</p> <p>Research from the UoA has impacted on a range of non-academic user groups and beneficiaries and given rise to three main types of impact: economic, health, societal & cultural. Economic impact derives from working directly with industrial partners through research awards, Doctoral training grants, Innovation Voucher scheme, bespoke seminars and workshops, development of method and models for company and product Innovation. Health and Wellbeing derives from partnerships with health providers and clinicians, research awards, Doctoral training grants, patient centered diagnostic tools, and the hospital environment. DJCAD research creates improvements in cultural, social and intellectual capital including: empowerment through product development; social networking; community identity; learning and skills and quality of life. We believe that impact must extend beyond direct instrumental impacts to include intrinsic effects.</p> <p>Main user groups with representative examples in each group:</p> <p><u>Industrial and commercial partners</u> (regional, national and international): NCR, Microsoft Research, Mozilla Foundation, NASA, EMI, BBC, Channel 4, The Guardian, Sky Research, Brompton Design Group, offshore oil & gas industry, Deutsche Telekom, Titan Salvage, Bright Solid, D.C.Thompson, Conran Associates, Denki, Whetstone Group, Snook, Johnston of Elgin, Pufferfish Ltd, Denki Ltd, Egeeo, Dynamo Games, TAG Games, Good Creative, Mirror Group, ITV Sports, British Pathe, Ferrings Pharmaceuticals, IDEO, ARUPS, Toshiba UK (Medical Visualisation Division).</p> <p><u>NHS and other healthcare</u> groups including forensic identification, patient groups: Ninewells Hospital, Highland Hospice, The Centre for Integrative Care, Glasgow Homoeopathic Hospital, Alzheimer's Society (UK), The Highland Hospice, Glasgow Homoeopathic Hospital, NHS Grampian, NHS Tayside.</p> <p><u>Government depts. and NGO agencies:</u> MOD, MI5 Centre for the Protection of National Infrastructure (CPNI), FCO, DEFRA, FBI Academy, Interpol, United Nations, UK Police Force, Ireland's National Police Service, Netherlands Forensic Institute (NFI), Serious Organised Crime Agency (SOCA), Fraunhofer Institute, Max Planck Institute, Intelligent Interface and Interaction Research Institute Fondazione Bruno Kessler, Govt. of South Georgia, Scottish Enterprise, Interface, NESTA (Scotland), AHRC, EPSRC, ESRC, Scottish Office, Scottish Govt., Met Office, MoD's Salvage and Marine Operations Group, Department for Transport, United States Government (Deepwater Horizon Oil Rig Investigation), Italian Govt. (Costa Concordia Investigation), US National Oceanic & Atmospheric Administration (NOAA), English Heritage, Arts & Business, Dundee C.C. Waterfront Development UKAEA, East of Scotland European Consortium (ESEC), Cultural Enterprise, Highland and Island Enterprise (HEI), Foreign and Commonwealth Office, US Homeland Securities, Scottish Parliament.</p> <p><u>Charitable bodies</u> and other third sector agencies; Oxfam, RNIB, South Georgia Heritage Trust, Republic of Yemen Ministry of Tourism, Falkland House Trust.</p> <p><u>Contemporary art galleries, museums, theatre:</u> Tate, Fruitmarket, British Library, V&A, British Museum, National Galleries of Scotland, DCA, Scottish National Portrait Gallery, National Libraries of Scotland, National Museum of Ireland, Metropolitan Museum New York, MACRO (Museum of Contemporary Art of Rome), DOCVA Milan, Kelvingrove Art Gallery and Museum, Tokyo Metropolitan Museum of Contemporary Art, Stedelijk Museum, Stills, RSA, Street Level, Highland Institute for Contemporary Art, National Museums of Scotland, CCA Glasgow, Design Museum, Science Museum London, Museum Rotterdam; Nederlands Fotomuseum, Scottish National Gallery of Modern Art, Hayward, Stadtmuseum Oldenburg, Mitchell Library, Kelvingrove, Royal Lyceum Theatre, Artpace, San Antonio USA, Thessaloniki State Museum of Contemporary Art Greece, Academy of Fine Arts Katowice Poland, Arnolfini Gallery in Bristol.</p> <p><u>Art sector agencies:</u> Creative Scotland, ACE, Art in Partnership, Design Council, Dutch Photo Institute, National Policy for Public Art, Hospitalfield Arts Programme Strategy Group, Scottish Sculpture Workshop, Art Connexion, Lille, France, Pépinières Européennes pour Jeunes Artistes, Paris, Public Art Scotland/Royal Society, Contemporary Art Society, New Media Scotland, LUX, Austrian Program for Arts-based Research (PEEK), Scottish Screen Archive, BFI, Edinburgh Science Festival, Arts Catalyst.</p>

Impact template (REF3a)

Visual effects production companies, post-production companies: Screen South, BBC, SKOR (Foundation for Art and Public Space) the Netherlands.

