

# Introduction to Research Data Management Planning

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# Why manage your data?

<https://www.youtube.com/watch?v=N2zK3sAtr-4>



# Some reasons for Data Management:

- it will protect your data from loss
- you will be able to locate your data easily whenever you need it
- your data will be secure
- you will be able to reuse your data
- your data will be easy to share with others

# Data management plan (DMP)

A document providing information on accumulation, storage and access of project data:

- indicating the measures intended in the course of the project and upon its completion to ensure that the data are archived safely and reliably;
- it also states how and under what conditions the data will be accessible for re-use, provided there are no conflicting legal, ethical factors or security concerns;
- how and when the data will be opened for other users;
- the standard metadata intended to be used for the description of the project data, as well as the procedure for management and updating the data, and what type of data will be provided for the long or short-term storage, in the latter case indicating when and in what manner the data will be destroyed.

Guidelines on open access to scientific publications and data, approved by the Research Council of Lithuania, 29th of February 2016, order No. VIII-2)

[https://www.lmt.lt/data/public/uploads/2016/09/eng\\_-atvira-prieiga-\\_galutinis.pdf](https://www.lmt.lt/data/public/uploads/2016/09/eng_-atvira-prieiga-_galutinis.pdf)

## Your DMP will show:

- what kind of data you will create
- how you are going to document your data
- how you are going to deal with sensitive data
- what you are going to do with your data at the end of the research project
- how you are going to share your data

# Why DMP is helpful?

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before you start your research, you will consider how you document your research process and data, how you will store the data, etc.

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you will make sure that your research is trustworthy and will be able to provide relevant data any time upon request

Provide a summary of the data addressing the following issues:

- State the purpose of the data collection/generation
- Explain the relation to the objectives of the project
- Specify the types and formats of data generated/collected
- Specify if existing data is being re-used (if any)
- Specify the origin of the data
- State the expected size of the data (if known)
- Outline the data utility: to whom will it be useful

Making data findable, including provisions for metadata:

- Outline the discoverability of data (metadata provision)
- Outline the identifiability of data and refer to standard identification mechanism. Do you make use of persistent and unique identifiers such as Digital Object Identifiers?
- Outline naming conventions used
- Outline the approach towards search keyword
- Outline the approach for clear versioning
- Specify standards for metadata creation (if any). If there are no standards in your discipline describe what metadata will be created and how

Metadata Standards Directory, <http://rd-alliance.github.io/metadata-directory/>



# Making data openly accessible

- Specify which data will be made openly available? If some data is kept closed provide rationale for doing so
- Specify how the data will be made available
- Specify what methods or software tools are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g. in open source code)?
- Specify where the data and associated metadata, documentation and code are deposited
- Specify how access will be provided in case there are any restrictions

*"as open as possible, as closed as necessary"*

[Registry of Research Data Repositories](https://www.re3data.org)

<https://www.re3data.org>

# Project, experiment, and data description

- What documentation will you be creating in order to make the data understandable by other researchers?
- Are you using metadata that is standard to your field? How will the metadata be managed and stored?
- What file formats will be used? Do these formats conform to an open standard and/or are they proprietary?
- Are you using a file format that is standard to your field? If not, how will you document the alternative you are using?
- What directory and file naming convention will be used?
- What are your local storage and backup procedures? Will this data require secure storage?
- What tools or software are required to read or view the data?

Source: <https://libraries.mit.edu/data-management/plan/write/>

# Documentation, organization and storage

- What documentation will you be creating in order to make the data understandable by other researchers?
- Are you using metadata that is standard to your field? How will the metadata be managed and stored?
- What file formats will be used? Do these formats conform to an open standard and/or are they proprietary?
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- What tools or software are required to read or view the data?

Source: <https://libraries.mit.edu/data-management/plan/write/>

# Access, sharing and re-use

- Who has the right to manage this data? Is it the responsibility of the PI, student, lab or the funder?
- What data will be shared, when and how?
- Does sharing the data raise privacy, ethical, or confidentiality concerns? Do you have a plan to protect or anonymize data, if needed?
- Who holds intellectual property rights for the data and other information created by the project? Will any copyrighted or licensed material be used? Do you have permission to use/disseminate this material?
- Are there any patent- or technology-licensing-related restrictions on data sharing associated with this grant?
- Will this research be published in a journal that requires the underlying data to accompany articles?
- Will there be any embargoes on the data?
- Will you permit re-use, redistribution, or the creation of new tools, services, data sets or products (derivatives)? Will commercial use be allowed

Source: <https://libraries.mit.edu/data-management/plan/write/>

- How will you be archiving the data? Will you be storing it in an archive or repository for long-term access? If not, how will you preserve access to the data?
- Is a discipline-specific repository available? If not, you could consider depositing your data into institutional repository.
- How will you prepare data for preservation or data sharing? Will the data need to be anonymized or converted to more stable file formats?
- Are software or tools needed to use the data? Will these be archived?
- How long should the data be retained? 3-5 years, 10 years, or forever?

