

# **University of Edinburgh policy recommendations for research data management by the Data Audit Framework steering committee**

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This paper outlines the background to and the primary recommendations of the Data Audit Framework (DAF) Steering Committee for a Research Data Management Policy to be adopted by the University of Edinburgh.

### **About the DAF Edinburgh Implementation Project & steering committee**

The Data Audit Framework (DAF) Implementation projects – along with the Data Audit Framework Development project (DAFD) led by DCC/HATII - were conceived in response to recommendations made in the JISC-commissioned report, *Dealing with Data: “A framework must be conceived to enable all universities and colleges to carry out an audit of departmental data collections, awareness, policies and practice for data curation and preservation,”* (Lyon, 2008). The DAFD project developed the methodology starting in April, 2008, and the Edinburgh project started in May 2008, as one of four JISC-funded projects to test the framework through implementation. The Edinburgh project finished end of November, 2008. (Edinburgh was a partner in the DAFD project as well.)

The key outputs from the project were five case studies – the final reports for each research unit audited, selected from across the three Colleges. These were the School of Divinity, Economic and Social History (School of History, Classics and Archaeology), Centre for Integrative Physiology (School of Biomedical Sciences), SFC Brain Imaging Research Centre (School of Molecular and Clinical Medicine), and the Institute for Astronomy (School of Physics and Astronomy). Also, the School of Geosciences was pilot audited as part of the DAFD project. None of the audits were a comprehensive survey of research data but they proved to be a good starting point to auditing research data holdings and investigating data management practices within the University (Ekmekcioglu and Rice, 2009).

Since the locus for conducting data audits within the university was not clear, a broad steering committee was formed as a stakeholder group with representation from: EDINA and Data Library (lead), Edinburgh Compute and Data Facility, the Digital Curation Centre, the Library, the University Archives (all part of IS), as well as Records Management, Edinburgh Research and Innovation, and academic data ‘champions’ from the Colleges.

In general, the findings showed:

- Inadequate storage space (reliable, regularly backed up, secure, easily accessible)
- Lack of awareness and understanding of research data management
- Lack of formal research data management plans
- Demand for training in research data management and curation
- Lack of good practice guidance and advice from support services as and when needed

- Lack of clarity about roles and responsibilities for research data management by University research staff

Four beneficial outcomes of the DAF Edinburgh implementation were envisaged by the steering committee by the time they last met in June, 2009. First, the University could and should be one of the first UK Higher Education institutions to adopt a specific **policy on research data management** (RDM); hence this paper. Second, University researchers would benefit from guidance on RDM in a local context; the project team succeeded in adding **web-based guidance** to the new IS website with its launch in September, 2009 and these will be maintained by the Data Library in consultation with others in IS and the University. Third, **training** should be developed for University staff and postgraduate students on RDM; a workshop was piloted by the project team in November 2009 for Geosciences postgraduates, and the project team has agreed with Jon Turner (then head of Transkills) that cross-disciplinary online training materials for PhD students should be written. (Staff resources/funding are currently an obstacle.) Also, the project team met with Sheila Thompson, Director Researcher Development Programme, who offered support if a training workshop was to be organised for academic staff. Fourth, the committee undertook some work regarding a **service gap analysis** on RDM; however this was not completed, as this was seen as something IS would be better placed to do than the project committee.

## Rationale for a University RDM Policy

Much national and international attention has been brought to bear on the issues of research data management and access to publicly funded research data in the last few years. Below are some specific drivers which the DAF steering committee believes should spur the University into enacting an RDM policy at the earliest opportunity.

- In 2007 the OECD published its *Principles and Guidelines for Access to Research Data from Public Funding*, which “are intended to promote data access and sharing among researchers, research institutions, and national research agencies, while at the same time, recognising and taking into account, the various national laws, research policies and organisational structures of member countries,” (OECD, 2007). The principles are openness, flexibility, transparency, legal conformity, protection of intellectual property, formal responsibility, professionalism, interoperability, quality, security, efficiency, accountability, and sustainability.
- In a set of articles about research data sharing in September 2009, the journal *Nature* editorialised that “Research data cannot flourish if data are not preserved and made accessible. All concerned must act accordingly,” (*Nature*, 2009). The articles explore both the state of the art and the daunting number of disincentives for researchers to share data in the current academic environment.
- According to a 2009 report from the UK Digital Curation Centre, “Most research funders require applicants to submit a statement on access, management and long-term curation of their research outputs at the proposal stage. The focus of this statement varies by funder: the AHRC, ESRC and NERC all require a statement on how resources will be created so they can be preserved in the long-term, while the BBSRC, MRC and Wellcome Trust focus heavily on the data sharing potential of research resources. ... The area requiring most work in terms of developing curation policy is at an institutional level. Although most institutions have records management policies, several recent reports have noted the lack on institutional policies for digital curation more generally and have noted that development of these is sporadic. The need for an

institutional stance on curation was also noted in audits conducted by the Data Audit Framework project.” (Jones, 2009).

- The University’s mission statement (curation of knowledge), research code of conduct, records management framework, and most recently its research publications policy (requiring academics to deposit their research outputs in a publications repository), are consistent with the aims of the proposed research data management policy, yet do not obviate the need for it. The University of Edinburgh has an historical opportunity to be one of the first universities in the UK to articulate a research data management policy; the University of Oxford is currently scoping an RDM policy through the EIDCSR project (Martinez Uribe, 2010) and the University of Glasgow is scoping a Digital Preservation policy (HATII, 2009) as part of the JISC Incremental project on improving research data curation practice, with Cambridge University (JISC, 2010).

## Research Data Management Policy Recommendations

The committee recommends that the following points be adopted as University policy on research data management and communicated to all research staff. A suitable definition of research data, for the purpose of this policy, is that research, unlike other types of information, is collected, observed, or created, for purposes of analysis to produce original research results. The policy will not cause excessive burden on researchers if colleges, schools and research units act to articulate procedures and if the support services act to develop relevant services; on the contrary, the policy will help researchers respond to stricter funding requirements within a context of institutional support.

1. Ownership and intellectual property rights of research data assets produced by research staff and students should be clarified, including multi-institutional collaborations.
2. Development and compliance with data management plans and procedures should be implemented at college, school, research unit and individual project level. These should include:
  - a. the allocation of appropriate roles and responsibilities
  - b. documentation/metadata to an identified minimum standard
  - c. arrangements for access and re-use
  - d. legal compliance.
  - e. storage and backup procedures including provision for business continuity arrangements.
3. Data upon which research outputs are published should be retained by the institution for sufficient time to allow reference.
4. Guidance on the assignment of retention periods for research data should be made available by the University.
5. Support and advice should be provided for researchers who wish to have their research data curated either after the recommended retention period, after the close of the research project, or when the researcher leaves the institution.
6. A formal procedure for data transfer should be developed for when staff and students leave the institution.

The committee believes that these policy parameters are sufficient without being unduly burdensome at the institutional level and that actual procedures need to be developed, articulated,

and monitored at the school, research institute and project levels, in accordance with guidance from research funders and support from local and national service providers.

## References

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