Libraries & Research Data: *Towards a new leadership role.*

1 What is research data management?

Research data are a core asset in many research areas – from the exact sciences to social sciences, arts and humanities. With a growing variety of data types and a massive growth in volume, the management of research data is becoming increasingly important.

Research data management acknowledges the value of data by making sure data can be used today and in the future. Infrastructures for research data provide services for storage, documentation, maintenance, processing and re-use of data.

"Metadata and research data management are a love note to the future use of data."

The curation of data from the planning stage to guidance on data management and sharing provides excellent opportunities for libraries to engage.

2 Why is it important?

Research data are essential for on-going research but also for verifying research results. Therefore, funding bodies, institutions and several publishers increasingly provide resources and mandate the deposit and sharing of research data. Disciplinary data repositories capture research data that are important for the progress of the field and develop guidance for researchers.

Institutional data repositories complement the landscape by providing a home for institutional assets – in particular, the long tail of relatively small research data.

3 How can libraries take the lead?

A core strength of research libraries is that they offer a stable environment and bring together expertise and services that facilitate the use and further development of digital infrastructures. They invest in expanding digital collections and developing digital infrastructures for research data.

"For me, long-tail research datasets are most important, and I would therefore like to see more repositories supporting these."

Therefore, libraries have a central role to play in coordinating the implementation of data management policies and procedures in institutions – typically in close collaboration with others (e.g. research administrators, IT staff and legal advisors).

Libraries are engaging at institutional, national and international levels to promote new roles for libraries in research data (e.g. the Research Data Alliance and several European projects).

4 How to get started?

Areas in which libraries can engage with research data have been described by LIBER in its seminal paper Ten recommendations for libraries to get started with research data management (Tartu, 2012).[1] For examples and good practices, please consult the LIBER Case Studies on Research Data Management in Libraries (Riga, 2014).[2]

Key Messages

The following messages are intended to assist you in making the case for your library's role in research data management.

1. Securing the future use of research data. An institutional policy and/or roadmap on research data is a good starting point for raising awareness of the need to curate data across the research life cycle. However, a policy needs underpinning by strategies for its implementation. Libraries can provide expertise and are ready to collaborate with research administrators and IT units to achieve these goals.

2. Learn more about disciplinary practices and needs. The general principle is that there is no one-fits-all solution in research data management. However, there will be similarities and differences in how researchers across disciplines work with data. Some areas will be fit for generic solutions and others need integration of special features and tools.

3. A permanent home for research data. From an institutional perspective it is important to balance the needs of all disciplines. The long-tail of relatively small datasets as well as data resulting from cross-domain research are equally important as the data that already have a home in a subject-based data repository.

4. Implementation requires new service roles. This will often involve creating new roles and job descriptions in libraries. Investment may need to be made in new staff or further qualification. Academic liaison or subject librarians may be expected to fulfill some of the service roles involved.

"The open publication of source code or scripts of simulation programs is extremely important and should be considered under the term 'open data' as well."

5. Continue exploring requirements and synergies. During the course of setting up infrastructures and support services you will detect new requirements and gaps but also opportunities to link service areas. Challenging areas will likely include the need to establish legal and ethical advice on data privacy.

6. Curate and think of future needs. Data management plans should be treated as 'living documents' that need to be reviewed regularly. In addition, the range of what needs curation will grow over the years – i.e. moving from research data to code and tools to process the data.

Citations 2 and 3: Anonymous responses from the Belmont Forum's Open Data Survey, doi:10.5281/zenodo.16384

1. http://libereurope.eu/blog/2012/08/24/ten-recommendations-for-libraries-to-get-started-with-research-data-management
2. http://libereurope.eu/committee/scholarly-research/research-data-management-case-studies