Other user groups include: Film & video festivals; Schools and other non HEI educational groups able to engage with the research results (MIT Media Lab; National Institute of Design- India, MIT Pune); the specialised art and cultural press (MAP, Times, Afterall), the general public.

Impacts include:

1. Creating compelling experiences and cultural interchanges leading to educational and social capital benefits, broadening horizons and generating intrinsic public value. (Relates to the Archive Curation and Practice).
2. Financial benefit has accrued to the local economy particularly through the *V&A at Dundee, Making it Happen* project and the waterfront development now underway. (AHRC KE-Hub Design in Action, DiA).
3. Increased cultural and social enrichment through exhibitions, public engagement events and outreach activities, conferences and festivals.
4. The attraction, appointment and economic activity of skilled and professional research staff including PDRAs, to the region, which are funded by external grants and contracts. (Relates to all research groups)
5. Provision of Knowledge Exchange and Transfer and improved social welfare with companies and agencies, including software development, products, service design e.g. Rowland, the development of the visualisation tool using multi-beam sonar data resulting in changes in business practices of international salvage companies. A University spin-out company: ADUS Ltd (Advanced Underwater Surveys) was also established. Follett, through DiA has established a model of support and innovation for a network of 450 SMEs. (Relates to the (DiA), Digital Products, Futures, Forensic & Medical Art Research Group, 3D Visualisation & Imaging Group - VERL and 3D Imaging Research laboratory)
6. Improved social welfare by establishing an international forensic tool (Wilkinson) that has enhanced forensic identification from human remains, established international standards, and training of personnel and correspondingly improved law enforcement services and disaster victim identification process, changing international policy, standards and business. (Relates to 3D Visualisation & Imaging Group - Forensic art & identification)
7. Improved health care in visualisation and doctor-patient communication and interaction (McGhee), and design for maternity units (Paul). (Relates to 3D Visualisation & Imaging Group and Design for Health)
8. Empowerment of individuals and communities through the development of social digital technologies (Rogers). (Digital Products and Futures)
9. Re-establishment of the importance of 'forgotten' works and artists to international attention and international curation, including David Hall, Kevin Atherton, Luca Patella. (Archives & Curation – Rewind and Demarco)
10. Improving social cohesion and audience development by engaging the public with the consultation process and helping with their understanding of the future shape of their city and its expanding cultural life. *Making it Happen* exhibition and events programme McManus Museum Dundee, Holyrood (Scottish Parliament) Edinburgh, Lighthouse Glasgow, V&A London. (Follett and DiA)
11. Delivered highly skilled people through national and international training programmes. (Relates to all Research Groups)
12. Providing cultural enrichment through enhanced public engagement with science and art internationally, through the craniofacial depiction of historical figures and ancient human remains; the promotion of Scottish heritage and language; interaction with product design; Shemilt's work with environmental management and habitat restoration on the Island of South Georgia and her art/science work with Ferguson, "Scales of Life". (Relates to Forensic & Medical Art Research Group, Digital Products and Futures and Centre for Remote Environments).
13. Knowledge Exchange between design agencies including the Design Commission, TSB-Innovate, KTN-Creative Industries Network, G8 Innovation Conference linking policy initiatives into the wider cultural eco-system as part of our strategy for increasing awareness of issues within the

Impact template (REF3a)

design sector. (Follett and DiA)

14. Extending cultural capital through visual practice and curation (Archives, Curation & Practice Group).

b. Approach to impact

In 2006, following the Warry Report (RCUK, EIG, 2006) we recognised the importance that the Impact agenda was to have as a key criteria for RCUK applications, and would have for the next research assessment, and the inherent concern to understand the distribution, utility and influence of research findings in non-academic contexts. We therefore developed and delivered Impact Workshops for our research staff and introduced an Impact section within our annual research return template (with guidance) to ensure that all research staff were considering and planning for impacts for current and future research. We have aimed to establish awareness of, and planned to make opportunities for, the unit's research within a full range of economic, health, social and cultural impacts and benefits derived from its research. Job descriptions for new academic appointments were informed by the need to recruit staff whose research has clearly defined non-academic beneficiaries and impact. Academic appointments include the Dundee Fellows: Jayne Wallace (Health products), Drew Hemment (Data, art/business/science public events research and curation), Nick Taylor (social digital products), Sarah Cook (international museum curation), Scott Myles (visual art), Andrea Alessandrini and Chris Lim (Interaction design and prototyping), Jin Zhi (Feature film visual effects), Sara Robertson (future textile technologies and dyes), Cornelia Sollfrank (Intellectual Property and copyright in cultural businesses), Ellie Harrison (the economy and artistic insight and critique). Non-academic appointments such as Michael Marra (Depute Director DiA), Brian McNicoll (DiA Business Partnership Manager), Dawn Campbell (DiA Industry Events Manager), Mhari Fraser (DJCAD Public Relations Officer).

