

Research Data Management at Deakin



Checklist for your data management plan

Research data management is a crucial component of responsible research. At Deakin University, research data broadly refers to all data created by researchers in the course of their work (e.g., figures, images, tables, texts, files, etc.). Research data is a valuable asset, especially data which can't easily be replicated, and therefore having a plan for how to manage, store and share your data in the long-term is imperative. Good data management, which usually starts with a plan, can save you time in the long-term and help increase the value of your data in the future. A research data management plan describes:

- What data will be created,
- What policies (funding, institutional, ethical, and legal) will apply to the data,
- Ownership, access and protection of intellectual property (IP),
- How the data will be described and possibly shared and/or reused,
- What data management practices (backups, access control, preservation and archiving) will be used,
- What facilities and equipment (hard-disk space, backup server, repository) will be required, and
- Who will be responsible for each of these activities?

About the Checklist

This checklist is designed as a preliminary guide to walk you through the most important steps of the data management cycle and provide you easy access to key resources and tips.

As a HDR candidate, you can use this checklist to:

- Start thinking about your data management plan,
- Describe and organise your data for reuse and discovery,
- Store and protect your data for long-term preservation,
- Collaboratively create and use data with other researchers,
- Share and publish your data,
- Access key data management resources and tools (national and institutional),
- Initiate a conversation on your data management needs with your supervisor(s).

Research data management requirements may change as your research progresses; policies, legislation, personnel and technologies all evolve, and refinements to research methodologies are common. Refer to your checklist regularly and update it as required.

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Use This Checklist with Deakin Research Data Footprints

[Research Data Footprints](#) is a Deakin University tool that enables you to create a data management plan and describe your data collections for archiving, discovery, and reuse or possible publication. You can access Research Data Footprints with your Deakin username and password.

The Checklist is designed as a supplementary tool to spark your initial thinking around, and link you to, important information about data management. In a way, *the Checklist is suggested as a preliminary tool to use before you start your 'formal' data management plan in Research Data Footprints.*

Further Resources

Online resources

- Deakin eResearch [Manage your research data](#)

Individual support

- Please contact your [Research or Liaison Librarians](#)

National and Institutional Context

All research conducted at Deakin University is subject to:

- [Australian Code for the Responsible Conduct of Research \(The Code\)](#)
- Deakin University [Research Conduct Policy](#), See point (22) for 'Management of research data and primary materials'

All Researchers at Australian Universities and Research Centres are required to be aware of The Code and abide by its principles. Researchers must also be aware of the Research Conduct Policy and related procedures and guidelines, including those relating to allegations of research misconduct.

Compliance with The Code is a prerequisite for receipt of [NHMRC](#) or [ARC](#) funding. You must also comply with the policies of your funding body.

Acknowledgement

The design of the Checklist was inspired by the Deakin Data Management Toolkit, the Monash University and University of Melbourne Data Management Checklists. Some content has been adapted from the Manage Your Research Data website developed by Deakin eResearch.

Your Project

Candidate

Supervisor(s)

Research Project Title

Faculty/School/Research Centre

Contact Details

Planning The Project

Data Management Compliance

Resources & Tips

1. National & Institutional policy & frameworks

-
- | | | |
|---|--------------------------|---|
| 1.1 I have read and understood the national policy and frameworks on data management | <input type="checkbox"/> | <ul style="list-style-type: none">• The Australian Code for the Responsible Conduct of Research• Practical Data Management: A Legal and Policy Guide [national guide]• ARC Funding Rules/Grant Guidelines• Policy, procedures and legislation relevant to the research funding provided by the NHMRC |
| 1.2 I have read and understood Deakin University policy and frameworks on data management | <input type="checkbox"/> | <ul style="list-style-type: none">• Deakin University Research Conduct Policy, See point (22) for 'Management of research data and primary materials' |
-

2. Copyright protection

-
- | | | |
|--|--------------------------|---|
| 2.1 The data is protected by copyright
<i>This will apply to most research data</i> | <input type="checkbox"/> | <ul style="list-style-type: none">• Deakin University Copyright Basics• Deakin University Copyright Policy• Deakin University Copyright and licensing for research data• Consult the Copyright Manager |
| 2.2 The data will be collected, created or compiled: | | |
| a. In Australia - Australian copyright applies | <input type="checkbox"/> | <ul style="list-style-type: none">• Australian Copyright Act 1986• Australian Copyright Amendment Act 2006 |
| b. Outside Australia | <input type="checkbox"/> | <ul style="list-style-type: none">• Investigate overseas copyright legislation and policies |
-

