

GUIDE FOR MANAGING YOUR RESEARCH DATA

January 2021

Data management planning is an integral part of good research practice and is the key to making research reproducible. Research data collected across disciplines can appear in various formats such as spreadsheets, survey questionnaires, audio or visual files, physical samples such as mineral specimens or tissue samples, geospatial data, code scripts, lab notebooks, and many more. Research data might also encompass project documentation such as grant applications, emails, project organisation, research agreements and so on.

Creating a [Data Management Plan](#) (DMP) before you start your research project will help identify all research data that will be created, collected, or captured during a project. You need to consider how data will be organised, stored, and backed up, how it will be shared with project partners and sponsors and plan for the preservation, retention, and sharing or deposit of the data after the project. If planned and executed well, your DMP should provide peace of mind that your data is secure and protected from loss, theft or misuse. A good plan should also help you to minimise the risk of accidental disclosure of sensitive data, such as private and personal information or culturally sensitive data. Your DMP should be updated as data is gathered or created during the project.

Appendix 1 and 2 offer you examples of a populated data management plan for sensitive and non-sensitive research. Appendix 3 contains a blank data management plan template which can be adjusted and modified to suit the needs of your particular research project and/or your research team.

How to Use This Guide

This Guide provides broad questions to prompt your thoughts about your research data to help with planning. Skip any questions that are not relevant to your project, e.g., questions about data sharing with partners, protocols for data exchange with external contractors, handling of sensitive data, or team workflows.

Before you start your project, consider the following questions:

Questions or points to consider	Notes
Who owns your research data and what happens to your data if or when you leave the University?	Griffith's Intellectual Property policy may be useful in working this out. The Copyright Matters site is also helpful.
How long are you required to retain the research data from this project?	The Schedule of Retention Periods for Research Data and Primary Materials (Griffith Policy Library) guides researchers in deciding on retention periods for research data and primary materials.
If you are joining an established project, is there an existing data management plan you need to comply with?	Consult the research leader.
Will human participants be involved in your research and, if so, what consent would be required?	If you hope to use data from this research for future projects, the consent sought at this time will need to cover both current and future use. Submit your Ethics application via the Research Information Management System (RIMS) .
Need to confirm if your data is considered sensitive?	Information Management can help you identify what classification your data belongs to in order to determine usage and access that users have to your data.
If your data is sensitive , what are your plans to protect it from unauthorised access or loss? How will you minimise the risk of accidental disclosure?	The Five Safes framework has been adopted by several Australian government agencies to assist researchers manage disclosure risk. Check the Research Education and Development Workshop Calendar to see if there are upcoming seminars or workshops on Dealing with Sensitive Data

What file formats will be used or generated during the research?	A decision to use proprietary or open source software now will affect how shareable, accessible, and reproducible your research data will eventually be. Open formats are more reliable for reproducibility and continued access. Learn more about file formatting .
Do you understand your responsibilities, as a researcher, for data management?	The Australian Code for the Responsible Conduct of Research (2018) provides a framework for how high quality research should be conducted and identifies which data principles and responsibilities are applied to researchers. The Management of Data and Information in Research guide provides more detail to assist researchers to adhere to relevant data principles P2, P3 and P7.
Would your project benefit from developing an induction and exit plan to ensure correct data handling practices and requirements are being addressed by research team members?	The Library Researcher Services team can provide you with standard operating procedures for adaptation.

Data Collection/Creation

Questions or points to consider	Notes
<p>What types of data will be captured and collected during your research?</p> <p>Will you need to use survey/data capture software to create data?</p>	<p>Check to see tools available at Griffith for data capture and managing study participants.</p> <p>Check what other research data already exists within your discipline and whether it is available for reuse.</p>
What is the estimated eventual size of the dataset you will be creating for this project?	Data size may affect where and how the data can be analysed and stored. eResearch Services can assist you with data size estimates.
Are you planning to collect data categorised as sensitive data , i.e. identifiable personal or health/medical data, Indigenous data, ecological data regarding vulnerable species or data that is 'commercial in confidence'?	If so, you have a responsibility to minimise the risk of loss, theft or accidental disclosure. See <i>Storing and Backing up your Data</i> below.
<p>Does your project involve high performance computing?</p> <p>Will your research require access to discipline-specific analysis, computation or visualisation tools?</p>	<p>eResearch Services partner with researchers on projects and can supply skilled staff for short term projects.</p> <p>eResearch Services can also provide advice and support for application development and can assist with requirement gathering and consultation to determine client needs for research.</p>

Data Organisation

Questions or points to consider	Notes
<p>How will you organise and document your data?</p> <p>What is the desired data workflow?</p> <p>Will raw data be housed separately from derived, analysed or visualised data?</p>	<p>Working out where the data will be stored and what will be the designated source of truth will help prevent confusion and mitigate the risk of new data being overwritten by older data.</p> <p>Documentation should include where your results and working data will be saved.</p>

How will you manage file naming?	Naming files consistently in a standard format will help project efficiency, lower the risk of misplaced or lost data, greatly foster research reproducibility, and save you time. The Library's Researcher Services team can advise you on file naming conventions.
Do you need to keep track of any versions of software code?	A version control system such as Git enables you to track changes to coding snippets and scripts.

