Guide to develop a data management plan for doctoral students

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This document intends to assist doctoral students in the development of their Data Management Plans (DMP).

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About your research

Name and email address	
Thesis director/s	
Working title for the thesis	
Describe your research	*Approximately 50 words*
Duration of your research	Start date: *DD-MM-YYYY* End date: *DD-MM-YYYY*
Linked project	*Is this a thesis related to a project? Which one?*
Funding	*Have you received funding to complete your dissertation? Whose?*

About this data management plan

Creation date	*DD-MM-YYYY*
Last update	*DD-MM-YYYY*
Version and date	*Make a new version every time there are significant changes (new datasets, significant changes in your research, or other factors)*

Sensitive/personal data	*If you work with personal or sensitive data, you have a legal obligation to process it according to applicable regulations. Personal data is any information that allows a person to be identified (name, address, location, etc.).* ☐ I'm not working with personal data ☐ I will work with personal data [see point 2]

1. Data collection

Describe the data you will create/collect

1.1 Will you use existing data during your research? If not, indicate the origin of the data you are going to use

☐ No

☐ Your own data or data from the research group in which you participate

☐ Academic collaborators

☐ Commercial collaborators

☐ Publicly available databases/files

☐ Commercial data providers

☐ Others (indicate which ones):

1.2 Data Description

Describe the data that you are going to create or the third-party data that you are going to reuse and specify:
- if you are going to use protocols or standards used in your research area
- the tools, instruments, equipment, hardware, or software you are going to use
If you reuse data from third parties, make sure to have the appropriate permissions and to be aware of the terms and conditions of the data.

1.3 Data type and formats

Keep in mind:
- the type of data: for example, if you are going to work with measurements, simulations, observations, text (text, MS Word), images, audio-visuals or samples, statistics (spreadsheets), with computational models, with data from a qualitative survey (questionnaires), recordings (audio, video), software (code), etc.
- the longevity of the file formats: preferably use open standards so that the data can be read by multiple programs, facilitating preservation, and sharing with other users.

1.4 Specify the data volume

❏ < 10 GB

❏ 10-30 GB

❏ 30-50 GB

❏ 50 GB-250 GB

❏ 250 GB-500 GB

❏ 500 GB-2 TB

❏ 2 TB

2. Data storage and security

Make sure that all your research data is securely stored and backed up regularly.

2.1 Specify any restrictions (commercial, ethical or confidentiality) that may affect your data

☐ Contractual obligations

☐ Legal obligations: protection of personal data (LOPDGDD, RGPD...) [see 4.1]

☐ Legal obligations: copyright, intellectual property [see 4.1]

☐ Ethical restrictions [see 4.1]

☐ Commercial aspects (p. ex. patentability)

☐ Formal security standards

☐ No obligations

☐ Other, specify:

Briefly explain the restrictions

2.2 Major data security risks

Identify the main risks, such as: accidental deletion of data, loss, or theft of data. Describe the consequences of potential data loss

2.3 Measures to be taken to reduce the risk of data loss.

☐ Access restrictions

☐ Encryption

☐ Data processing

☐ Pseudonymization

☐ Anonymization

☐ Regular backups

☐ Other, specify:

Also specify the procedures you will use to guarantee the privacy of personal data.

2.4 Where will you store your data?

☐ In the network of your department or research group

☐ In the university network

☐ Physical storage (e.g., USB, external hard drive)

☐ Cloud service (e.g., Dropbox)

☐ Other, specify:

Briefly explain the storage and copying conditions

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3. Data documentation

Document data to facilitate comprehension and reuse

3.1 Name and structure of the files and the folders

Describe how your data files and folders will be organized and named

3.2 Version control

Describe how you will control the versions. Also, specify what you will do if you delete data

☐ No version control (e.g., original files are overwritten)

☐ Software with version control, indicate it:

☐ Software with change tracking option

☐ Version number and date in the file or folder name

☐ Making a copy of the script in which the data is processed

☐ Other, specify:

3.3 Which metadata standards do you intend to use?

See "Disciplinary metadata standards" of DCC or "Metadata standards" at Wikipedia.

☐ I will not use any standard (specify the metadata needed to understand the data)

☐ Generic metadata schema (e.g., Dublin Core)

☐ Windows automatic metadata schema (e.g., from Word, Excel)

☐ Specialized thematic metadata schema, indicate:

☐ Another metadata schema, indicate:

Specify how they will be created (in a "readme" file, in a spreadsheet, embedded in the data) and what documentation you will produce to make the data understandable to others

4. Access, share and reuse the data

4.1 Do you have any restrictions on data sharing as regards the existing regulation (General Data Protection Regulations) or others (ethics, commercial, security, intellectual property, or copyright)?

Specify which ones.

4.2 Who are the potential users of your data and how are they going to find them?

Briefly describe who might be interested in your research and how you will distribute it (e.g. data repositories, website, conference publications, etc.)

4.3 Specify the licenses that you will apply to the data to enable maximum reuse

The use of Creative Commons licenses is recommended (CC - BY o CC Zero) or GNU

5. Deposit and conservation of the data

Keep in mind that all favourably evaluated theses must be published in the respective open access institutional repositories.

5.1 What criteria will you use when selecting the data for long-term preservation?

☐ Type of data (raw, processed) and ease of generation

☐ Relevance of content to others

☐ Ease of reuse of the format by others

☐ Data linked to a publication

☐ Investigation verification

☐ Time available

☐ Available financial resources

☐ Others, specify:

5.2 How long do you intend to preserve the data?

Various international standards recommend a minimum of 10 years.

5.3 In which repository will you store your data?

Consider specific requirements in terms of format, metadata, size, cost, etc., that the repository may have to deposit data

☐ Institutional repository

☐ Thematic repository (international), specify:

☐ Multidisciplinary repository (e.g., Zenodo, Figshare, Dryad)

☐ Others, specify: