ORCC UKRN Primer on Working in Research Data Management

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This is an introductory guide for those working and considering working in the area of research data management. It was drafted by members of the Open Research Competencies Coalition.

What is working in research data management?

Research Data Management (RDM) refers to the storage, access, and preservation of data produced by a given investigation. Data management practices cover the entire lifecycle of a project, from planning the investigation, conducting it, backing up data as it is created and used, to long term preservation of data deliverables after the research investigation has concluded. (Based on the Codata RDM Terminology, CC-BY 4.0)

One of the aims of RDM is to ensure that research data is as useful as it can be and remains available by either being shared openly or in a more controlled environment.

RDM roles are primarily focused on assisting researchers in managing and sharing their research data so that it remains a useful asset long after the end of a specific project. Roles may have different job titles e.g. Research Data Manager, Research Information Officer, Research Data Support, Data Steward, or Data Champion.

UK context

In the UK many Research Organisations have RDM staff who help and support researchers with research data management. Roles are often based in information services, libraries, or research offices. There may also be subject-specialist data support staff, embedded within faculties, subject areas, or specific projects.

Some research funders have well established RDM policies and requirements that researchers are expected to comply with. The level of maturity of research data support varies across organisations. Some are well established whilst others may be at an earlier stage resulting in a variety of roles, seniority, and career paths.

Globally many research topics and funders have domain specific data centres that researchers utilise to reach those interested in their subject. UK specific examples include the Environmental Information Data Centre and the UK Data Archive. Research organisation repositories often provide a home for data where there is no suitable subject or domain specific repository.

How might someone get involved?

Skill/knowledge area:

There are no strict requirements for specific qualifications or background knowledge for someone wanting to work in research data management (RDM).

Research experience, knowledge of the wider research landscape, and an understanding of the research project lifecycle is useful. Discipline specific knowledge is helpful if the role is based within a specific field or working with specific types of research data such as survey data, experimental data, or observational data. Technical expertise, or a grounding in information or records management, may also be helpful but it is possible to come from a different background and make a success of the role.

Strong transferable skills such as communication, a customer focussed attitude, negotiation and influencing, collaboration, time management, and good judgement as to what to prioritise and when to consult others are probably the most important skills for a job in this area, combined with an ability to work in a rapidly changing research landscape. Working in RDM support requires post holders to be comfortable working in multi stakeholder environments and across hierarchies with a view to minimising administrative burden for researchers.

On the job:

Tasks may vary according to level of seniority and specialism. A more generalist role, may include, but is not limited to:

- Helping complete or review data management plans
- Supporting researchers in understanding funder requirements
- Encouraging adoption of <u>FAIR principles</u>, <u>UNESCO Recommendation on Open Science</u> and the <u>Concordat on Open Research Data</u>
- Advising on appropriate data storage and data management processes, including data documentation, file naming, archiving, and preservation
- Liaising and working with colleagues in Information Technology, Data Protection, Information Security, Records Management and Research Support
- Liaising with local Research Leaders and Managers, and other relevant roles
- Developing and delivering RDM training to a wide variety of researchers
- Co-ordinating and developing a community/network in support of RDM
- Administration and development of research information systems
- Administration and development of institutional data repositories, including metadata creation, curation of datasets, and quality control
- Advocating, advising, and facilitating the sharing of research data
- Implementation, reviewing and rewriting of RDM policy
- Working on services to improve processes and adoption of RDM
- Working on RDM projects with other stakeholders at their institution and further afield
- Working on communications to promote RDM and service e.g. webpages, blogs
- Keeping informed of developments and initiatives in RDM internally and externally

Looking for RDM roles:

Many roles based in research organisations are advertised on <u>jobs.ac.uk</u>. Searching using terms like 'research data', 'open research' or 'open science' may yield results. If you are unsure where to start when searching for a job you could look under <u>Library Services</u>, <u>Data</u>, & <u>Information Management Jobs</u> as many jobs are advertised in this category but be aware

jobs could come under several headings. Jobs are also advertised on research data mailing lists.

Short experience videos:

<u>Clair Castle (Research Data Coordinator, University of Cambridge)</u>
Mary Donaldson (Research Information Officer, University of Glasgow)

Where to find RDM related resources:

There are many resources available on the topic of research data management either aimed at those working in RDM roles or more generally on research data management practices. The following provide a starting point but is not a comprehensive list.

- The Research Data Management discussion list <<u>RESEARCH-DATAMAN@JISCMAIL.AC.UK</u>> is a helpful group for advice, jobs, and questions. Sign up on the <u>Jiscmail page</u>.
- The <u>Turing Way</u> is a handbook for reproducible, ethical and collaborative data science.
- The UKRN Open Research Programme https://www.ukrn.org/open-research-programme/, includes a training strand.
- The UKRN <u>Data sharing primer</u> and <u>Open Code and Software primer</u>
- Foster training e.g. The Responsible Data Sharer
- The Openaire RDM Handbook a primer for managing your research data.
- The <u>UK Reproducibility Network has collected by discipline</u> a list of open research case studies, examples of open research practices, and links to resources to support open research.
- Research Data Terminology
- The UKRI Concordat on Open Research Data
- FAIR principles
- UNESCO Recommendation on Open Science
- Concordat on Open Research Data
- How to be FAIR with your data: a teaching and training handbook for higher education institutions



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