3. Ownership of copyright and intellectual property

- 3.1 The copyright and other IP in the data is owned by:
- a. The Higher Degree Research Student
Research conducted by Deakin HDR students in the normal course of study, which does not fall into any of the other categories below, is owned by the student.
- b. Deakin University
I have assigned IP to the University because it falls into one of the categories prescribed under the Statutes and Regulations.
- c. Deakin University (joint ownership)
Research conducted by Deakin in collaboration: copyright and IP ownership are documented in an agreement between the organisations.
- d. Someone else owns the data
A Deakin HDR researcher will create/collect the data, but another party owns the copyright and IP.
Reference:

Deakin HDR student is using data originating from another party and that party owns the data.
Reference:
- Deakin Intellectual Property ([IP policy \(Students\)](#))
 - Deakin University [Copyright Policy](#) , governed by [Statute 09.1 - Intellectual Property](#).
 - Deakin University [Copyright and licensing for research data](#)
 - Consult the [Copyright Manager](#)
 - *Provide a reference number or copy of the agreement.*
 - *A common example is research funded by a company that wants to retain copyright/IP.*
 - *This might also apply to communities (e.g. indigenous groups) that participate in the research and negotiate ownership or co-ownership of the data.*
 - *Provide a reference number or copy of the agreement.*
 - *Common third parties are government or commercial agencies with existing datasets.*
 - *Provide a reference number or copy of the agreement.*

4. Third party data

- 4.1 If someone else owns the data, how did you obtain it and what terms and conditions apply to your use of it?
- a. Purchased or licensed the data commercially
- b. Obtained data under an open access license
- c. Obtained data through other means
- [Copyright & your thesis](#) at Deakin – third party material
 - *Provide a reference number or copy of the agreement/license.*
 - *Provide a reference number or copy of the agreement/license.*
 - *Formalise an arrangement with the data owners as soon as possible*

5. Ethical requirements

- 5.1 The research involves human subjects
This includes re-use of data from or about people, e.g. from health agencies
- 5.2 A Human Ethics Application has covered / will cover requirements in the following areas:
- a. Privacy
 - b. Confidentiality
 - c. Cultural sensitivity
 - d. Other
- 5.3 Other special requirements for managing data have been negotiated in addition to the Human Ethics Application.
Details:
- See [research guidelines and approvals](#) for link to specific ethics requirements
 - Information on storage requirements for identifiable data about people is also available in the [Deakin human ethics guidelines](#)
 -
 -
 -
 - [Deakin University – Why do I need a data management plan?](#)
 - NHMRC [National Statement on Ethical Conduct in Human Research](#)
 - [AIATSIS Guidelines for Ethical Research in Indigenous Studies](#)
- NB:** *Ethical requirements will impact on how you share and control access to the data.*

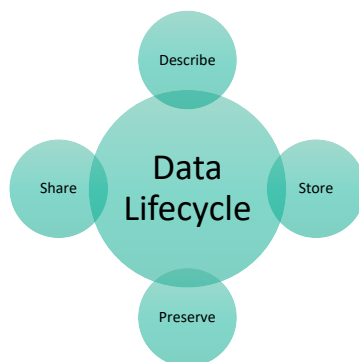
6. Research and work safety assessments

The hazards involved in any research or experimental work should be identified and assessed before the work commences.

- Information available at Deakin University website in [Research and work safety assessments](#) page

Data Management Planning

Resources & Tips



I understand the use of Research Data Footprints at Deakin.

- [Research Data Footprints Guide](#)
Learn more about data management plans with [ANDS 23 Data Things: Thing 15 Data management plans](#)

1. Describe data

- a. I understand the benefits and my obligations about describing my research data and data formats
- b. I understand and able to use metadata to describe the content and formats of my research data

- Learn more about metadata with [ANDS 23 Data Things: Thing 11 What's my schema](#)

