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# **MANAGING RESEARCH DATA with DMPTUULI**

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- Updated demands for the AoF applications
- What is research data?
- What is research data management?
- Research data management plan (DMP)
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  - o Benefits
  - o What do research funders want?
- DMPTuuli
- Where to ask for support?



# Academy of Finland September call

“Applications to be submitted to the Academy of Finland **must include as a separate appendix a data management plan**, describing how the project will manage its research data and how the data will be made available upon project completion. **The plan should not be longer than 1–2 pages.** If your project will not produce any research data to be stored, please provide a brief account of the situation in the appendix. **You should submit the appendix even though no data will be produced.** The information in the appendix is completed where applicable. Draft the data management plan according to the structure below (next slide) or by using the data management planning tool [DMPTuuli](#). The questions and guidance in DMPTuuli are similar as those provided below, but DMPTuuli may also include additional, university-specific guidelines.”

[Academy Of Finland, September Call 1–28 Sept 2016.](#)  
[Appendix 5: Guidelines for Drafting a Data Management Plan](#)

# Research data formats & objects



Varied physical file formats & content types

- Text
- Numerical
- Multimedia
- Models
- Software
- Discipline specific
- Instrument specific
- ...

Following objects e.g.

- Documents (text, Word), spreadsheets
- Laboratory notebooks, field notebooks, diaries
- Questionnaires, transcripts, codebooks
- Audiotapes, videotapes
- Photographs, films
- Test responses
- Slides, artefacts, specimens, samples
- Collection of digital objects acquired and generated during the process of research
- Statistical or other data files
- Database contents (video, audio, text, images)
- Models, algorithms, scripts
- Contents of an application (input, output, logfiles for analysis software, simulation software, schemas)
- Methodologies and workflows
- Standard operating procedures and protocols



# Management of research data refers to....

...creating and storing research data and related descriptive metadata.

The aim is to secure and preserve the usability and reliability of the material, taking into account confidentiality and data protection issues throughout the lifespan of the data.



# What is a data management plan (DMP)?

A brief plan written at the start of a project to define:

- how the data will be created?
- how it will be documented?
- who will access it?
- where it will be stored?
- who will back it up?
- whether (and how) it will be shared & preserved?

DMPs are often submitted as part of grant applications, but are useful whenever researchers are creating data.



# How do DMPs help researchers?

**Planning is useful whether or not a DMP needs submitted with a grant application, as it can help the researchers to...**

- 1 Make informed decisions to anticipate and avoid problems
- 2 Avoid duplication, data loss and security breaches (break of law)
- 3 Develop procedures early on for consistency
- 4 Ensure data are accurate, complete, reliable and secure
- 5 Save time and effort to make their lives easier!

**Becoming aware of questions related to the collection, owning, sharing and saving of research data**



# Benefits of DMPs for institutions

- Opportunity to engage with researchers and improve RDM practice
- Raise awareness of support available
- Collate information to inform service delivery
- Ensure the University is not exposed to risk
- Ability to recover costs via grants



# Funders that require DMPs or equivalent



Department  
for International  
Development

BILL & MELINDA  
GATES *foundation*



GenomeCanada



National Science Foundation  
WHERE DISCOVERIES BEGIN



ACADEMY OF FINLAND



Vetenskapsrådet



National Institutes of Health  
*Turning Discovery Into Health*



Deutsche  
Forschungsgemeinschaft

NHS  
*National Institute for  
Health Research*



For research on  
diseases of poverty  
UNICEF • UNDP • World Bank • WHO



# What do research funders want?

- Usually a brief plan submitted in grant applications
- 1-4 sides of A4 as attachment or a section in application form
- Typically a prose statement covering suggested themes
- An outline of data management and sharing plans, justifying decisions and any limitations



# What is DMPTuuli?

- A web-based tool to help researchers write DMPs
- Contains templates for different funders e.g. for Academy of Finland
- Tailored guidance, examples and suggested answers
- Ability to share and co-write plans with colleagues
- Leave comments / notes for one another
- Customised export to a variety of formats
- DMPTuuli is customized version of British DMPOnline for Finnish research organizations



# Tuuli-project

Carried out under [Open Science and Research –initiative](#)

Aim of Tuuli-project: to launch **a tool for writing data management plans** for the use of Finnish research organizations => **DMPTuuli was launched in May 2016**

Library led project started during spring 2015 and ends during spring 2017

Nearly all Finnish universities are involved

Tuuli-office is in the University Library of Helsinki



# Tuuli-team at the University of Oulu

## Library

- Responsible for the Tuuli-project at University of Oulu
- Contact person Tiina Sipola accompanied with Jani Sassali

## Information/data Administration

- Miki Kallio, Leena Pussinen, Reijo Rasinkangas

## Research Support

- Aija Ryyppö, Rauno Kenakkala, Emma Pirilä

## In addition

- Heidi Enwald from Information Studies degree programme

7-8 active members.