Storing and Backing up Your Data

Questions or points to consider	Notes
Will your <i>non-digital data</i> , and any copies, be held in a safe and secure location?	Non-digital data should be stored securely, e.g., in fireproof, lockable filing cabinets, or within lockable offices.
Will your <i>digital data</i> , and any copies, be held in a safe and secure location? Are you storing and sharing data on software/platforms that are approved by the University and funding bodies?	Griffith provides safe and reliable solutions for the storage, transfer of sensitive and non-sensitive data and automatic and regular backing up of data for researchers. Check to see which Research Storage Service will ensure your data is protected and how you can give necessary access permissions to others working on your project.
Are all project hard drives (laptops and portable drives) encrypted to prevent a data breach?	Griffith's cybersecurity advice has useful information. Check the Griffith Data Protection site for steps towards ensuring you are cybersafe, i.e. using a password manager and encrypting all devices.
If your data is sensitive , what are your plans to protect it from unauthorised access or loss? How will you minimise the risk of accidental disclosure?	The Five Safes framework has been adopted by several Australian government agencies to assist researchers manage disclosure risk. Talk to eResearch Services or the Library's Researcher Services Team for more information.
What protocols are in place for securing data, especially sensitive data, that must be exchanged with external partners or service providers, e.g. transcription services, genome sequencing services, image processing or data visualisation services?	Griffith's cybersecurity advice has useful information.
How many people will form the research team? Are there specific roles, e.g., one person gathering data, another analysing it, a third visualising it, or will everyone be doing similar roles?	This might be an important issue when controlling levels of data access, especially if there are external partners.
What should you do if you suspect your data has been breached?	Please consult Digital Solutions to find how out and when you need to respond to a suspected data breach .

Data post-project / post-publication

Questions or points to consider	Notes
What is the plan for eventual data sharing?	Researchers on funded grants need to deposit at least the project metadata (and preferably the data too) in an open repository within three months of project finalisation.
Will the journal you publish with require a copy of your supporting research data to be stored in a discipline-based or an institutional repository?	Increasingly, journals are requesting data with publication to allow others to test your research findings and build on your research.
Is there potential for your data, including de-identified sensitive data, to be reused in the future by other researchers?	<p>If your research will be shared for potential reuse, it is recommended that a licence, such as a Creative Commons Attribution licence, be applied to make that intention explicit. This Research Data Rights Management Guide includes flowcharts to guide decision-making.</p> <p>Publishing and sharing sensitive data, or simply a description of your data, means that others can discover and cite it. You can publish a description of your data without making the data itself openly accessible. Read the Publishing and sharing sensitive data guide for more information.</p>
<p>How will you manage retention periods and secure destruction, if this is required?</p> <p>Do you need to apply the minimum data retention periods, or longer?</p> <p>What data are you required to retain and for how long? If you are required to destroy data securely, how will you do this?</p>	<p>The Schedule of Retention Periods for Research Data and Primary Materials (Griffith Policy Library) guides researchers in deciding on retention periods for research data and primary materials.</p>

Additional Griffith Data Resources

Griffith University, [Research Integrity](#), Resource Sheet [#3 Planning and conducting a project responsibly](#)

Griffith University, [Research Integrity](#), Resource Sheet [#5 Responsible Management of Data](#)

Griffith University, [Research Integrity](#), Resource Sheet [#8 The Responsible HDR Candidate](#)

Griffith University, [Working with Data](#)

Need help?

For data management, approved storage solutions and sharing options, Research Survey Tool (Lime Survey), RedCAP or for Copyright or Licensing support, please contact the Library's [Researcher Services Team](#) for a consultation appointment. The team can provide onward referrals to other services at Griffith if needed.

Appendix 1: Worked example of a Data Management Plan for sensitive data

Please note, this is a data management plan template for a humanities project that DOES contain sensitive, personal and identifiable information (i.e. the research data will NOT be able to be openly shared with de-identification and / or access controls.)