During The Project

Describe Your Data	Resources & Tips
1. Data formats	
1.1 Data formats used: Details	<input type="checkbox"/> • Consider the durability of all data formats, including digital, print and physical samples
1.2. Data formats meet the following criteria: a. Endorsed by international/national standards agency b. Widely used c. Accepted as best practice in this discipline <i>Details:</i>	<input type="checkbox"/> • Choosing standards-based formats assists with long-term access and preservation <input type="checkbox"/> • Learn more about metadata with ANDS 23 Data Things: Thing 11 What's my metadata schema <input type="checkbox"/>
1.3. Special hardware or software requirements (for digital data) <i>Details:</i>	<input type="checkbox"/> • Special hardware and software requirements may have an impact on long-term access and preservation. <input type="checkbox"/> • Techniques for organising and keeping digital data safe on the Deakin data management website
2. Metadata	
The following documentation and/or metadata (information about the data) will ensure data can be retrieved and used:	<input type="checkbox"/> • Learn more about metadata with ANDS 23 Data Things: Thing 11 What's my metadata schema
2.1 Inventory of data assets <i>Details:</i>	<input type="checkbox"/>
2.2 Metadata standards <i>Details:</i>	<input type="checkbox"/>
2.3 Protocols for identifiers / reference numbers <i>Details:</i>	<input type="checkbox"/>
2.4 Protocols for file naming <i>Details:</i>	<input type="checkbox"/>
2.5 Protocols for document structures – e.g. column headings, document properties etc. <i>Details:</i>	<input type="checkbox"/>
2.6 Data dictionaries, data definition files and schema <i>Details:</i>	<input type="checkbox"/>
2.7 Other documentation or metadata requirements (including software that may be used to managed documentation and metadata) <i>Details:</i>	<input type="checkbox"/>

Describe Your Data**Resources & Tips**

1. Digital Data

1.1 Digital data is stored in:

a. Deakin Research Data Store (RDS)

Location:

b. Faculty-allocated network storage (e.g. "V-drive")

Location:

c. Other

Details:

- [Store your research data](#) on the Deakin data management website
- [Research Data Store \(RDS\)](#)

1.2 Digital data is backed up:

a. On RDS – automatic backup regularly

b. On faculty-allocated network storage

Frequency of backup:

c. Other backup arrangements

Details:

2. Non-digital data

2.1 Data in non-digital formats is/will be stored in:

a. Secure facilities located in the school, institute, or centre

Location:

b. Other

Location:

3. Data volumes (all formats)

3.1 Estimated data volumes:

Details:

- *Estimate data volumes and discuss these with your supervisors and eResearch Director.*
-

4. Share and Control data access

This section refers to sharing data during your project, e.g., with colleagues, collaborators, etc.

-
- 4.1 During the project, data will be shared:
- a. Not at all – I am the only person who will have access
 - b. Internally – Deakin staff (e.g. supervisor) and other students
 - c. Externally – e.g. co-supervisor at another institution, research participants, funding agency
- Details:*
- 4.2 Data will be shared with external parties in the following ways:
- a. Data stored at Deakin will be accessed by others, e.g. using an online shared workspace
 - b. Data will be transferred to other location/s:
 - by email
 - on physical media, e.g. DVDs, hard disk drives
 - by other means
- Details:*
- 4.3 Access to the data during the project will be:
- a. Restricted
 - Password-protected (digital data only)
 - Encrypted (digital data only)
 - Physical security, e.g. locked filing cabinets, check-out procedures
 - b. Unrestricted
- Details:*
- *Always consider and comply with copyright and IP ownership and ethics requirements before sharing your data*
 - *Always consider the security when transferring your data*
 - *Always consider and comply with ethics requirements*
 - *This is generally advised against due to ethics requirements. Please discuss with your supervisors*
-

When the project is complete

Preserve Your Data

Help

1. Minimum periods

1.2 Data must be retained after submission of the thesis or publication of results for a minimum of:

- a. 5 years
Standard retention period
- b. 7 years
Psychological testing or intervention with adults
- c. 15 years
Medical research involving clinical trials
- d. 25 years after date of birth of participants
Psychological testing or intervention with children
- e. Other time period
Details:

Deakin University [Research Conduct Policy](#)

- [ARC Funding/Grant Agreements](#) and the [NHMRC](#) require administering organisations to deposit data and publications in an appropriate repository within six months of the completion of research, or give reasons why this has not been done.

1.2 Based on the above, data must be kept until at least:

Date: _____

- *Write down the date, if unsure, discuss with your supervisors*

2. Long-term and permanent retention

2.1 Data should be considered for permanent retention / archiving because the research:

- a. Is controversial
- b. Is of wide public interest
- c. Uses an innovative technique for the first time
- d. Shifts the paradigm in this field of inquiry
- e. Would be costly or impossible to reproduce
- f. Will be of enduring value to researchers in this discipline
- g. Will be of enduring value to researchers in other disciplines
- h. Supports a patent application or other formal IP process
- i. Other

- *Consider and discuss these issues with your supervisors to develop an overall strategy*

2.2 The ability to permanently retain / archive the data and make it accessible will be affected by:

- a. Legal issues around ownership of copyright & IP
- b. Ethical requirements for data to be destroyed
- c. Legal or ethical requirements for access to data to be restricted
- d. Technical issues, e.g. obsolete data format or software
- e. Other
Details:

This section refers to sharing and/or publishing your research data with the wider community after your project.

