Data Audit Framework

Four Steps to Effective Data Management

Briefing paper, August 2008

The Data Audit Framework (DAF) provides organisations with the means to identify, locate, describe, and assess how they are managing their research data assets. DAF combines a set of methods with an online tool to enable data auditors to gather this information. DAF will help ensure that research data produced in UK HEIs is preserved and remains accessible in the long term.

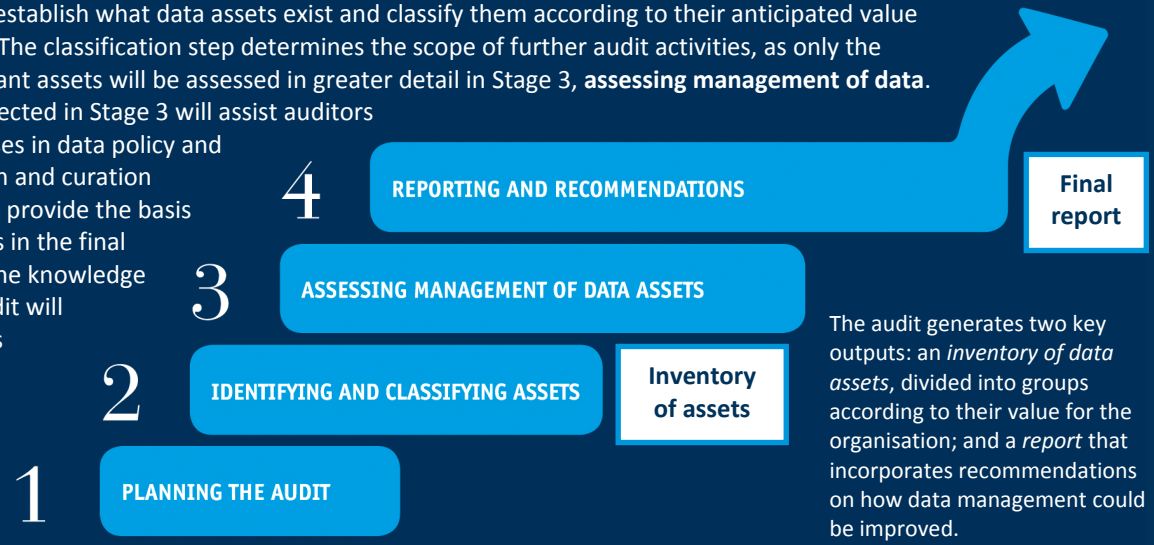
Background

Vast quantities of data are being created by researchers in UK higher education institutions, however few institutions have formal strategies in place for curating these research outputs. Moreover there appears in many institutions to be a lack of awareness as to what data are held and whether they are being managed. If institutions are to realise the full potential value of their data through its reuse they must be able to establish quickly and easily an overview of holdings and the policies and practices in place to manage them.

In response to these concerns the JISC issued a call for proposals to develop and implement a Data Audit Framework. A project was funded led by HATII at the University of Glasgow in association with the Digital Curation Centre to produce an audit methodology, online tool and registry. Four implementation projects were also funded to test the toolkit and promote its uptake. These are based at the University of Edinburgh, Imperial College, King's College and University College London.

The method: The Data Audit Framework recommends that audits of research data assets proceed as a four step process:

In the **planning** stage the purpose and scope of the audit is defined. Preliminary research is conducted and meetings scheduled to optimise time spent with the organisation's staff. The purpose of the second state, **identifying research data**, is to establish what data assets exist and classify them according to their anticipated value to the organisation. The classification step determines the scope of further audit activities, as only the vital or most significant assets will be assessed in greater detail in Stage 3, **assessing management of data**. The information collected in Stage 3 will assist auditors to identify weaknesses in data policy and current data creation and curation procedures. This will provide the basis of recommendations in the final stage of the audit. The knowledge gained from the audit will enable organisations to improve data management.



The audit generates two key outputs: an *inventory of data assets*, divided into groups according to their value for the organisation; and a *report* that incorporates recommendations on how data management could be improved.

The Data Audit Framework has been developed with JISC funding by a project led by HATII at the University of Glasgow in conjunction with the Digital Curation Centre. Further details can be found at: http://www.data-audit.eu

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Benefits of auditing research data holdings

To manage data holdings effectively an organisation must first be aware of the location, condition and value of its research assets. Conducting a data audit provides this information, raising awareness of collection strengths and identifying weaknesses in data policies and management procedures.

Conducting an audit enables an organisation to:

- ✓ appreciate the full extent of its research data assets
- ✓ monitor holdings and avoid data leaks
- ✓ manage risks associated with data loss and irretrievability
- ✓ develop a data strategy and implement robust data policies
- ✓ improve workflows and benefit from efficiency savings
- ✓ realise the value of data through improved access and reuse

"JISC should develop a Data Audit Framework to enable all Universities and colleges to carry out an audit of departmental data collections, awareness, policies and practice for data curation and preservation."

Recommendation from *Dealing with Data: Roles, Rights, Responsibilities and Relationships* (2007)

Data Audit Framework

Several UK institutions are already using the audit methodology and online toolkit. These include:

- University of Glasgow
- University of Edinburgh
- UKOLN, University of Bath
- King's College London
- Imperial College London
- University College London
- University of Oxford
- University of Southampton

To find out more and to try out the tool visit: http://www.data-audit.eu

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Further information

The Data Audit Framework online tool will be officially launched on 1st October 2008 at British Academy in London. The latest versions of the methodology detailing the complete workflow and tasks, and the online tool are available through the project's website. Support for those using the Data Audit Framework is available online at: http://www.data-audit.eu

Related projects and reports

The JISC has funded a number of related data projects under its repositories programme, such as DataShare, UK Research Data Strategy, and the DCC Digital Curation Summer School. Further details of all these projects can be found at: http://www.jisc.ac.uk/home/whatwedo/themes/information_environment/researchdata.aspx

Lyon, L. *Dealing with Data: Roles, Rights, Responsibilities and Relationships*, (Bath, 2007) http://www.ukoln.ac.uk/ukoln/staff/e.j.lyon/reports/dealing_with_data_report-final.pdf

McHugh, A., Ross, S., Ruusalepp, R., and Hofman, H. *The Digital Repository Audit Method Based on Risk Assessment (DRAMBORA)*, (Glasgow, 2007) http://www.repositoryaudit.eu

OSI e-Infrastructure Working Group. *Developing the UK's e-infrastructure for science and innovation*, (London, 2007) http://www.nesc.ac.uk/documents/OSI/report.pdf

This paper was produced by Sarah Jones & Seamus Ross of the Data Audit Framework Development team based at HATII at the University of Glasgow and Raivo Ruusalepp of the Estonian Business Archives. It is available online at: http://www.data-audit.eu or on request in hard copy.