

# Advantages of managing research data

- Avoids preventable data loss.
- Allows you to find and understand research data quickly.
- Facilitates collaboration.
- Makes it possible to validate research findings.
- Creates transparency of research and makes it easy to open the data when appropriate and beneficial.
- Enables data reuse and decreases duplication of effort.
- Ensures you meet funder and legal requirements.



## 1 Research data management planning

### Funding

Data management costs are usually eligible costs to be included in the funding application. Ask also funding for costs for preparing data for long-term archiving.

**DMP** (data management plan) is required by most of the main funders. Use **DMPTuuli** or benefit from its instructions.

### IPR

Choose a suitable licence, e.g. **Creative Commons CC BY 4.0**, for your data. Make sure you have the license for the reuse of others' data.

### Data protection and ethics

Be extra careful with **personal data**. Follow the legislation and **ethical guidelines**. Informed consent must be obtained for all types of human subjects research.

## 2 Organising research data

### Naming files and folders

Be consistent, plan together with the research group.

### Version control

Keep track of master versions of files. Use Aalto's version.aalto.fi.

### Supporting documentation

Create supporting documentation/metadata, at the time of data creation. **Documentation** is all the information necessary to interpret, understand and use a given dataset.

### Managing references

Use reference management software, for example **Aalto RefWorks**.

## 3 Research data storage and sharing

### Storage & backup

Plan where to store your research data. These attributes will influence your choice: size, type, confidentiality and sharability of data. Backup in order to avoid data loss.

### Selection and appraisal

Archive research data to satisfy funders', legal and Aalto's requirements. Minimally archive everything that is needed to replicate results in scientific publication or in a study.

### Data repositories

Archive research data in a discipline-specific data repository, in common repository (e.g. **Zenodo** or **FSD**) or in **ACRIS**.

### Sharing data within research group

Plan how you securely share data with other members of your research and project group. Remember that all commercial cloud services are not suitable for confidential or sensitive data.

## 4 Making research data publicly available

### Open Access

Many funders require making research data publicly available when it is ethically, commercially and legally appropriate. Opening data enhances the visibility of your research and increases citations to your research publications. Digital Object Identifier (DOI) makes data uniquely citable.

### Further information:

[www.aalto.fi/en/research/research\\_data\\_management](http://www.aalto.fi/en/research/research_data_management)  
E-mail: [researchdata@aalto.fi](mailto:researchdata@aalto.fi)