1. Is my data sharable?

- | | | |
|--|--------------------------|--|
| 1.1. Can my data physically/technically be shared (i.e. format, appropriate metadata present)? | <input type="checkbox"/> | <ul style="list-style-type: none"> • Share your research data on the Deakin data management website |
| 1.2. Can my data be legally shared? | <input type="checkbox"/> | <ul style="list-style-type: none"> • Learn more about data sharing with ANDS 23 Data Things: Thing 10 Sharing sensitive data • <i>Check the deposit requirements of your scholarship and funding agreements.</i> |
| 1.3. Would it be ethical to share my data? | <input type="checkbox"/> | |
| 1.4. I have licensed my data for reuse
<i>License:</i> | | <ul style="list-style-type: none"> • Learn more about licensing data with ANDS 23 Data Things: Thing 9 Licensing data for reuse. • <i>Write down your license</i> |

2. Deposit in a repository or archive

- | | | |
|---|--|--|
| 2.1. The data will be deposited in a repository or archive:
a. Deakin University Research Repository
b. another repository or data archive
<i>Details:</i> | <input type="checkbox"/>
<input type="checkbox"/> | <ul style="list-style-type: none"> • Research Data Store (RDS) • Deakin repository Deakin Research Online (DRO) • Techniques for organising and keeping digital data safe on the Deakin data management website • Learn more about data preservation with ANDS 23 Data Things: Thing 6 Long-Lived data: curation & preservation. |
| 2.2. I have contacted the archive / repository manager and understand the terms and conditions of deposit | <input type="checkbox"/> | |
| 2.3. Data will not be deposited in a repository or archive:
a. Data and documentation stored on RDS will be associated with the academic unit
b. Data and documentation stored on faculty drives will be associated with the academic unit
c. A copy of local data (e.g. from a personal laptop or home computer or on removable media) will be provided to the academic unit
<i>Details:</i> | <input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/> | <ul style="list-style-type: none"> • Research Data Store (RDS) |
| 2.4. I will keep copies of the data myself
<i>Details:</i> | <input type="checkbox"/> | |
| 2.5. Data will be securely destroyed.
<i>Details:</i>
<i>I have discussed these arrangements for long-term care of the data with my academic unit and other relevant staff</i> | <input type="checkbox"/>
<input type="checkbox"/> | <ul style="list-style-type: none"> • <i>Always consider and comply with ethics requirements</i> |

Discover and Reuse Data

This section could be useful when seeking data sources at the beginning of your project or considering to make your data discoverable at the end of your project.

Discover and Reuse data	Help
1. Discover existing data sets	
You may need to search multiple places to locate useful and relevant data, as there is no one database containing every dataset. You can try the following sources:	
1.1. General data repositories	<input type="checkbox"/> <ul style="list-style-type: none">• Research Data Australia• Australian Data Archive
1.2. Government repositories	<input type="checkbox"/> <ul style="list-style-type: none">• Australian Bureau of Statistics• https://data.gov.au/• Trove• Australian Institute of Health and Welfare• Australian Institute of Aboriginal and Torres Strait Islander Studies
1.3. Commercial repositories	<input type="checkbox"/> <ul style="list-style-type: none">• Figshare
1.4. Grey literature (that contains data sets)	<input type="checkbox"/> <ul style="list-style-type: none">• Google Scholar is a good place to search for grey literature
1.5. Research publications (that provide and publish data sets)	<input type="checkbox"/> <ul style="list-style-type: none">• Plos• Nature
1.6 Leverage your research networks	<input type="checkbox"/>
2. Reuse existing data sets	
2.1. I understand how I am allowed to use the data	<input type="checkbox"/> <ul style="list-style-type: none">• <i>Check the licensing information about the data. If licensing information is not clear, contact the data owner for more information.</i>
2.2. I understand how to attribute and cite data sets	<input type="checkbox"/> <ul style="list-style-type: none">• <i>Follow the same principles of citing research publications</i>• Learn more about data citation with ANDS 23 Data Things: Thing 7 Data citation for access & attribution

This document was created by the Library Research Services team. It is current as of March 2019.

<https://www.deakin.edu.au/library/about/contact-your-librarian/research-librarians>