Helpdesk is supplemented with two members from faculties.

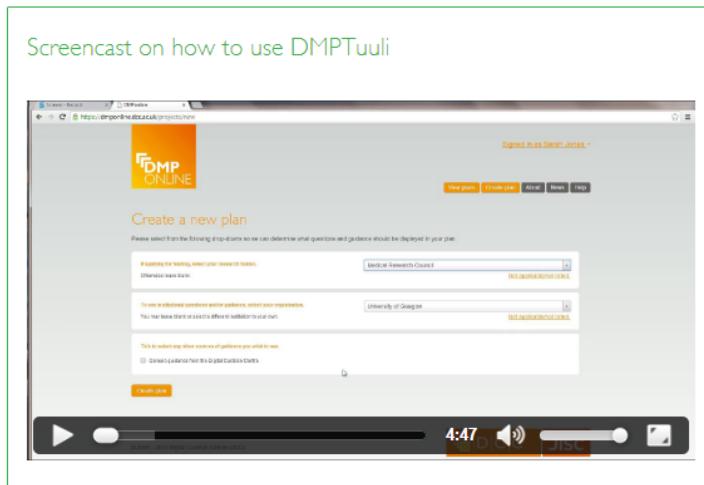


# Registration



Welcome.

Data management planning tool Tuuli will help you write data management plans.



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Log in



Sign up

New to DMPTuuli? Sign up today.

Email \*

Organisation

[My organisation isn't listed.](#)

Password \*

Password confirmation \*

I accept the [terms and conditions](#) \*

**Sign up**

Sign up with your email address, organisation and password

Select 'other organisation' if yours is not listed

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**DMP  
ONLINE**



# 'My plans' homepage

**DMP Tuuli** [View plans](#) [Create plan](#) [About](#) [Help](#)

## My plans

The table below lists the plans that you have created, and any that have been shared with you by others. These can be edited, shared, exported or deleted at anytime.

Name	Owner	Shared?	Last edited	Select an action
Twenty 07 public health study	Me	Yes (with 1 people)	12-05-2016	<a href="#">Edit</a> <a href="#">Share</a> <a href="#">Export</a> <a href="#">Delete</a>
My plan (Tuuli DMP)	Me	No	11-05-2016	<a href="#">Edit</a> <a href="#">Share</a> <a href="#">Export</a> <a href="#">Delete</a>
Withdrawal of services for young adults	Richard Fedorko	Yes (with 1 people)	12-05-2016	<a href="#">View</a> <a href="#">Export</a>

[Create plan](#)

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Delivered by  Powered by 

Summary of the DMPs that you have created, or others have shared with you.  
Note the varying permissions.



# How to create a plan

DMP **Tuuli** [View plans](#) [Create plan](#) [About](#) [Help](#)

## Create a new plan

Please select from the following drop-downs so we can determine what questions and guidance should be displayed in your plan.

If you aren't responding to specific requirements from a funder or an institution, [select here to write a generic DMP based on the most common themes.](#)

If applying for funding, select your research funder.  
Otherwise leave blank.

Tekes LUONNOS [Not applicable/not listed.](#)

To see institutional questions and/or guidance, select your organisation.  
You may leave blank or select a different organisation to your own.

University of Turku [Not applicable/not listed.](#)

Tick to select any other sources of guidance you wish to see.

DMP guidance, DCC, UK  
 DMP guidance, Finland

Click to write a generic DMP based on Tuuli template  
Or choose your funder to get their specific template

Pick your uni to add local guidance and to get their template if no funder applies