Source: <https://libraries.mit.edu/data-management/plan/write/>

# Data management planing tools

- DMPonline, <https://dmponline.dcc.ac.uk/>
- DMPTool, <https://dmptool.org>
- DMP Roadmap,  
<https://github.com/DMPRoadmap/roadmap>

# Functions of DMP tools

- to help create and maintain different versions of Data Management Plans
- to provide useful guidance on data management issues and how to meet research funders' requirements
- to export attractive and useful plans in a variety of formats
- to allow collaborative work when creating Data Management Plans

# DMPonline

DMPonline helps you to create, review, and share data management plans that meet institutional and funder requirements.

It is provided by the Digital Curation Centre (DCC).





The screenshot displays the DMPonline website interface. At the top, a navigation bar includes the 'DMP ONLINE' logo, 'Home', 'Public DMPs', 'Sign in', 'Create account', and a 'Language' dropdown menu. The main content area is divided into two columns. The left column features a 'Welcome' message, a user icon with '17,622 Users', a document icon with '23,083 Plans', and a paragraph explaining the tool's purpose. The right column contains a registration form with fields for 'First Name', 'Last Name', 'Email', 'Organisation', and 'Password'. A red box highlights the 'Create account' button in the top navigation bar, with a red arrow pointing to the 'Email' field in the registration form. Below the registration form are checkboxes for 'Show password' and 'I accept the terms and conditions', and a 'Create account' button. A separate login panel on the right includes 'Sign in' and 'Create account' buttons, 'Email' and 'Password' fields, a 'Remember email' checkbox, a 'Forgot password?' link, and a 'Sign in with institutional credentials (UK only)' button.

**DMP ONLINE** Home Public DMPs Sign in Create account Language

## Welcome

DMPonline helps you to create, review, and share data management requirements. It is provided by the Digital Curation Centre (DCC). Join the growing international community that have adopted DMPonline.

**17,622 Users**

**23,083 Plans**

Some funders mandate the use of DMPonline, while others provide templates without logging in, but the tool provides tailored guidance for research organisations. Why not sign up for an account and create your own DMP?

Show password

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

Create account

Sign in Create account

\* Email

\* Password

Forgot password?

Remember email

Sign in

- or -

Sign in with institutional credentials (UK only)

**DMPonline** My Dashboard Create plans Reference Help Language KTU doktorantas

Notice: Welcome! You have signed up successfully.

## My Dashboard

**Welcome**  
You are now ready to create your first DMP. Click the 'Create plan' button below to begin.

There are no records associated

Create plan

### Create a new plan

Before you get started, we need some information about your research project to set you up with the best DMP template for your needs.

\* What research project are you planning?

mock project for testing, practice, or educational purposes

\* Select the primary research organisation

Other   - or -  No research organisation associated with this plan or my research organisation is not listed

\* Select the primary funding organisation

Begin typing to see a filtered list

- or -  No funder associated with this plan or my funder is not listed

Create plan Cancel

## **Data Collection**

What data will you collect or create?

How will the data be collected or created?

## **Documentation and Metadata**

What documentation and metadata will accompany the data?

## **Ethics and Legal Compliance**

How will you manage any ethical issues?

How will you manage copyright and Intellectual Property Rights (IPR) issues?

## **Storage and Backup**

How will the data be stored and backed up during the research?

How will you manage access and security?

## **Selection and Preservation**

Which data are of long-term value and should be retained, shared, and/or preserved?

What is the long-term preservation plan for the dataset?

## **Data Sharing**

How will you share the data?

Are any restrictions on data sharing required?

## **Responsibilities and Resources**

Who will be responsible for data management?

What resources will you require to deliver your plan?

**DMP ONLINE** My Dashboard Create plans Reference - Help Language - KTU doktorantas

✓ Notice: Successfully created your plan.  
This plan is based on the default template.

## PhD DMP

Project Details Plan overview Write Plan Share Download

\* Project title  
PhD DMP

mock project for testing, practice, or educational purposes

Funder  
Kaunas University of Technology

Grant Number

Project abstract

ID

Principal Investigator  
Name  
KTU doktorantas

ORCID iD

### Plan Guidance Configuration

To help you write your plan, DMPonline can show you guidance from a variety of organisations.  
Select up to 6 organisations to see their guidance.

