



DATA MANAGEMENT PLANS

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Research Data Life Cycle

- Data Repurposing/Re-use
- Data Citation



Creating Data

A circular node with a dark grey gradient, representing the 'Creating Data' stage of the research data life cycle.

- Designing Data Management Plans
- Data Capture
- Data Storage
- Metadata creation

Processing Data

A circular node with a red gradient, representing the 'Processing Data' stage of the research data life cycle.

- Data Storage
- Metadata Creation
- Data Cleansing
- Data Verification
- Data Validation
- Data Anonymisation



Analysing Data

A circular node with a blue gradient, representing the 'Analysing Data' stage of the research data life cycle.

- Data Storage
- Metadata Creation
- Data Cleansing
- Data Verification
- Data Validation
- Data Anonymisation
- Data Interpretation & Analysis
- Data Publishing
- Data Visualisation

Preserving Data

A circular node with a yellow gradient, representing the 'Preserving Data' stage of the research data life cycle.

- Data Archiving
- Data Preservation
- Metadata Creation
- Link data to outputs

Giving Access to Data

A circular node with an orange gradient, representing the 'Giving Access to Data' stage of the research data life cycle.

- Data Sharing
- Link Data to Outputs



Based on UK Data Archive Lifecycle

What is a Data Management Plan?

- A Data Management Plan is “a formal document that outlines what you will do with your data during and after you complete your research” (The University of Virginia Library, 2014).
- A Data Management Plan “outlines your practices for collecting, organizing, backing up, and storing the data you will be generating” (University of Minnesota)

Why do researchers need to complete a Data Management Plan (DMP)?

- Meet funding body grant requirements, e.g. NSF, NIH;
- Meet publisher requirements
- It helps you ensure your research data are accurate, complete, reliable, and secure both during and after you complete your research (University of Edinburgh)
- It saves time in the long run because there is no need to re-organise, re-format, or try to remember details about data (Wikipedia)
- It allows you to critically review your project and develop a suitable plan of action to overcome any issues.(University of Nottingham)
- DMPs outline the practices for collecting, organising, backing up, and storing the data that will be generated

DMP Elements

| Element | Typical Questions |
|---------------------|---|
| Data Collection | What type(s) of data will you create, collect or generate? |
| | How will the data be collected or created? |
| | What data formats will you create? |
| Responsible persons | Who will be responsible for managing the data? Who will take responsibility for verifying that the Data Management Plan is adhered to? |
| Resources | What resources will you require to deliver your Plan? |
| Metadata | What information is needed for the data to be to be read and interpreted in the future? (e.g. Bibliographic - or Subject Specific Metadata) How will you create or capture the metadata? |

DMP Elements

| Element | Typical Questions |
|-----------------------------|---|
| Access, sharing and privacy | <p>Which data can be shared, or given access to? How will you share the data? Are there any restrictions on data sharing required? (e.g. Creative Commons License)</p> |
| Ethics and Legal Compliance | <p>How will you manage ethical issues? (e.g. protection of identity of participants, Anonymisation, Sensitive data etc.) How will you manage copyright and Intellectual Property Rights (IPR) issues?</p> |
| Data storage and back-up | <p>How will data be stored and backed up during the research? How will you manage access and security?</p> |
| Selection and Preservation | <p>Which data should be retained, shared, and/or preserved? How will data be archived/preserved for long-term? Where will the data be held? (e.g. archive, repository)</p> |

Things to remember about DMPs

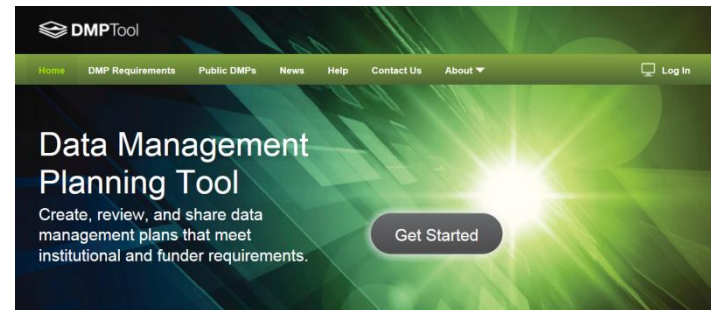
- Every project is unique so there is no one data management plan that fits all projects
(University of Edinburgh)
- DMPs are live documents. They must be continuously maintained and kept up-to-date throughout the course of your research (University of Edinburgh)

Creating a Data Management Plan

- Review your funding agency guidelines/requirements that need to be addressed:
 - University of Minnesota Libraries.
<https://www.lib.umn.edu/datamanagement/funding>
 - SPARC's Data Sharing Requirements by Federal Agency
<http://datasharing.sparcopen.org/compare?ids=>
- Examples of Data Management Plans
 - https://dmptool.org/public_dmps
 - <http://www.dcc.ac.uk/resources/data-management-plans/guidance-examples>
- Data Management Planning Tools

Data Management Planning Tools

Data Management Planning Tool
(DMPTool) <https://dmptool.org/>
(University of California Curation Center
of the California Digital Library)



DMPOnline Tool
<https://dmponline.dcc.ac.uk>
(Digital Curation Centre, UK)



DIRISA Tool
<http://pilot.meraka.csir.co.za>



Useful Resources

- **Browse Data Sharing Requirements by Federal Agency.** Washington, DC: SPARC, 2016. <http://datasharing.sparcopen.org/compare?ids=> (Accessed 7 June 2016)
- Digital Curation Centre. 2015. **Funders Data Plan Requirements.** <http://www.dcc.ac.uk/resources/data-management-plans/funders-requirements> (UK Funders) (Accessed 1 December 2015)
- Digital Curation Centre (2011). **Checklist for a Data Management Plan, v.3.** [http://www.dcc.ac.uk/sites/default/files/documents/data-forum/documents/docs/DCC Checklist DMP v3.pdf](http://www.dcc.ac.uk/sites/default/files/documents/data-forum/documents/docs/DCC%20Checklist%20DMP%20v3.pdf) (Accessed 1 December 2015)
- **Funding Agency Guidelines (USA).** University of Minnesota Libraries. <https://www.lib.umn.edu/datamanagement/funding> (Accessed 2 December 2015)

Useful Resources

- Jones, S. (2011). *How to Develop a Data Management and Sharing Plan*. (DCC How-to Guides). Edinburgh: Digital Curation Centre. <http://www.dcc.ac.uk/resources/how-guides/develop-data-plan> (Accessed 1 December 2015)

Happy Planning