Institution:	University of Northumbria at Newcastle

Unit of Assessment: 36B - Library and Information Management

a. Context

The key communities for research in Northumbria's iSchool, external to academia, are: (i) practitioners in the broad information management professions; (ii) organisations managing their information and information systems; and (iii) creators and users of information, records and/or archives and their management systems. Practitioners include: librarians, information, records and knowledge managers; archivists and digital curators; information systems managers; information governance and security managers. Organisations are diverse and from all sectors (e.g. libraries, archives, museums, schools, charities, local/central government, health trusts, construction, publishing, finance) and located in the region, the UK and internationally. Creators and users range from decision-makers and staff in those organisations to school children and the general public.

The impact of our research is mainly:

- influencing information behaviour, strategic thinking, policy and practice;
- contributing to understanding and emerging theory, reframing debates;
- engaging practitioners and other stakeholders in systems design and adoption and research in order to innovate;
- contributing to personal and professional development, including influencing the methods used to conduct LIM research.

This is facilitated through: (i) the contribution of the research to theory, the evidence base and new data for practitioners; (ii) the provision of resources, methods/tools and new ways of thinking with which practitioners can re-conceptualise aspects of information management/systems and reflect on their behaviour and practice, as well as that of their organisations and users, to effect change; and (iii) knowledge exchange, publishing and stakeholder engagement.

b. Approach to impact

As researchers working in professional disciplines, impact is central to our philosophy; our research is 'industry' facing, policy or needs driven, and critically informed. Our approach to impact has evolved since 2008 and has three key pathways:

1. the nexus of theory and practice to facilitate impact in the diverse information professions;
2. the engagement of participants and stakeholders in co-producing (collaborative) research, the first step to impact;
3. openly sharing findings both *during* and after the research process for early exposure, knowledge exchange and use, to impact on policy, decision-making and/or practice.

These pathways have enabled knowledge exchange and exploitation, which works both ways, as well as formal and anecdotal evidence-gathering about impact. Website statistics provide evidence of the level of interest and global reach of our research; emails and other communications provide evidence of its use and impact.

1. Impact through the nexus of theory and practice

Our research focuses on problems important to both professionals and academia. It explores the relationship between theory and practice which facilitates the value and potential impact of our work. Examples include the analysis of information needs of refugees and asylum seekers to immediately and directly impact the design and delivery of services provided by a public library to that user group (**Pickard**); the application of the records lifecycle theory to support a proportionate approach to managing research data (DATUM - **McLeod**, **Childs** and **Lomas**); the use of socio-technical theory to inform the design and implementation of healthcare information systems for pathology modernisation where hospital diagnostics automation projects often cost over £10m (**Wainwright**); the use of information behaviour theory to analyse information literacy and inform teaching (**Walton**); the use of complexity thinking in the understanding of communication,

knowledge creation and leadership, to enhance the well-being of individuals/organisations (**Sice**).

2. Impact through engagement of participants and stakeholders in collaborative research

We facilitate engagement in a number of ways, including: innovative, collaborative and participative approaches to conducting research; knowledge exchange and transfer activities; and the use of international, national and regional networks and links with different stakeholders. Engaging in these ways has enabled our research to have more immediate impacts and influence, and has also influenced our research.

For example, participants in the collaborative colloquia of our AHRC funded project, AC$^+$erm, (**McLeod** and **Childs**) were interested in incorporating elements of what they had learned into their training. Use of virtual co-operative research methods and social media engaged practitioners and academics internationally. This led to the co-production of a book proposal; a short film, used by two of the practitioners for training/engaging their staff in records management; and a communications architecture toolkit, used by two to inform their organisation's policy development (**Lomas**' PhD study). A Knowledge Transfer Partnership (KTP), with the construction sector company Frank Haslam Milan North East, led to new collaborative design practices and the implementation of a new materials control system (**Wainwright**); another with NSG (National Salvage Group) reduced the time to process accident-damaged vehicles (**Philips**). Links with a local school enabled collaborative evaluation of a web evaluation framework (**Pickard**) influencing pupils' information behaviour. Inviting the Chief of Archives and Records Management, UN New York, to spend her three-month sabbatical with us influenced the final versions of research outputs under development, to enhance their potential impact on practitioners (Case Study 2).