Digital Curation Centre

Find guidance from additional organisations below  
[See the full list](#)

Submit

# DMPonline: Initial PDM (7 sections, 13 questions)

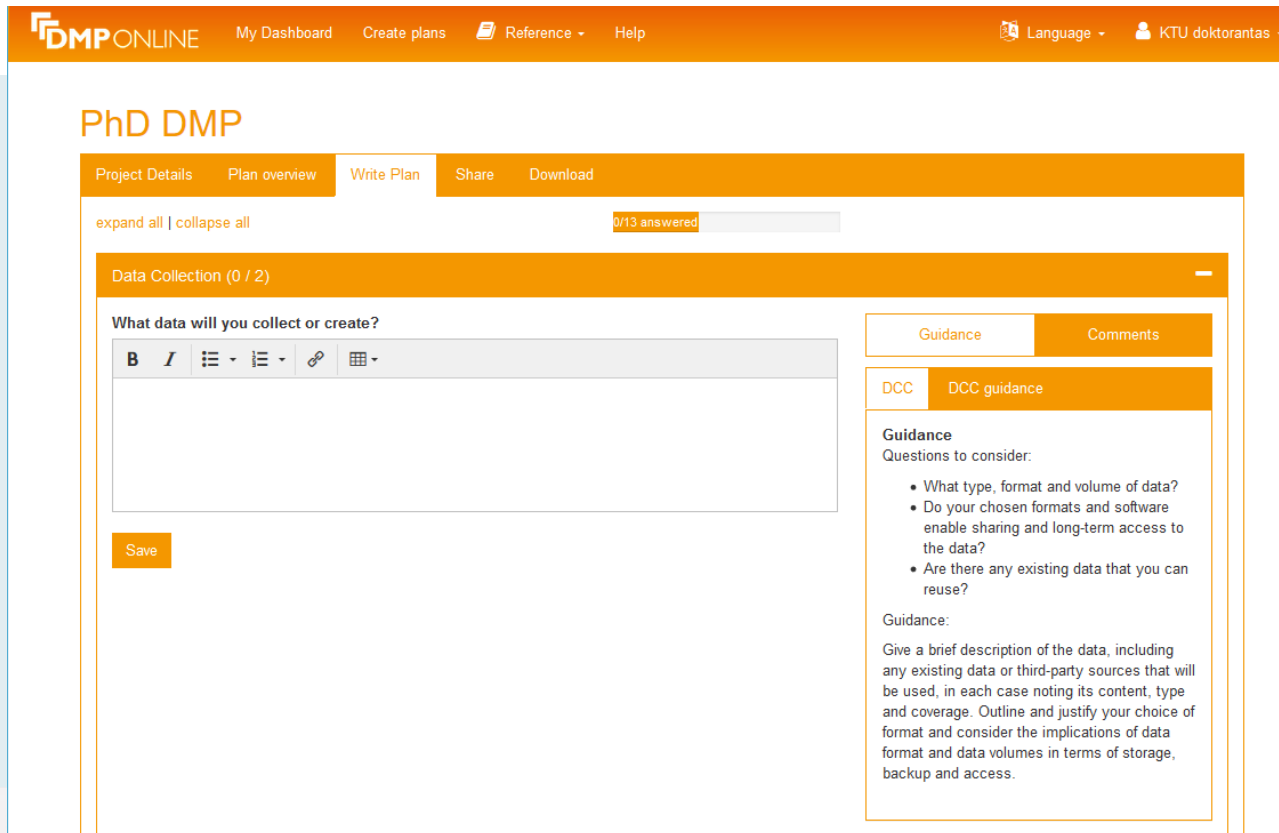
## PhD DMP

Project Details Plan overview **Write Plan** Share Download

[expand all](#) | [collapse all](#) 0/13 answered

Data Collection (0 / 2)	+
Documentation and Metadata (0 / 1)	+
Ethics and Legal Compliance (0 / 2)	+
Storage and Backup (0 / 2)	+
Selection and Preservation (0 / 2)	+
Data Sharing (0 / 2)	+
Responsibilities and Resources (0 / 2)	+

# DMPonline: Data Collection



The screenshot shows the 'PhD DMP' interface with a navigation bar at the top containing 'DMP ONLINE', 'My Dashboard', 'Create plans', 'Reference', 'Help', 'Language', and 'KTU doktorantas'. The main content area is titled 'PhD DMP' and has tabs for 'Project Details', 'Plan overview', 'Write Plan', 'Share', and 'Download'. Below the tabs, there is a progress indicator '0/13 answered' and a 'Data Collection (0 / 2)' section. The 'Data Collection' section has a heading 'What data will you collect or create?' and a rich text editor with a 'Save' button. To the right, there is a 'Guidance' panel with 'DCC' and 'DCC guidance' tabs. The 'DCC guidance' tab is active, showing 'Guidance' and 'Questions to consider:' followed by a bulleted list of questions.

