

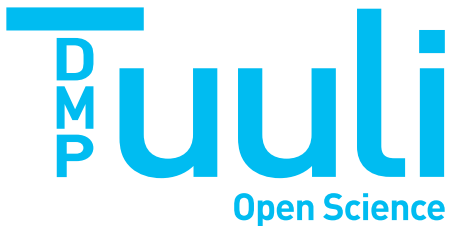
SERVICES FOR DATA MANAGEMENT

Benefits for your research:

- Take care of your data and ensure the reproducibility of research.
- Increase your visibility, enable citations and gain merit.
- Follow funder guidelines and organisational policies.

Take advantage of free services:

- Plan data management
-> **DMPTuuli**
- Open data -> **AVAA**
- Find and share data -> **Etsin**
- Store data -> **IDA**



**PLANNED DATA
MANAGEMENT**

DMPTUULI – TOOL FOR DATA MANAGEMENT PLANS

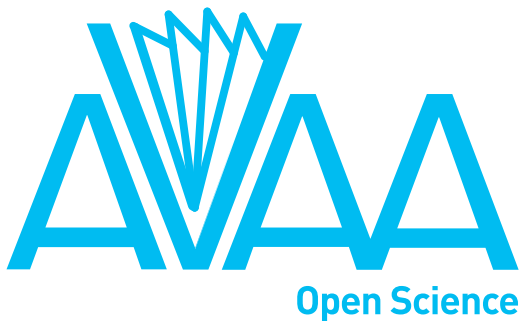
DMPTuuli is a tool for researchers and research organisations for creating data management plans (DMP).

DMPTuuli enables:

- creating structured DMP's assisted with guidance
- use of appropriate templates with guidance provided by research funders and organisations
- sharing and writing plans together with collaborators
- exporting DMPs in different formats.

DMPTuuli service: dmptuuli.fi

More information:
openscience.fi/tuuli



OPEN RESEARCH DATA

AVAA – PUBLISHING PLATFORM FOR OPEN RESEARCH DATA

AVAA is an open data publishing platform for research data. It extends the data with related applications and interfaces. It serves both the producers and users of open research data.

AVAA enables:

- search, utilisation and combination of research data
- downloading data from IDA service when data is open or you are entitled to it
- participating in the service development by proposing your data or applications for the portal.

AVAA service: avaa.tdata.fi

More information: openscience.fi/avaa



**DISCOVERABLE
RESEARCH DATA**

ETSIN – RESEARCH DATA FINDER

In Etsin you can store and publish descriptive information about research datasets, e.g. the subject, authors and licenses. The published metadata is open for anyone to browse and search.

Etsin enables:

- discovery of datasets and requests for use
- description of your dataset so others can find it
- permanent identifier and link for your dataset
- use of controlled vocabularies and identifiers to support the description
- merit through increased visibility
- discipline and location independent cataloguing of data.

Etsin service: etsin.avointiede.fi/en

More information: openscience.fi/etsin



**SAFELY STORED
RESEARCH DATA**

IDA – RESEARCH DATA STORAGE

IDA provides safe and easy storage for research datasets. You can apply for storage quota online.

IDA enables:

- free storage for research data produced within Finnish higher education institutions and projects funded by the Academy of Finland
- shared storage spaces for research groups or multi-organisation collaborations
- description of data and automatic workflows
- data backup as well as virus and integrity checks
- data sharing openly or based on access applications
- data preservation in combination with the digital preservation solution.

More information and application guidelines at openscience.fi/ida

BENEFITS FOR RESEARCHERS

- Smaller risk for data loss and misuse.
- Safe storage for re-use and a permanent identifier for citations.
- Data sharing facilitates collaboration within a research group and between research organisations.
- Openness creates visibility and new opportunities for collaboration.
- You can meet the requirements of research funders.

To whom?



The services can be utilised by a single researcher, a research group or a research network operating across organisations.



The services are provided by the Ministry of Education and Culture.

SERVICES AND OPEN SCIENCE

The services support openness of research and its outputs. Data owners decide on data openness and use policies.