Choose any additional optional guidance

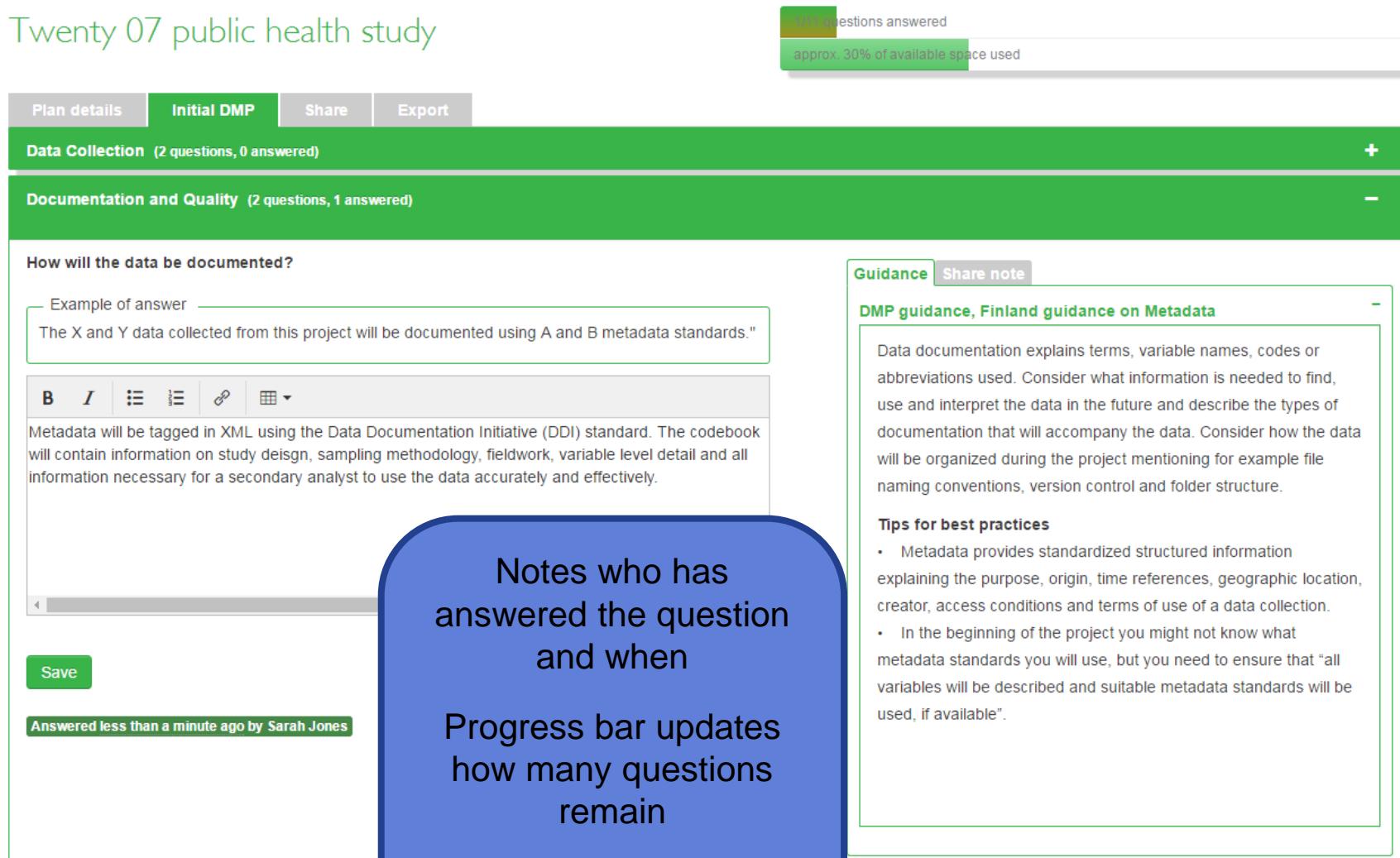
[Create plan](#)

A few questions are asked to determine what template and guidance to present



# Answering questions

## Twenty 07 public health study





# Most general questions to be answered in DMPs

The screenshot shows the Tuuli DMP interface. At the top, there is a navigation bar with the Tuuli logo (a blue stylized 'T' with yellow lines), the text 'DMP', and four buttons: 'View plans', 'Create plan', 'About', and 'Help'. Below the navigation bar, the main title 'My plan (Tuuli DMP)' is displayed. To the right of the title, a progress bar indicates '0/11 questions answered' and 'approx. 25% of available space used'. Below the title, there is a horizontal navigation bar with four buttons: 'Plan details', 'Initial DMP' (which is highlighted in green), 'Share', and 'Export'. The main content area contains a list of five categories, each represented by a green bar with a '+' sign on the right: 'Data Collection (2 questions, 0 answered)', 'Documentation and Quality (2 questions, 0 answered)', 'Storage and Backup (2 questions, 0 answered)', 'Ethics and Legal Compliance (2 questions, 0 answered)', and 'Data Sharing and Long-term Preservation (3 questions, 0 answered)'. At the bottom right of the content area, there is a green 'Export' button.

My plan (Tuuli DMP)

0/11 questions answered  
approx. 25% of available space used

Plan details Initial DMP Share Export

Data Collection (2 questions, 0 answered) +

Documentation and Quality (2 questions, 0 answered) +

Storage and Backup (2 questions, 0 answered) +

Ethics and Legal Compliance (2 questions, 0 answered) +

Data Sharing and Long-term Preservation (3 questions, 0 answered) +

Export



# Sharing plans

Twenty 07 public health study

Plan details   Initial DMP   **Share**   Export

You can give other people access to your plan here. There are three permission levels.

Users with "read only" access can only read the plan.  
Editors can contribute to the plan.  
Co-owners can also contribute to the plan, but additionally can edit the plan details and control access to the plan.

Add each collaborator in turn by entering their email address below, choosing a permission level and clicking "Add collaborator".