3. Impact through openly sharing findings both *during* and after the research process

Sharing findings *during* the research places us in a strong position to increase early impact and enables wider participant triangulation. We use a wide range of mechanisms and platforms to maximise reach and engagement. For example, staff in the UoA created a project website and used social media (a blog and Twitter) to share findings and outputs during the entire life of the three-year AC$^+$erm project which at the time was inventive in this context in the field; a Witness Seminar (2010), *Transforming Information and Records Management through Research and Development,* was used to showcase some of the project's outputs and specifically debate the value and impact of research with a range of UK and international academics and practitioners (e.g. from the European Central Bank, UK Parliament). Engaging with senior NHS policy and decision makers in hospital trusts to develop innovative methods for healthcare information systems design, influenced both policy and practice for pathology modernisation during the research (**Wainwright**). Similar mechanisms are used *after* the research. Outputs on the DATUM project website (**McLeod** and **Childs**), for example, have had a large impact on curriculum development for a course on managing research data for information students and professionals offered by librarians at the University of Massachusetts Medical School. Other forums are used (e.g. communities of practice, professional events/press, collaborative research bids) and illustrated in the case studies.

Supporting and enabling impact: The iSchool supports staff in achieving impact in a range of ways, for example, by providing time (e.g. **Pickard's** sabbatical), resources to maintain research websites and funding for travel/hosting visits. We draw on the expertise of the University's Public Engagement and Impact Manager, utilise institutional funding to support impact activities (e.g. *HEIF Public Engagement and Impact Activities Fund* for **Wainwright's** evidence-gathering work with a regional hospital and Case Study 1), and use institutional facilities to host events (e.g. the 2010 Witness Seminar).

c. Strategy and plans

Impact is an integral part of the UoA's research, ensuring that it creates tangible benefits for our key communities. Building on past successes, our approach to achieving impact means that, while staff benefit from central University impact support as well as the experience of dedicated Faculty impact champions, every researcher is their own impact champion. Embedding impact in research design means it is as inherent a part of research design as is methodology. Systematically capturing evidence of impact will aid greater understanding of how best to achieve it and will

require increasingly innovative and sophisticated methods.

The strategy is targeted at being even more successful and bringing activities currently in progress to maturity. All new research proposals from staff and doctoral students are required to consider: the relevance/importance/potential benefit of the research to LIM theory, policy and/or practice; the likely beneficiaries (academic/non-academic); who will be engaged (collaborators/participants) in the research and how; how the findings will be shared and disseminated, to whom and when (i.e. the mechanisms, the target audience(s), the timings); what will be done to effect/facilitate/ensure exploitation of the research; and, in particular, how evidence of the reach and significance of the impact will be *identified, assessed* and *captured*. Paying attention to the last of these will enhance our understanding of successful impact pathways and inform their development.

This strategy encapsulates our philosophy that impact begins with the relevance/potential benefit of the research (significance), is maximised through engagement, communication and dissemin-ation, and is realised through knowledge exchange and exploitation (reach). It is exemplified in the design of research in recent applications for funding to AHRC (Big Data in the heritage sector, **Nicholas**, **McLeod** and **Moss** with Europeana, 2013) and EPSRC (model-driven systematic literature reviews for evidence-based research in IS, **Wainwright** and **Childs**, 2013). In supporting the impact strategy in the future we will:

- ensure through mentoring that new academic staff and research students are aware of, understand and adopt the strategy;
- ensure *all* research proposals are peer-reviewed internally to check that the questions above are addressed, by extending the process used for proposals to external funding bodies;
- ensure staff/students have the necessary knowledge and skills to maximise the impact of their research by facilitating knowledge-sharing and continuous development. This will entail introductory impact workshops for staff, 'research impact' seminars on ways to optimise the impact of our existing work, develop impact strategies for future research and capture evidence of the impact; public and professional engagement skills training. Impact case study authors will lead these, drawing on the expertise of the University's Public Engagement and Impact Manager;
- enable its implementation e.g. strengthening and deepening our public engagement around research through two-way exchange of knowledge and understanding between staff and the public; workshops with research end users/funders of stakeholder-led research, Professional Body networks; building on approaches such as our witness seminars, round tables, panel discussions; growing knowledge transfer activities that address user requirements, shape our research agenda and create new knowledge.

d. Relationship to case studies

The two case studies exemplify how this three-pathway approach to impact works in practice.

- Case Study 1 details the impact resulting from 12 years of research into users' information behaviour in the context of electronic and web-based resources, and the tools developed from the research. It is an example of using theory in empirical research to inform and develop practice (pathway 1).
- Case Study 2 details the impact of a significant project on managing electronic records. It has been instrumental in developing the focus of the strategy (above) on embedding and owning research impact, and systematically capturing evidence of it, and led to the inclusion of an engagement and impact champion in a collaborative AHRC bid with The National Archives (2012). Its use of a website, different social media and events demonstrates particularly well the impact of openly sharing findings both during and post the research process (pathway 3).

Both case studies have engaged relevant stakeholders in collaborative and/or participatory ways to conduct, evaluate and/or use the research regionally, nationally and internationally (pathway 2).