Project Details Plan overview Write Plan Share Download

expand all | collapse all 0/13 answered

Data Collection (0 / 2)

What data will you collect or create?

**B** *I* [List icons] [Link icon] [Table icon]

Save

Guidance Comments

DCC DCC guidance

**Guidance**

Questions to consider:

- What type, format and volume of data?
- Do your chosen formats and software enable sharing and long-term access to the data?
- Are there any existing data that you can reuse?

Guidance:

Give a brief description of the data, including any existing data or third-party sources that will be used, in each case noting its content, type and coverage. Outline and justify your choice of format and consider the implications of data format and data volumes in terms of storage, backup and access.

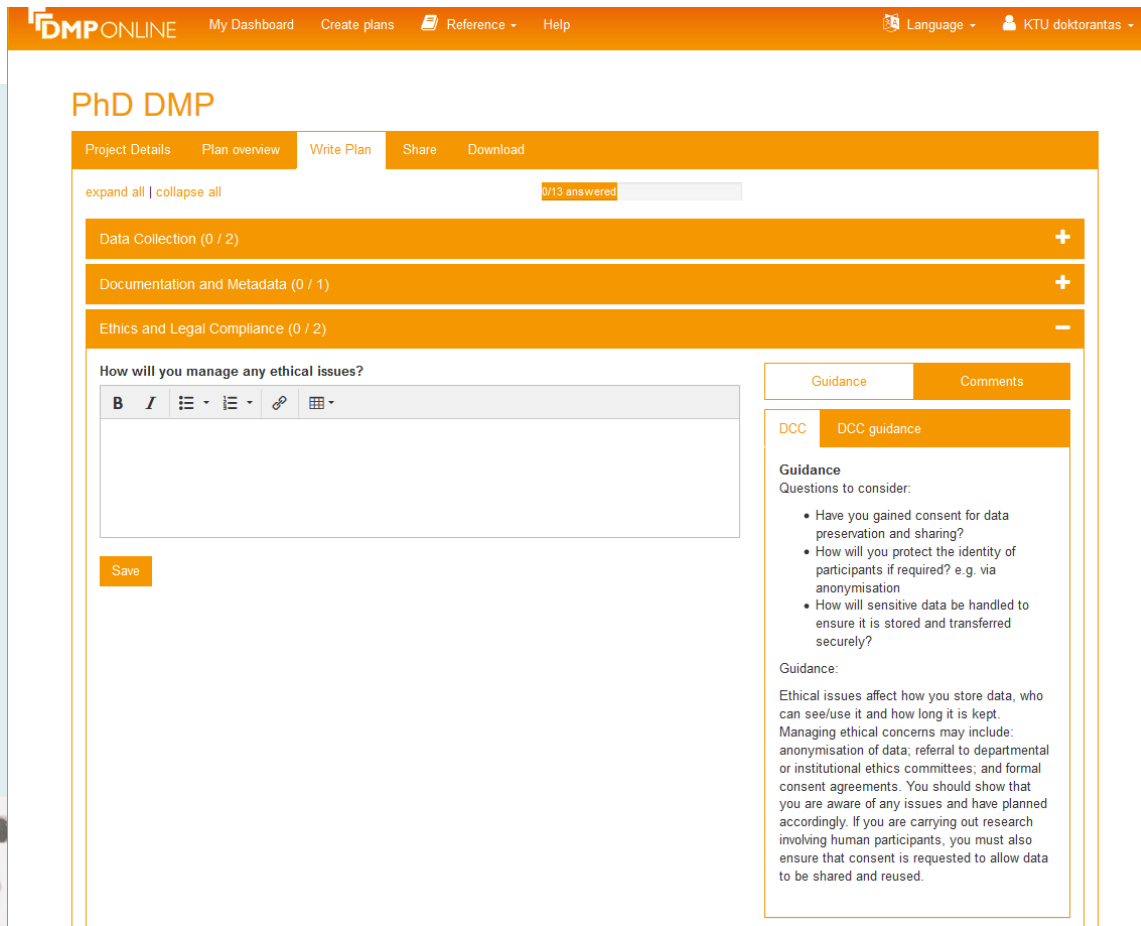
- What data will you collect or create?
- How will the data be collected or created?