PROJECT	Example response
Project Title + Identifier	
Project Description	
Researcher Name	John Citizen
Date / Updated	
DATA COLLECTION-CREATION	
<p>What data will be collected, captured, created and in what form?</p> <p>What folder structure would be suitable to your project?</p> <p>Will you use images/content belonging to other collections/ museums etc?</p>	<p>Archival video clips (converted to mp4) Historical photographs digital copies JPEG). Video / Audio recordings-interviews (mp4 + mp3) Transcripts of video/ audio recordings -interviews Scans of Consent Forms -Interviews (PDF) Spreadsheet-multimedia asset audit Spreadsheet -Permission/copyright status use of video & images Spreadsheet- Historical (text) references, citations and bibliography Gene sequences as txt files</p>
Will participants be involved?	6 interview participants. Hard copy consent forms from participants secured in locked School facility. Electronic copies of consent along with Private or Identifiable data are stored separately in Research Drive solution. This has been deliberately separated from working data in Research Space solution
Application for ethics approval? Ethics Approval number	Completed Ethics approval application (via Research Information Management System (RIMS) Ethics No. 178_000
Have you established who owns the copyright of your data?	Yes, according to Griffith Policy.
DATA ORGANISATION	
<p>How will data be documented and described?</p> <p>How will you name and label your files?</p> <p>Will open standards and file formats be used?</p>	Files named using recommended Griffith naming convention.
STORAGE AND BACK UP	
<p>Where and how will your data be stored and backed up in safe, secure locations</p> <p>Will sensitive data be protected?</p> <p>Has data been de-identified, and identifiers stored in a separate location?</p>	<p>Data will be stored in Griffith Research Space Access passwords provided to the 2 key collaborators Identifiers have been removed from dataset and stored in a separate file, in a separate folder that is password protected I shared the password with my supervisors (I verbally told them the password, I didn't email them)</p>
DATA POST PROJECT	
<p>Will you make data publicly available ?</p> <p>Will your data be available for reuse?</p> <p>If so what license will be assigned?</p> <p>What data will be retained and for how long?</p> <p>Who will maintain access to the data?</p>	<p>Will deposit datasets (including metadata) in Griffith Research Online. Creative Commons license applied: CC BY ND NC Permanently due to Heritage value Non-public data to be archived in Research Vault</p>

Appendix 2: Worked example of a Data Management Plan for non-sensitive data

Please note, this is a data management plan template for projects that DO NOT contain sensitive, personal or intellectual information (i.e. the data can be openly shared)

PROJECT	Example response
Project Title + Identifier	
Project Description	
Researcher Name	John Citizen
Date /Updated	
DATA COLLECTION-CREATION	
<p>What data will be collected, captured, created and in what form?</p> <p>Will you use images/content belonging to other collections/ museums etc?</p>	<p>Archival video clips (converted to mp4) Historical photographs digital copies JPEG). Transcripts of video/ audio recordings -interviews Scans of Consent Forms -Interviews (PDF) Spreadsheet-multimedia asset audit Spreadsheet- Historical (text) references, citations and bibliography Field data collected using biocollect (Atlas of Living Australia) Outputs from machine learning runs Raw data captured from remote sensors (i.e. acoustics, camera traps, turbidity and velocity sensors) Meta-analysis using data sourced from open repositories</p>
Have you established who owns the copyright of your data?	Yes, according to Griffith policy.
DATA ORGANISATION	
<p>How will data be documented and described?</p> <p>How will you name and label your files?</p> <p>What folder structure would best suit the needs of your project?</p> <p>Will open standards and file formats be used?</p>	<p>According to Griffith naming convention.</p> <p>Files will be organised in folders according to types of data.</p> <p>Dublin core metadata schema Mp3,Mp4, text, pdf, odf formats.</p>
STORAGE AND BACK UP	
Where and how will your data be stored and backed up in safe, secure locations?	Data will be stored in Griffith Research Space. Access passwords stored in joint project LastPass vault.
DATA POST PROJECT	
<p>Which open repositories will you store your data and analysis workflows in?</p> <p>What license will be assigned?</p> <p>What data will be retained and for how long?</p>	<p>Will deposit datasets (including metadata) in Griffith Research Online, TERN data portal. Creative Commons license applied: CC BY ND NC. Permanently due to Heritage value.</p>

Appendix 3: Empty template for a Data Management Plan

PROJECT	Response
Project Title + Identifier	
Project Description	
Researcher Name	
Date /Updated	
DATA COLLECTION-CREATION	
What data will be collected, captured, created and in what form?	
Will you use data generated by or belonging to other researchers or organisations?	
Will research participants be involved?	
Ethics Approval number (If relevant)	
Who owns the copyright of your data?	
DATA ORGANISATION	
How will data be documented and described?	
How will you name and organise your files?	
What folder structure would be suitable to your project?	
What file formats be used?	
STORAGE AND BACK UP	
Where and how will your data be stored and backed up in safe, secure locations?	
What protections are there for any sensitive data?	
What protocols are in place to separate de-identified data, and the related identifiers?	
DATA POST PROJECT	
Will you make data publicly available ?	
Will your data be available for reuse?	
If so what license will be assigned?	
What data will be retained and for how long?	
Who will continue to maintain access to the data?	