

## How to organise your research data and associated records

The main principles relating to organising your data are that:

- You can quickly find your data and related records when you need to
- Your data and related records are kept secure
- Your data and related records are accessible to the relevant people, e.g. collaborators, research funders, other users
- Your data and related records are disposed of correctly at the end of a project.

### Research data

The Digital Curation Centre (DCC) has a checklist of what should be included in a Data Management Plan. This checklist can be found here: <http://www.dcc.ac.uk/resources/data-management-plans/checklist> with a template version attached to this guidance that can be copied and filled in. The School will be working towards an online version of the template, which will be sent on to

The School's draft Data Policy required researchers to follow the checklist. The checklist covers research data through creation, ethical issues, security, storage, accessible to final disposal. By thinking through and recording this information via the template in the appendix, researchers should be in a good position to follow the principles set out above.

### Organising research data

When organising research data, the School suggests the following:

- Use succinct file titles that provide enough information that you can understand what is in the file without having to open it.
- File names should be independent of their storage location.
- Determine a naming convention if you are working within a team so that everyone working on the project knows what is expected regarding file titling. This is particularly important if you are using any abbreviations. Keep characters to the ISO basic Latin alphabet and Arabic numerals. Use underscores and hyphens to replace blanks.
- Determine a version convention if you are likely to be creating different versions e.g. stick to major.minor.revision number convention 1.0.0, 2.0.0 or a, b. If working in a team, make sure everyone knows what the convention is.
- Consider date formats. YYYY-MM-DD at the start of a file title will arrange documents in date order better than other methods.
- Take advantage of the hierarchical folder system, that is, folders within folders if it suits you. Otherwise try to keep to a flatter structure but keep in mind that systems will most likely want to arrange folders and files alphabetically.
- Don't use too many levels within a hierarchical system. Aim to keep to three or four so that you get the best balance between breadth and depth.
- Organise structure around either research activity, type (original, adjusted, or analysis), or kind of material (data or documentation).
- Document changes to files either in the file or in a separate text or syntax file.
- Take advantage where you can of tags to organise and search for information. Tagging software is available that could help here if the School's systems do not provide what you need.
- Organise a six monthly review of your folder structure, so you can clear out folders that are not being used. This could be a shorter or longer review period, depending on the project. Establish rules for retaining and deleting files.
- Define what is to be backed-up: data and files (original files, master files, data files, etc.) or of the entire data collection
- Define access privileges (passwords, firewall, read and write permissions) and protection against overwriting a backup set (read-only).
- Consider what metadata you need to use for you and others to navigate the research data. The UK Data Archive has a guide on metadata that is available here: <http://www.data-archive.ac.uk/create-manage/document>. [Cambridge also has detailed guidance relating to metadata here: <http://www.lib.cam.ac.uk/dataman/pages/metadata.html>]

- For reference management, the School offers EndNote and Mendeley, which can be used to manage references to articles, books and other reference material used in your research. Other reference management software is also available.

### Documentation, metadata and associated records

As well as the research data, you will also need to be able to manage records associated with the research project such as:

- A copy of the data collection tool (survey, interview schedule) and any instructions
- A copy of the consent form used to obtain informed consent for participation, or the process of obtaining informed consent is described
- Information sheets about the project.
- Outline of data validation features, and modifications made to data and documentation
- Contextual material in the data and documentation files
- Funding documents, like grant proposals and contracts or other agreements
- Managing the award, which includes financial records, claiming expenses, timesheets, recruitment and other personnel records, specific responsibilities if you are the principal investigators, reports.
- Ethical information, the data management plan itself, any records relating to data protection if using personal data for the research.

We suggest the following folder structure for these records, but if you have a system that works, use it. An alternative is shown in this blog post: <http://www.vukovicnikola.info/folder-structure-for-research/>