# DMPonline: Documentation and Metadata

The screenshot shows the DMPonline web application interface. At the top, there is a navigation bar with 'DMPonline' logo, 'My Dashboard', 'Create plans', 'Reference', 'Help', 'Language', and 'KTU doktorantas'. Below this, the 'PhD DMP' section is active, with tabs for 'Project Details', 'Plan overview', 'Write Plan', 'Share', and 'Download'. A progress indicator shows '0/13 answered'. The main content area is titled 'Data Collection (0 / 2)' and 'Documentation and Metadata (0 / 1)'. A form titled 'What documentation and metadata will accompany the data?' is displayed, featuring a rich text editor with a 'Save' button. To the right of the form, there are tabs for 'Guidance' and 'Comments', and a section for 'DCC guidance' containing a list of questions to consider and a paragraph of guidance text.

What documentation and metadata will accompany the data?

# DMPonline: Ethics and Legal Compliance



The screenshot shows the DMPonline interface for a PhD DMP. The top navigation bar includes 'DMPonline', 'My Dashboard', 'Create plans', 'Reference', 'Help', 'Language', and 'KTU doktorantas'. The main content area is titled 'PhD DMP' and has tabs for 'Project Details', 'Plan overview', 'Write Plan', 'Share', and 'Download'. Below the tabs, there are sections for 'Data Collection (0 / 2)', 'Documentation and Metadata (0 / 1)', and 'Ethics and Legal Compliance (0 / 2)'. The 'Ethics and Legal Compliance' section is expanded, showing a text editor with the question 'How will you manage any ethical issues?' and a 'Save' button. To the right, there is a 'Guidance' section with 'DCC guidance' and a list of questions to consider.

expand all | collapse all 0/13 answered

Data Collection (0 / 2) +

Documentation and Metadata (0 / 1) +

Ethics and Legal Compliance (0 / 2) -

How will you manage any ethical issues?

**B** *I* [List Bullets] [List Circles] [Link] [Table]

Save

Guidance Comments

DCC DCC guidance

**Guidance**

Questions to consider:

- Have you gained consent for data preservation and sharing?
- How will you protect the identity of participants if required? e.g. via anonymisation
- How will sensitive data be handled to ensure it is stored and transferred securely?

Guidance:

Ethical issues affect how you store data, who can see/use it and how long it is kept. Managing ethical concerns may include: anonymisation of data; referral to departmental or institutional ethics committees; and formal consent agreements. You should show that you are aware of any issues and have planned accordingly. If you are carrying out research involving human participants, you must also ensure that consent is requested to allow data to be shared and reused.

- How will you manage any ethical issues?
- How will you manage copyright and Intellectual Property Rights (IPR) issues?



# DMPonline: Storage and Backup

The screenshot shows the DMPonline interface for a PhD DMP. The top navigation bar includes 'DMPONLINE', 'My Dashboard', 'Create plans', 'Reference', 'Help', 'Language', and 'KTU doktorantas'. The main content area is titled 'PhD DMP' and has tabs for 'Project Details', 'Plan overview', 'Write Plan', 'Share', and 'Download'. Below the tabs, there are expandable sections: 'Data Collection (0 / 2)', 'Documentation and Metadata (0 / 1)', 'Ethics and Legal Compliance (0 / 2)', and 'Storage and Backup (0 / 2)'. The 'Storage and Backup' section is expanded, showing a text editor with the question 'How will the data be stored and backed up during the research?'. A 'Save' button is visible below the text editor. On the right side, there is a 'Guidance' tab and a 'Comments' tab. Under the 'Guidance' tab, there is a 'DCC guidance' section with the following text:

