

# Research Data Management at Aalto

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## Aalto Doctoral Orientation Days

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Aalto-yliopisto  
Aalto-universitetet  
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# Content

## 1. Research data management – brief introduction

- a. What is RDM?
- b. Basics of good RDM
- c. Legal and ethical issues
- d. Publishing research data

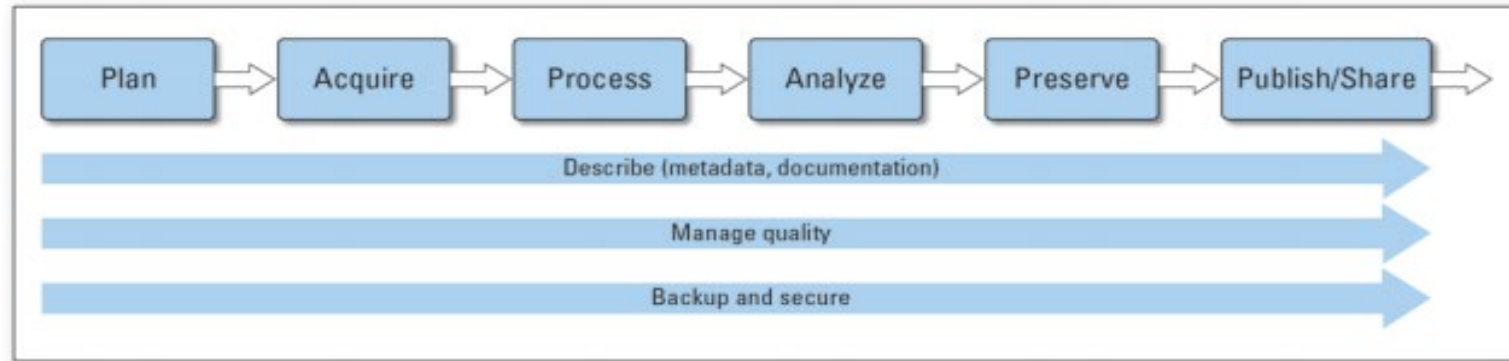
## 2. RDM support services at Aalto

- a. Storage services
- b. Support services and training

**+ RDM resource checklist: contacts and essential information**

# Research Data Management (RDM)

- = A set of practices and steps taken to handle and take care of the research data throughout the research life cycle
- in a way that ensures the **accessibility, understandability, integrity and high quality** of research data.
- for example: the organisation of data, version control, documentation, backup and digital security, quality control...



# Why is RDM important?

- Data are the cornerstone of your results: if peer-reviewers asked to see the data, would it be in a state where others can **understand, validate or potentially reproduce** your results?
- To facilitate **data reuse** and give your research more **visibility**
- To develop **useful skills**
- To **manage risks**
  - Data loss, flawed/corrupted data, article retractions...
  - Mistakes in personal data protection, legal and ethical issues.

## CASH REWARD

for returning my lost backpack



[505Adventure.com](http://505Adventure.com)

- Black [AK] Burton Rucksack
- Lost on Friday 15. July at 8 pm in the Panton Arms pub 43, Panton St. Cambridge
- Containing a laptop (white MacBook), a black external hard drive and scientific research documents

The external hard drive is VERY important to me as it contains 5 years of research data which are crucial for my PhD thesis!!!

If you found it, I would be extremely grateful if you could return it to the Panton Arms or contact me on: 07804430054 (ar456@cam.ac.uk)

Thank you!!

