DataWise Frequently Asked Questions

Research data

Australian Code for the Responsible Conduct of Research, Section 2, says:

"The responsible conduct of research includes the proper management and retention of the research data. Retaining the research data is important because it may be all that remains of the research work at the end of the project. While it may not be practical to keep all the primary materials (such as ore, biological material, questionnaires or recordings), durable records derived from them (such as assays, test results, transcripts, and laboratory and field notes) must be retained and accessible. The researcher must decide which data and materials should be retained, although in some cases this is determined by law, funding agency, publisher or by convention in the discipline. The central aim is that sufficient materials and data are retained to justify the outcomes of the research and to defend them if they are challenged. The potential value of the material for further research should also be considered, particularly where the research would be difficult or impossible to repeat."

The digital age has resulted in a deluge of data with the possibilities of greater understanding of worldwide problems. However, to solve these problems, data must be available. For the data to be available, data must be managed so that it can be preserved for the future. In addition, researchers must be willing and able to share.

What is data?

National Research Council defines data:

"Data are facts, numbers, letters, and symbols that describe an object, idea, condition, situation, or other factors."[1] The notion of 'data' can vary considerably among collaborators[2] and disciplines.

Data can have different values. Some types of data have only short term value. Some have both short term and long term value, while others increase in value over time.

What is data management?

Data management includes all the processes and actions required to manage data throughout the research life-cycle, also known as the data curation continuum, to enable it to be preserved and accessible for current and future research purposes and users. The data curation continuum begins in the private domain, with the creation of research data by a researcher. At this stage, researchers manage their own data. Preservation and metadata may not be needed and access to the data is limited. Data then passes to the shared domain where collaboration occurs. Access is more open, but not everything is shared. When the data passes the next and final boundary, it passes to the public domain where access will usually be open to all.

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[1] *A Question of Balance: Private Rights and the Public Interest in Scientific and Technical Databases* 1999, National Academy Press, Washington, DC, accessed 16/09/2010, http://www.nap.edu, p15

[2] Wallis, JC, Borgman, CL, Mayernik, MS & Pepe, A 2008, 'Moving archival practices upstream: an exploration of the life cycle of ecological sensing data in collaborative field research', *International Journal of Digital Curation*, vol.3, no.1, pp114-126

Why do we need data management?

1. Because of the huge volume of data that is currently being produced digitally.
2. Because data is an asset and a strategic resource.
3. Because the expenditure of time and resources in managing data is an investment.
4. To validate the return on investment to the funding body.
5. To preserve data so that it can be accessed and reused in the future.

How can DataWise assist you?

1. UOW is establishing an infrastructure for data management to enable you to preserve your data for the future.
2. Research Data Management Checklist and Guidelines are being prepared to guide you in administering your research project.
3. Registration of your project will give you access to I.T. storage and tools.
4. Completion of the Research Data Management Plan will prepare you for your project.
5. Access to the Research Project Metadata Template will help you to describe your data for discovery.
6. Permanent secure storage is available for your research data.
7. Advice on sharing and discoverability of your research data through Research Data Australia can be obtained by emailing e-research@uow.edu.au or phoning 02 4221 3938.

Why should we share research data?

1. To make the data collected and generated, while conducting publicly funded research, available to the research community. (Soon this will be a compulsory requirement of ARC and NHMRC grants.)
2. To support and verify your research publications.
3. To increase citations of your work.
4. To enable others to ask new questions of existing data, and thereby make new discoveries.
5. To advance the state of science, while avoiding duplication of research effort.
6. To comply with the policies of the Australian government. (Declaration of open government by Lindsay Tanner on 16 July 2010 – encouraging reuse of information in new, valuable and potentially unexpected ways.)
7. To conform to international policies of sharing scholarly data.
8. To comply with UOW Research Data Management Guidelines.

Why should we invest time in describing collections for Research Data Australia?

1. Because data is an asset and a strategic resource.
2. Describing collections for Research Data Australia enables national and international discovery of your research data, while allowing you to retain the rights of access to your data.
3. Enables discovery of your research data by all researchers not just those in your own discipline.
4. Enhances your opportunities for collaboration.
5. Allowing your research data to be discoverable facilitates the sharing of data.

What is a collection?
In Research Data Australia a “collection” means an aggregation of physical and/or digital resources which has meaning in a research context. This context includes the research process itself, any resources which support that process and the linked scholarly communications cycle with its research outputs of publications and published data. Objects from these collections provide context and meaning for each other. Print publication outputs are not within the scope of the Research Data Australia.

What collections make sense in Resource Data Australia?

There is no set size for a collection and no single right way to create collections.

Collections should:

1. Be either thematic, project, temporal or spatial collections.
2. Meet the needs of those for whom they were created, including the institution and like-minded researchers.
3. Be large enough to allow good metadata to be created and to be managed effectively.
4. Be not so large that they would be difficult to manage and would return too many undifferentiated search results when displayed in Research Data Australia.
5. Be grouped in a manner that makes the best use of curatorial time and effort.

What metadata do I need to collect?

To assist in creating the metadata for your collections, please access the Research Project Metadata Template located here:
http://www.uow.edu.au/research/eresearch/datamanagement/resources.