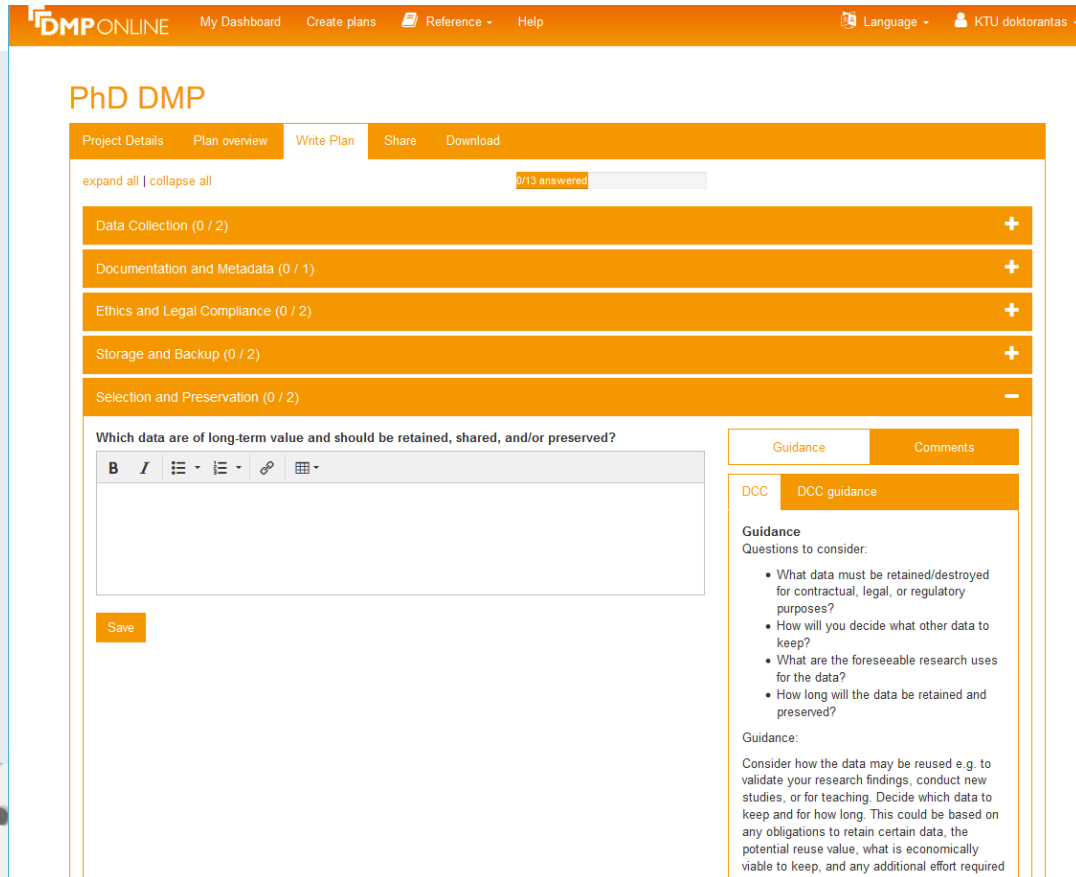
**Guidance**  
Questions to consider:

- Do you have sufficient storage or will you need to include charges for additional services?
- How will the data be backed up?
- Who will be responsible for backup and recovery?
- How will the data be recovered in the event of an incident?

Guidance:  
State how often the data will be backed up and to which locations. How many copies are being made? Storing data on laptops, computer hard drives or external storage devices alone is very risky. The use of robust, managed storage provided by university IT teams is preferable. Similarly, it is normally better to use automatic backup services provided by IT Services than rely on manual processes. If you choose to use a third-party service, you should ensure that this does not conflict with any funder.

- How will the data be stored and backed up during the research?
- How will you manage access and security?

# DMPonline: Selection and Preservation



The screenshot shows the DMPonline interface. At the top, there is a navigation bar with 'DMPONLINE', 'My Dashboard', 'Create plans', 'Reference', 'Help', 'Language', and 'KTU doktorantas'. Below this, the 'PhD DMP' section is active, with tabs for 'Project Details', 'Plan overview', 'Write Plan', 'Share', and 'Download'. A progress indicator shows '0/15 answered'. A list of categories is shown: 'Data Collection (0 / 2)', 'Documentation and Metadata (0 / 1)', 'Ethics and Legal Compliance (0 / 2)', 'Storage and Backup (0 / 2)', and 'Selection and Preservation (0 / 2)'. The 'Selection and Preservation' category is expanded, showing a question: 'Which data are of long-term value and should be retained, shared, and/or preserved?'. Below the question is a text input area with a 'Save' button. To the right, there is a 'Guidance' section with 'DCC guidance' and a list of questions to consider.

**Which data are of long-term value and should be retained, shared, and/or preserved?**

**Guidance**

**DCC** DCC guidance

**Guidance**

Questions to consider:

- What data must be retained/destroyed for contractual, legal, or regulatory purposes?
- How will you decide what other data to keep?
- What are the foreseeable research uses for the data?
- How long will the data be retained and preserved?