# How to approach good RDM?

## Data management planning is good practice

*“Researchers (incl. doctoral students) and research groups are **encouraged** to draw up a **data management plan (DMP)** at the beginning stage of research and update the plan regularly.”*

*Aalto University Open Science and Research Policy*

- General Finnish DMP template with Aalto tips can be found [here](#)
- Planning saves time, compared to fixing problems afterwards
- Most major research funders require a DMP from grant recipients – useful skill for your future career in academia

# Good RDM Checklist

- **Before you start collecting data, consider legal and ethical issues: are you working with personal data? Confidential data?**
    - See our webinars [Handling personal data](#) and/or [Legal aspects of research data](#)
  - **How are you going to store your data?**
    - Rule of thumb: don't store your data only on your laptop or USB drive that can be lost, stolen, or damaged!
    - See our webinar [How to store research data](#)
  - **What does your data need to make it understandable and reusable? -> standard file formats, documentation/metadata**
    - Readme files
    - Clear descriptions of variables
    - [Version control](#)
    - Standard vocabularies, identifiers, schemas, e.g., [InChI](#) in chemistry
    - File naming rules and folder structure
- Want to know more? See our webinar [Introduction to RDM](#)**

# Legal and ethical issues

Aalto University recommends publicly funded research data to be openly accessible **unless there are ethical or legal issues** preventing open access. This is in line with the commonly accepted principle:

*“As open as possible, as closed as necessary”*

- What may be necessary to keep closed?
  - **Personal or sensitive** data which cannot be anonymized,
  - **Confidential** data,
  - or when there are plans for **commercialization** of the research outcomes.
- There are options to share data with **restricted access**, or to only publish a description of the data to showcase your expertise, even if the data cannot be published
- When in doubt, talk to your supervisor or contact us at [researchdata@aalto.fi](mailto:researchdata@aalto.fi)

# Publishing research data

- Good practice: provide access to the data to validate your results
- This is usually done through **data repositories** or **data journals**: see tips for publishing research data [here](#)
- [Here](#) you can find information about opening your code
- Published data can get you **citations, visibility or new collaborations!**
- If you publish your dataset or software, please send us the link or other identifying information to [researchdata@aalto.fi](mailto:researchdata@aalto.fi) – we will add it to ACRIS



# Services for RDM at Aalto

## Storage services for research data

- **Aalto network drives** are the recommended file storage space for research data, and **cloud file sharing** can be useful for collaboration. **Use cloud services with your Aalto account** to keep sharing secure.
- See more information about services and their suitability for confidential data [here](#) ([service comparison sheet](#))
- If you need help setting up access to network drive, cloud storage service, or other technical support, contact: [servicedesk@aalto.fi](mailto:servicedesk@aalto.fi)

# Services for RDM at Aalto

## The RDM support network:

- **Helpdesk: [researchdata@aalto.fi](mailto:researchdata@aalto.fi)**
  - Coordinated by Data Advisor Antti Rousi
  - Broad range of specialists (Open Science, legal, IT) answering all kinds of RDM questions
- **Data Agents**
  - A network of researchers and staff who are specialized in RDM
  - More discipline-specific RDM support: Data Agents in each School
  - You can reach them informally at **SciComp garage Data focus day: every Wednesday at 13:00 via Zoom**

