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Template for a Data Management Plan

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Data Management Plan Template

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DIT Library Services

Data Management Plan Template

This is information about what needs to be in a Data Management Plan and a generic template for a plan is at the end of the document. If you are seeking funding from a specific funder check if they have a bespoke plan that you must use.

What is a data management plan (DMP)?

A DMP is a statement describing how you will manage and document your research data during the life of your research project and where you will deposit the data so as to ensure its preservation and reuse. A DMP does not have to be long. The National Science Foundation (NSF) states that all proposals must have a supplementary document of no more than two pages labelled a data management plan and four pages would be maximum.

Step 1: Where will the data come from?

Answer the following questions:

- **Where will the data come from?** Possible **sources** of research data will come from interviews, questionnaires, images, lab experiments and so on. Make the list as comprehensive as you can.
- **Can you quantify how much data there will be?**
- **Will existing data be used?** If so, where is it coming from and why are you using it.
- **Will the sources of the data change?** If you think the sources of the data will **change**, say so and try and estimate how it will grow and develop.
- **Can you list any special tools or software that are needed to create, process or visualise the data?**
- **Will your data be compliant with the GDPR (general data protection regulations)?**

Keywords: Data, Creation, Sources, Tools

Step 2: What format is the data in?

Answer the following questions:

- What format will the data be in.... ASCII, txt, excel, word files, open source, proprietary software. What are your reasons for selecting particular formats? Whatever **format** it is in, make sure it meets the **standards** of your discipline and always use national and international standards. It is important that you think about reuse, interoperability and long-term preservation of the data at this stage and make sure the file format facilitates that. As proprietary software will become out-of-date and inoperative, the use of open source software is recognised as best practice. If you are using proprietary software state your reasons why it is necessary to do that.
- Describe how you will **backup** up your data and the contingency plan should it became **lost** or unusable later. Remember backups are different to preservation of data. Backups are about safeguarding your data for the life of the project. Preservation is about keeping the data long term. Ideally, there should be a national data bank but in the meantime lodge the data in Arrow.

Keywords: Format, Standards, Backup.

Step 3: How will the data be organised, documented and described?

How you do this is important for both **quality control and reproducibility**. The term metadata will be mentioned here. **Metadata** is documentation that describes the data. Data documentation will ensure that your data will be understood and interpreted by any user. It will explain how your data was created, what the context is for the data, the structure of the data, and its contents, and any manipulations that have been done to the data. Doing this properly enables you and users of the data to understand and track important details of the work. It will also help search and retrieval when you have deposited it in the [Data Portal](#) in Arrow.

Answer the following questions:

- What metadata standard will be used? There is a list of **metadata standards** [here](#). Does your discipline demand that you use a specific one?
- How will this metadata or documentation happen...who will create and manage it?
- How will **folders** be structured and named, how will different **file versions** be handled?
- What **identifiers** will be used? The Library can supply DOI's (Digital Object Identifiers) to you.
- What other documentation and **contextual information** is needed so that other people can understand your data (data dictionaries, codebooks, questionnaires)?

Keywords: Quality control, Reproducibility, Metadata, Data Portal, Standards, Folders, Files, Who, Identifiers, Contextual Information.

Step 4: How will you store the data and ensure it is secure?

Answer the following questions:

- Where will the data be stored and what media will be used for storage? Is this just for the short term or are you thinking of preserving it for the future? Ideally, you will store the data for your project and when you are ready to publish it, deposit it in the [Data Portal](#) in Arrow. Think about the **contextual information** that needs to be in the repository to make the data reusable. Also, be careful of depositing data with journals and check out whether, as with journal articles, they are copyrighting the data to themselves.
- Who will be responsible for **storage** and **security** of the data? Will security be provided by assigning passwords, level of permissions or data encryption?
- Who will be responsible for **backups** and how will that be done?
- Will you share the data throughout the project and will that compromise **security**? You need to think about whether the data will outlive the project and will that be all of it or just some of it.

Keywords: Storage, Security, Contextual Information, Backups

Step 5: How will you store the data and ensure it is secure?

Answer the following questions:

- Are there ethical or legal reasons why you cannot **share** the data? For example did you tell the interviewees that the data would be anonymised and shared and in this regard remember there are extra responsibilities under the [GDPR](#) (General Data Protection Regulations).
- **Who owns the data?** This is particularly important if your project is cross-institutional as ownership needs to be clearly established from the beginning. Also, if you are using facilities offered by journal publishers to store your data they may have assumed **ownership** rights.

Keywords: GDPR, Share, Ownership

Step 6: Data Sharing

Answer the following questions:

- Who will be the **audience** for the data?
- Are there other people apart from the creators who have the right to see or use the data?
- Is there an **embargo** period before you will release the data and if so, why?
- Are you opting-out of sharing all or some of the research data and if so why?
- Remember the [Open Science Movement](#) wants to see both publications and data available on open access so that they are available to all. This means that if you are keeping data closed and unavailable you should have good reasons and state them clearly. Horizon 2020 applies the principle of “as open as possible, as closed as necessary” for research data. There is more information on Horizon 2020 [here](#).

Keywords: Audience, Embargo, Open Science

Step 7: Implementation of the Plan

Answer the following questions:

- How will you ensure the **plan is followed** and who will be responsible for keeping the plan on track?
- How often will you **review** and update the plan? It is expected that as your research progresses it is likely that your plan will have to change, just remember to document it in detail.

Keywords: Audience, Embargo, Open Science

Examples of Data Management Plans:

University of Glasgow

https://www.gla.ac.uk/media/media_442573_en.pdf

National Foundation of Science (US)

https://www.dataone.org/sites/all/documents/DMP_MaunaLoa_Formatted.pdf

<http://www.research.pitt.edu/sites/default/files/u24/NSF%20Data%20Mgt%20Sample.pdf>

National Endowment for the Humanities (USA)

https://www.neh.gov/files/dmp_from_successful_grants.zip

Pan European Project

http://www.freme-project.eu/resources/FREME_Deliverable_D7-4.pdf

Data Management Plan

Proposal Name

1. Description of the data
Type of study

- 1.1. Types of Data

- 1.2. Format and scale of the data

2. Data collection and generation
 - 2.1. Methodologies for data collection and generation

2.2. Data Quality and Standards

3. Data management, documentation and curation

3.1. Managing, storing and curating data

3.2. Metadata standards and data documentation

3.3. Data preservation

Data will be deposited in the Data Portal of the DIT institutional repository
Arrow@dit

4. Data security and confidentiality

5. Data sharing and access

6. Responsibilities and implementation

Author of the data management plan _____

Contact email _____

Date _____

If you want to know more about Data Management there is a free online tutorial available from the University of Edinburgh <https://mantra.edina.ac.uk>