**Guidance:**

Consider how the data may be reused e.g. to validate your research findings, conduct new studies, or for teaching. Decide which data to keep and for how long. This could be based on any obligations to retain certain data, the potential reuse value, what is economically viable to keep, and any additional effort required

- Which data are of long-term value and should be retained, shared, and/or preserved?
- What is the long-term preservation plan for the dataset?

# DMPonline: Data Sharing

**DMPONLINE** My Dashboard Create plans Reference Help Language KTU doktorantas

## PhD DMP

Project Details Plan overview Write Plan Share Download

expand all | collapse all 0/13 answered

- Data Collection (0 / 2) +
- Documentation and Metadata (0 / 1) +
- Ethics and Legal Compliance (0 / 2) +
- Storage and Backup (0 / 2) +
- Selection and Preservation (0 / 2) +
- Data Sharing (0 / 2) -

**How will you share the data?**

**B I** [List] [Link] [Table]

Save

**Guidance** Comments

DCC DCC guidance

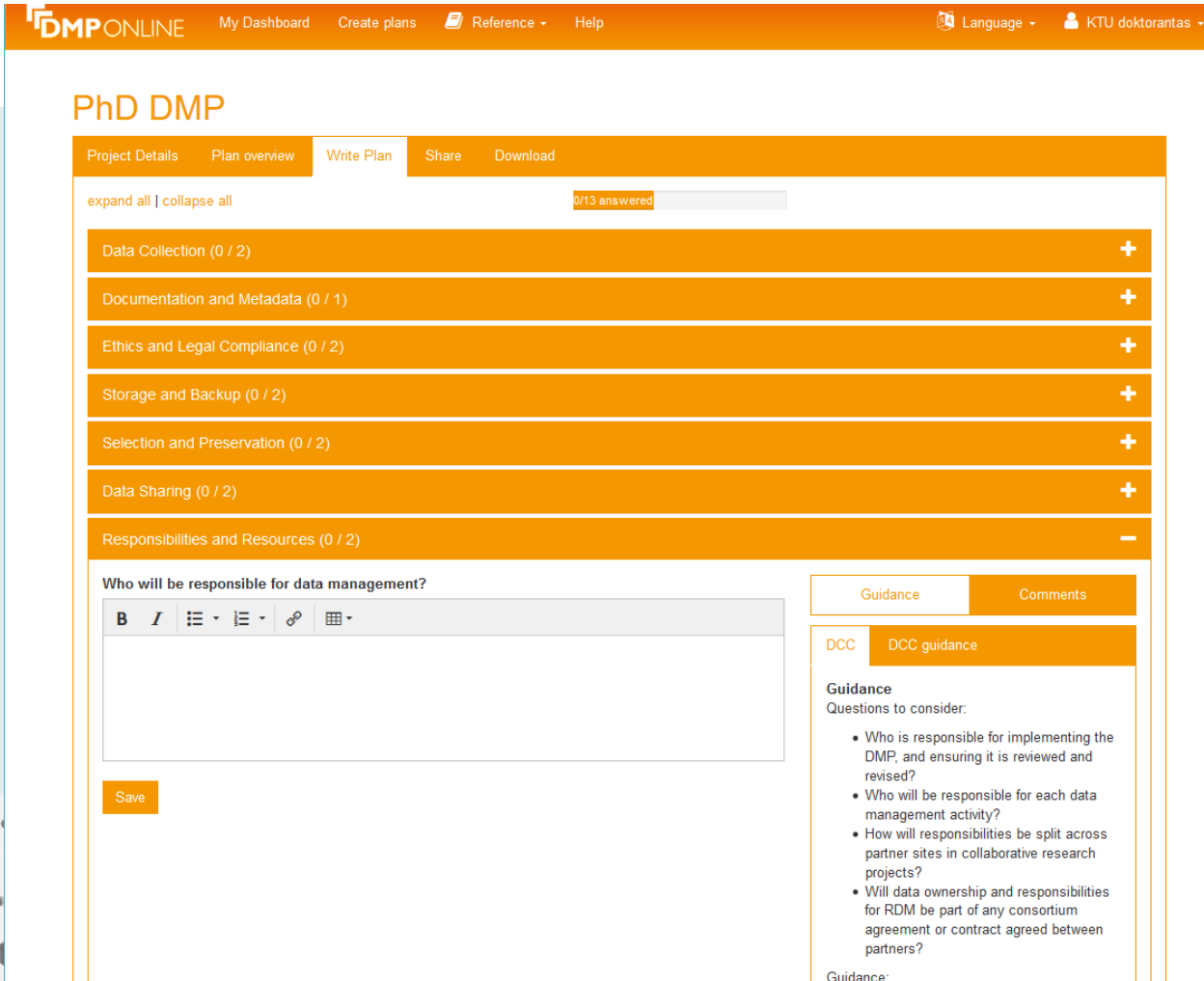
**Guidance**  
Questions to consider:

- How will potential users find out about your data?
- With whom will you share the data, and under what conditions?
- Will you share data via a repository, handle requests directly or use another mechanism?
- When will you make the data available?
- Will you pursue getting a persistent identifier for your data?

