

# Digital Repositories

Digital Repositories offer a convenient infrastructure through which to store, manage, re-use and curate digital materials. They are used by a variety of communities, may carry out many different functions, and can take many forms. The meaning of the term 'digital repository' is widely debated. Contemporary understanding has broadened from an initial focus on software systems to a wider and overall commitment to the stewardship of digital materials; this requires not just software and hardware, but also policies, processes, services, and people, as well as content and metadata. Repositories must be sustainable, trusted, well-supported and well-managed in order to function properly. Digital Repositories are also commonly referred to as 'institutional repositories' or 'digital archives'.

## Short-term benefits and long-term value

In the short term, a digital repository:

- Enables quick, easy, simultaneous and remote access to deposits
- Allows institutions/organisations to efficiently retain and manage their own intellectual assets. Digital repositories are being increasingly seen as a valuable tool for the Research Assessment Exercise (RAE)
- Facilitates re-use of deposited materials for new research, education, and learning
- Minimises physical storage requirements whilst increasing the potential mass of deposits
- Manages both metadata and intellectual objects in the same location
- Enables external validation of research results

Over the longer term, a digital repository:

- Can enable persistent access to deposits independently of external publishers
- Can be used to store incremental deposits of unique observational data to spatially significant and new collections for developmental analysis
- Increases institutional research visibility
- Raises potential
- Return on Investment from asset creation
- Enables long-term proof of authorship or assurance of credibility for unpublished papers if repository is certified/trusted

## HE/FE perspective

“At the most basic and fundamental level, an institutional repository is a recognition that the intellectual life and scholarship of our universities will increasingly be represented, documented, and shared in digital form, and that a primary responsibility of our universities is to exercise stewardship over these riches: both to make them available and to preserve them. An institutional repository is the means by which our universities will address this responsibility both to the members of their communities and to the public. It is a new channel for structuring the university's contribution to the broader world, and as such, invites policy and cultural reassessment of this relationship”

– **Clifford A. Lynch** in *Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age* (February 2003).

## eScience perspective

“The benefits of trusted, curated, grid-supported scientific data repositories need to be articulated to the wider scientific community. It is important that scientists and researchers actively want to be part of the digital curation process. Incentives to do so – such as recognition for citation of datasets, promotion of scientific advance from collection-based science – are important. Ambitions in curation-enabled science should be encouraged.”  
 – Philip Lord & Alison MacDonald in the *JISC e-Science Curation Report* (2003).

## Additional resources

Heery, Rachel & Anderson, Sheila, Digital Repositories Review, (2005)  
[http://www.jisc.ac.uk/uploaded\\_documents/digital-repositories-review-2005.pdf](http://www.jisc.ac.uk/uploaded_documents/digital-repositories-review-2005.pdf)

McLean, Neil, The Ecology of Repository Services: A Cosmic Review (2004)  
<http://www.ecdl2004.org/presentations/mclean/>

JISC Digital Repositories Programme -  
[http://www.jisc.ac.uk/index.cfm?name=programme\\_digital\\_repositories](http://www.jisc.ac.uk/index.cfm?name=programme_digital_repositories)

Dspace: Free Open Source repository software - <http://www.dspace.org/>

ePrints: Free Open Source repository software - <http://www.eprints.org/>

Fedora: Flexible Extensible Digital Object and Repository Architecture -  
<http://www.fedora.info/>

Preservation Metadata Maintenance Activity [PREMIS] -  
<http://www.oclc.org/research/projects/pmwg/>

## Roles and responsibilities

Digital Repositories depend upon activities by a range of stakeholders in order for them to be successful; success in this context means that the repository receives regular deposits of target material, that the material is properly curated so that it can be reliably re-used, that the material can be located and retrieved, that an infrastructure is developed beyond software alone, and that sufficient funding is allocated to manage, maintain and develop the repository and its contents over time.

- **Clear guidelines** on producing re-usable resources should be promoted to data creators, whether they be scientists, researchers, lecturers or students. This means creating **well-documented** data resources that **respect copyright and IP restrictions** and which can be re-used without significant further permissions being sought.
- Data curators, including librarians, archivists and IT staff, must design/select and implement an appropriate **repository architecture**. The architecture should be scalable and flexible enough to meet the changing needs of the institution over time.
- The repository must be **promoted** to potential depositors within the institution and the potential **benefits** of deposit made tangible. It is important to define **realistic deposit requirements** to ensure that depositors' workloads are not unduly increased.
- **Internal promotion** of the digital repository to institute directors, vice-chancellors, and faculty heads will be necessary to ensure that support and funding are secured for ongoing management and development of the repository.
- Some repositories, particularly those established for the RAE, may benefit from **mandated deposit** of certain types of materials; reinforcing the status of the repository in **policy** is also desirable.
- Institutions may wish to consider mechanisms for **certifying** the repository. Certification can help to establish trust in the repository, **encourage deposit**, and **improve long-term prospects**.

Effective communication of the potential benefits to all stakeholders, combined with clearly defined policies regarding roles and responsibilities, will help ensure that repositories and the services they comprise are viable for both the short and long-term.