We encouraged and developed mechanisms (from core funding) to support staff efforts to transfer knowledge to other contexts where it could make a societal difference. This was achieved through: briefings and workshops; staff attendance at external events; targeted funding for exhibition, exposition, public engagement events. DJCAD's exhibition programme within the 4 campus galleries and in particular the *Visual Research Centre* within the public arts centre, Dundee Contemporary Arts, and Dundee Arts Café (McManus Museum Art and Science Talks), reach a broad audience and publics. Educational and human capital benefits have been created - a variety of publics are able to engage with our research results, by attending our exhibitions and events. Over one hundred exhibitions and events were held at these venues. Staff in art and design disciplines have also been involved or featured in exhibitions, events, radio and television programmes and expositions across the world – effectively enabling more people to benefit from the intrinsic values and cultural experiences that they can gain from arts and cultural participation.

The DJCAD Visual Research Centre *Centrespace* is a purpose built exposition/exhibition space within the public art centre (Dundee Contemporary Arts - DCA) and is dedicated to events around our research portfolio, including research from other colleagues from the University and collaborations with other HEIs and Research Organisations and industry. For example, since 2011, three *Small Society Lab(s)* have been staged running for 5 weeks in June/July in partnership with DCA. Led jointly by the DCA Director Clive Gilman (DJCAD Hon Research Fellow) and Dr Jon Rogers, *The Small Society Lab* brought together DJCAD research staff and students from product and interaction design with members of the public, staff from SMEs and free-lance designers for an intensive period of hands-on workshops, training sessions, talks and events. Such 'gateway experiences' are considered increasingly important for encouraging active participation with our research and knowledge exchange.

<http://www.dca.org.uk/whats-on/projects/the-small-society-lab.html>

<http://www.serena.ac.uk/2012/06/small-society-lab-2012-panel-and-workshops/>

<http://www.dundee.com/news/build-robots-and-experience-life-parallel-universe-pop-science-museum.html>

The unit has developed strong and sustainable links between our research and stakeholders, including honorary appointments to Research Professorships and Fellowships.

Over and above continuing collaboration with industrial contacts, the UoA has a proactive policy of horizon-scanning to identify and take advantage of any new opportunities to set up new collaborations with non-academic users.

Impact template (REF3a)

The University's policy on Doctoral Training Awards is to provide 50% funding with researchers encouraged to obtain matched funds from industrial partners. The UoA has used this scheme to encourage researchers to actively seek new industrial collaborations which have not only led to DTA awards, but also to new partners to work with towards impact e.g. Microsoft, Ferrings Pharmaceuticals, NCR, NASA.

c. Strategy and plans**Strategy includes:**

1. To continue to inform, train, and enable research staff on impact.
2. Develop methods to support and widen impact.
3. Develop partnerships, collaborations, dissemination, exchange and exploitation of our research findings.

The UoD has decided to develop Design in Action into a strategic unit of the University and will lead on engagement, partnership and knowledge exchange with micro enterprise and SMEs. It will provide models for innovation, IP, legal and contractual arrangements, innovative equity development, networking, advocacy for policy and economic growth.

We will continue to make full use of the University's RIS office through close liaison with the UoA's dedicated Business Development Managers. The UoA will make full use of the newly established Innovation Portal, created to promote and foster productive knowledge transfer between the University, James Hutton Institute (formerly the Scottish Crop Research Institute) and Scottish industry. Its aim is to improve the competitiveness of local businesses by bringing together innovative companies with scientists, technologists and engineering experts keen to apply their expertise to the needs of industry.

The UoA also places a lot of emphasis on impact in its training and mentoring of newly appointed Early Career Researchers. In partnership with RIS, all new staff are introduced and exposed to the UoA's existing collaborative network with non-academics and industry and new non-academic partnerships are always being sought.

d. Relationship to case studies

The case studies are representative examples across the unit's research portfolio. The key method that underpins our interdisciplinary research is co-design and co-creation. Exemplars include the 3D Visualisation (ALDUS); Digital Products & Futures (Mozilla, NASA); DiA (V&A); Archives & Curation (Galleries & Museums); Forensic Art (Heritage & Identification); and other research groups not included in the 5 case studies, such as the Service Design Group (Deutsche Telekom) and Centre for Remote Environments (FCO, MoD, British Antarctic Survey, South Georgia Heritage Trust).

The case studies are externally facing, user-centred and applied to development of new knowledge and/or solutions of complex problems in a real-world context.