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Research Data Management: The Basics



Research Data Management (RDM) is the methodical handling of the information produced or reused during the course of academic research. The goals of RDM are to **protect the rights of data subjects/owners**, to **enable the validation of research conclusions**, and to **preserve data for potential re-use** in the future.

RDM is a policy requirement of many funders, and a legal responsibility. Archiving data and linking it to research publications engenders confidence in the quality of your research.

Together with Open Access publishing and other open research outputs such as Open Source software, and open workflows and protocols, managing and providing access to your data contributes to the modern goal of Open Science/Open Research.

What do we mean by data?

‘Data’ in the research context is somewhat broader than the usual dictionary definition. **It can be anything which is necessary for validating or evidencing research conclusions, or for enriching the understanding of research.** Data may be qualitative or quantitative, factual (measured) or non-factual (perceived), numerical, textual or audio-visual. In general we will be talking about born-digital data, but it may also be analogue (recorded on paper) or even physical specimens such as cells.

What’s the first step?

Many research funders require a Data Management Plan (DMP) to be submitted alongside funding applications, but planning is worthwhile in any case. Some funders provide templates to help structure your plan, while others leave that down to you. A University template is available, and the Research Data Support team can help you to prepare your DMP in good time for submission in line with your funder’s requirements. Planning the data related aspects of your research aligns with thinking through and recording issues such as ethics, IP and data protection.

And if my research is already underway?

As with any digital information, for your own sake as well as others it's important to ensure that research data is backed up and kept safe: using University systems and services takes care of this for you. If your research involves **sensitive data**, whether it is ethically or commercially sensitive, you'll also need to ensure that it's stored securely, and only accessible by suitably authorised people. Finally, if your research involves working with partners either within or beyond the University, dedicated collaboration tools such as DataSync can help enable that.

I'm approaching the end of my project: What do I need to do?

Your funder or publisher may require your data to be archived and shared before a paper is published, or the last bit of research funding is released. The Research Data Support team can help you to identify and interpret these expectations. We can archive your data towards the end of your work, and issue Digital Object Identifiers (DOIs) to link data and papers via a **data access statement**.

What other help is available?

The Research Data Support Team offers scheduled and tailored training sessions for staff and postgraduate students, as well as general Helpdesk and DMP consultancy functions.

Contacts and resources

- Research Data Service website: www.ed.ac.uk/is/research-data-service
- DMP online data management planning tool: <https://dmponline.dcc.ac.uk/>
- Contact Research Data Support by email: data-support@ed.ac.uk or contact the IS Helpline: is.helpline@ed.ac.uk

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