Those you invite will receive an email notification that they have access to this plan, inviting them to register with DMPTuuli if they don't already have an account. A notification is also issued when a user's permission level is changed.

**Collaborators**

Email address	Permissions	
Sarah Jones	Owner	
Richard Fedorko	Edit	<a href="#">Remove user access</a>

**Add collaborator**

Email:

Permissions:

**Add collaborator**

Allow colleagues to read-only, edit, or become co-owners

Rights can be removed and changed at any time

Oulun yliopisto



# Co-writing DMPs

Twenty 07 public health study



Plan details **Initial DMP** Export

**Data Collection** (2 questions, 0 answered) +

**Documentation and Quality** (2 questions, 1 answered) -

This section is locked for editing by Sarah Jones.

How will the data be documented?

Metadata will be tagged in XML using the Data Documentation Initiative (DDI) standard. The codebook will contain information on study design, sampling methodology, fieldwork, variable level detail and all information necessary for a secondary analyst to use the data accurately and effectively.

Answered 8 minutes ago by Sarah Jones

Sections are locked for editing when they're being worked on by colleagues, but notes can still be left

How will the consistency and quality of data be controlled and documented?

Not answered yet

**Storage and Backup** (3 questions, 0 answered) +

**Ethics and Legal Compliance** (1 question, 0 answered) +

**Data Sharing and Long-term Preservation** (3 questions, 0 answered) +

Guidance Share note

Share note with collaborators

B I H E S P

Save

Guidance Share note

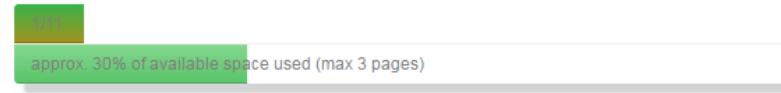
DMP guidance, Finland guidance on Data Quality +

Export



# Leaving notes

Twenty 07 public health study



Plan details   Initial DMP   Share   Export

**Data Collection** (2 questions, 0 answered) +

**Documentation and Quality** (2 questions, 1 answered) +

How will the data be documented?

Example of answer

The X and Y data collected from this project will be documented using A and B metadata standards."

**B** **I** **≡** **≡** **🔗** **grid** **grid** **▼**

Metadata will be tagged in XML using the Data Documentation Initiative (DDI) standard. The codebook will contain information on study design, sampling methodology, fieldwork, variable level detail and all information necessary for a secondary analyst to use the data accurately and effectively.

**Save**

Notes appear adjacent to each question. Owners can edit and remove them while others can just view and leave their own comments

**Guidance** **Notes (1)**

**Add note**

---

Sarah Jones (12/05/2016 13:37) [View](#) [Edit](#) [Remove](#)

---

**Noted by:**

Sarah Jones (12/05/2016 13:37)  
Should we mention that DDI is recommended by the UK Data Archive here, since that's where we plan to deposit?

**Add note**



# Exporting plans

Settings (Using default PDF formatting values)

Title

Title

Included Elements

Admin details

Project Name

Project Identifier

Grant Title

Principal Investigator / Researcher

Project Data Contact

Description

Funder

Institution

Sections

Data Collection

What kinds of data are collected or reused?

What file formats will the data be in?

Documentation and Quality

How will the data be documented?

How will the consistency and quality of data be controlled and documented?

Storage and Backup

How will the data be stored and backed up?

How will you control access to keep the data secure?

How much data will you collect? Estimate the volume of the needed storage space...

Ethics and Legal Compliance

How will ethical and legal issues be managed?

Data Sharing and Long-term Preservation

How, when, where and to whom will the data be made available?

How and where will the data with long-term value be made available?

Have you estimated costs in time and effort to prepare the data for preservation...

PDF Formatting

Font

Face: Arial, Helvetica, Sans-Serif

Size (pt): 12

Margin (mm)

Top: 20

Bottom: 20

Left: 20

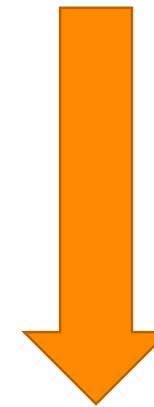
Right: 20

Choose what sections to include in the export and set the formatting.

You can export in a variety of formats: pdf, txt, docx, csv, xml, html, json



**Need for support  
with research data  
management?**



**[researchdata@oulu.fi](mailto:researchdata@oulu.fi)**

**LibGuide: Research Data**



# Open Science and Research at the UOulu Goals for 2017

The processes of **registration of the research data** and preservation of the sufficient **metadata** are defined.

The **data management plans and processes** are included into the performance negotiations.

The principles for the **opening of research data** are defined and the appropriate resources provided.

The self-archiving of publications is organized.

The support and training for the development of the appropriate **data skills of researchers** is planned and ongoing.

<http://www.oulu.fi/university/node/38260>