Guidance:  
Consider where, how, and to whom data with acknowledged long-term value should be made available. The methods used to share data will be dependent on a number of factors such as

- How will you share the data?
- Are any restrictions on data sharing required?

# DMPonline: Responsibilities and Resources



**DMP ONLINE** My Dashboard Create plans Reference - Help Language - KTU doktorantas -

## PhD DMP

Project Details Plan overview Write Plan Share Download

expand all | collapse all 9/13 answered

- Data Collection (0 / 2) +
- Documentation and Metadata (0 / 1) +
- Ethics and Legal Compliance (0 / 2) +
- Storage and Backup (0 / 2) +
- Selection and Preservation (0 / 2) +
- Data Sharing (0 / 2) +
- Responsibilities and Resources (0 / 2) -

### Who will be responsible for data management?

**B** *I* [List] [List] [Link] [Grid]

Save

Guidance Comments

DCC DCC guidance

**Guidance**  
Questions to consider:

- Who is responsible for implementing the DMP, and ensuring it is reviewed and revised?
- Who will be responsible for each data management activity?
- How will responsibilities be split across partner sites in collaborative research projects?
- Will data ownership and responsibilities for RDM be part of any consortium agreement or contract agreed between partners?

Guidance:

- Who will be responsible for data management?
- What resources will you require to deliver your plan?

**DMP** ONLINE
My Dashboard
Create plans
 Reference
Help
 Language
 KTU doktorantas

## My Dashboard

The table below lists the plans that you have created, and that have been shared with you by others. You can edit, share, download, make a copy, or remove these plans at any time.

Project Title	Template	Edited	Role	Test	Visibility	Shared	
PhD DMP	Horizon 2020 DMP	09-03-2018	Owner	<input type="checkbox"/>	Private	No	<a href="#">Actions</a>
PhD DMP	ERC DMP	09-03-2018	Owner	<input type="checkbox"/>	Private	No	<ul style="list-style-type: none"> <li>Edit</li> <li>Share</li> <li>Download</li> <li>Make a copy</li> <li>Remove</li> </ul>
Quality of the Library Services	DCC Template	09-03-2018	Owner	<input type="checkbox"/>	Private	No	

Create plan

## Funder requirements

Templates for data management plans are based on the specific requirements listed in funder policy documents. The DCC maintains these templates, however, researchers should always consult the funder guidelines directly for authoritative information.



Template Name	Download	Organisation Name	Last Updated	Funder Links	Sample Plans (if available)
EPSRC Data Management Plan	<a href="#">DOCX</a> <a href="#">PDF</a>	Engineering and Physical Sciences Research Council (EPSRC)	31-05-2018		
Horizon 2020 DMP	<a href="#">DOCX</a> <a href="#">PDF</a>	European Commission (Horizon 2020)	31-05-2018		
MRC Template	<a href="#">DOCX</a> <a href="#">PDF</a>	Medical Research Council (MRC)	05-06-2018		
Hartstichting	<a href="#">DOCX</a> <a href="#">PDF</a>	Hartstichting (Dutch Heart Foundation)	08-06-2018		
UKRI Template	<a href="#">DOCX</a> <a href="#">PDF</a>	UK Research and Innovation (UKRI)	22-05-2018		
NERC Template	<a href="#">DOCX</a> <a href="#">PDF</a>	Natural Environment Research Council (NERC)	22-05-2018		
Datamanagement ZonMw	<a href="#">DOCX</a> <a href="#">PDF</a>	ZonMw (Nederlands)	31-05-2018		
ERC DMP	<a href="#">DOCX</a> <a href="#">PDF</a>	European Research Council (ERC)	22-05-2018		
Wellcome Trust Template	<a href="#">DOCX</a> <a href="#">PDF</a>	Wellcome Trust	22-05-2018		
Population Research Committee Template	<a href="#">DOCX</a> <a href="#">PDF</a>	Cancer Research UK (CRUK)	22-05-2018		
BBSRC Template	<a href="#">DOCX</a> <a href="#">PDF</a>	Biotechnology and Biological Sciences Research Council (BBSRC)	31-05-2018		

Find us - we may be able to help you!



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