The Open Science and Research Initiative recommends CC BY 4.0 licencing for open research data. Metadata is published under a CC0 waiver.

To further openness:

- Agree on ownership and rights to data.
- Use licences for research outputs.
- Utilise services provided for research data.

More information from the Open Science and Research Handbook: openscience.fi/handbook



BENEFITS FOR ORGANISATIONS

- Gain visibility for the organisation's research.
- Risks related to data storage are dispersed and decreased.
- Get support for implementing data policies and policies set by research funders.
- Benefit from a coherent service portfolio.
- Cost efficiency by using shared services.

To whom and how?

- The Ministry of Education and Culture offers the services for the Finnish research system.
- Research organisations can offer their data to be published in the services and utilise their allotted storage quota by contacting the service provider.
- The services are produced in the initiative by several organisations, including CSC, Helsinki University Library and National Library. The services are developed continuously based on open source solutions.

OPENNESS IN RESEARCH ORGANISATIONS

Openness promotes the quality, effectiveness and impact of science. The Framework for Open Science and Research defines principles for furthering openness and interoperability.

To further openness:

- Include openness in strategies
- Create policies for opening research outputs
- Develop competencies related to openness

More information on the framework for the Open Science and Research: openscience.fi/framework-for-open-science

DEVELOPING SERVICE PORTFOLIO

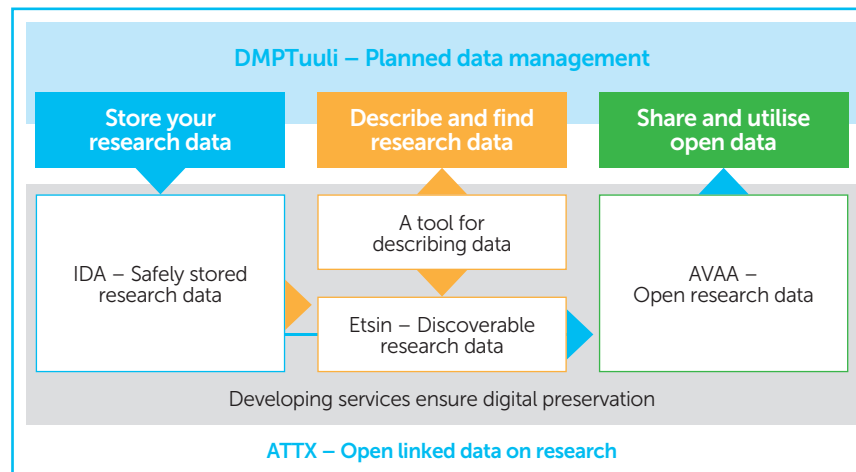
Services for open science support data management planning and enable storing, describing and sharing your research data. You may also find and utilise existing datasets. As the service portfolio develops, more interoperable solutions both for researchers and research organisations will be provided, such as:

A metadata tool to assist researchers in describing their research data. Metadata is necessary for finding relevant datasets and makes them possible to re-use. The future tool will offer a simple and flexible way to create quality metadata. The tool will support different metadata schemas and collaborative creation of metadata.

ATTX, a solution offering data broker services. The solution assists in utilising research material, such as metadata. The solution will offer data broker services with features for linking, enriching and re-distributing published open data in a scalable and robust way. ATTX will provide research organisations with components for creating their own open data platforms.

ENSURING THE REPRODUCIBILITY OF RESEARCH

The service portfolio supports the reproducibility of research and ensures the digital preservation and future availability and usability of research data. The goal is that research outputs are preserved, accessible and interoperable in the future. This requires services for assuring the safe storage of data as well as the ease of discovering and using it in the future. Managing the research data lifecycle should be a part of the research process itself. Permanent identifiers ensure that the data creators of receive due merit.



CONTACT INFORMATION

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openscience.fi

More information about the services: openscience.fi/services
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Ministry of Education and Culture

The Ministry of Education and Culture of Finland has launched the Open Science and Research Initiative. The objective is for Finland to become one of the leading countries in openness of science and research by the year 2017.



**OPEN SCIENCE
AND RESEARCH**