# Research ~~Data~~ *Software* Management

## Aalto Research Software Engineers

- Any matter related to software used in research

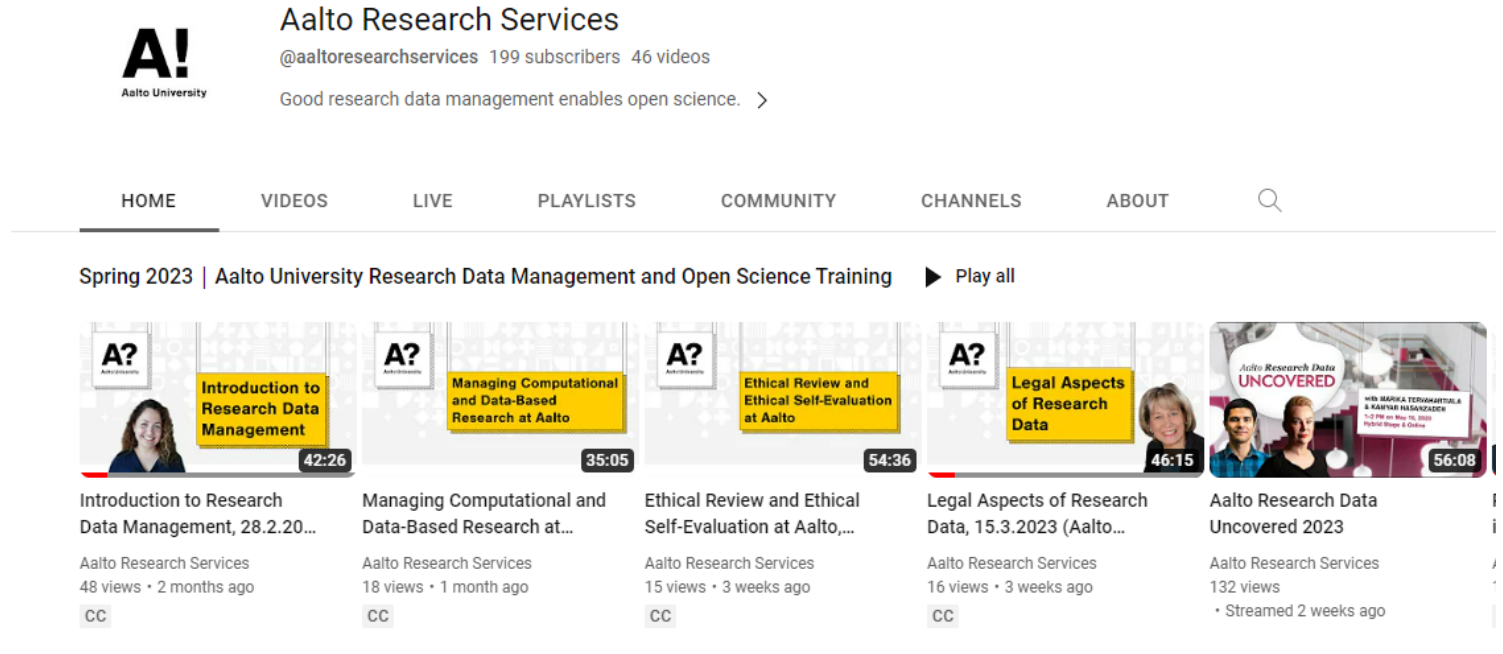
## Aalto RSEs can

- **code it for you**  
automatic transcription of interviews, transforming data from one format to another, applying standard analysis pipelines, web data collection platforms
- **code it with you**  
work with your team to set up the tools, software development workflow (git, testing), hands-on data management (databases, large amount of data, sensitive data, secure computing)
- **take the code you already have and improve it**  
Fixing old code you inherited, code cleaning for publications, write documentation, make the analysis reproducible
- **consult on research methods**  
data collection, statistics, machine learning, data preprocessing, anonymization, automation

# Services for RDM at Aalto

## Trainings

- Live webinars on Zoom, recordings and slides on YouTube:



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**Aalto Research Services**  
@aaltoresearchservices 199 subscribers 46 videos  
Good research data management enables open science. >

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Ethical Review and Ethical Self-Evaluation at Aalto	54:36	15 views	3 weeks ago	CC
Legal Aspects of Research Data, 15.3.2023 (Aalto...	46:15	16 views	3 weeks ago	CC
Aalto Research Data Uncovered 2023	56:08	132 views	Streamed 2 weeks ago	

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# RDM Resource Checklist

## Contact information:

- [researchdata@aalto.fi](mailto:researchdata@aalto.fi)
- [servicedesk@aalto.fi](mailto:servicedesk@aalto.fi) for storage space issues

## Information resources @ Aalto:

- RDM and Open Science [main page](#)
- Research Data Management [FAQ](#)
- [Publishing and reusing research data](#)
- [RDM training](#)
- Aalto Scientific Computing [homepage](#)