# VU DMP TEMPLATE + GUIDANCE

Conditional questions create different routes through the template, which lead to the same structure, but with specific guidance for that route.

The guidance below is colour-coded:

purple - all routes

orange - personal data

green - non-personal data

## -1. Template Description

Welcome to the Data Management Plan (DMP) template from the Vrije Universiteit Amsterdam.

*What is a DMP?*

A data management plan (DMP) is a document or a paragraph in your research proposal in which you describe:

* what data you plan to collect during your research project
* how you are going to store and manage the data during the project
* how the data will be managed after the project is finished

A DMP is a living document, which means that it may evolve as you go through your research project. If your research plan changes during the research project, you can change your DMP accordingly.

If you do not yet know the answer to a question, please fill in your current options and/or thought process.

*Why do you need a DMP?*

A data management plan (or paragraph) makes research data management concrete and practicable: what are you going to do and how?

It saves you time, work and money: by elaborating the management of research data at an early stage, you reduce the chances of having to face unpleasant surprises later in your research.

You may also need planning to have computer facilities like network storage or specific hardware at your disposal.

## 

## 0. GENERAL INFORMATION

In this section, you are asked to describe general information about your research project.

#### 0.1 Document version & date

A DMP is a living document, which means that it may evolve as you go through your research project.

If your research plan changes during the research project, you may need to change your DMP accordingly. Export and save the different versions (tip: add the name and date to your versions) of your DMP to keep track of the evolution of your project.

#### 0.2 Project title

#### 0.3 Project summary

A short summary of the project provides the context for the rest of the DMP. If you have one, you can reuse the summary from your research proposal. If you have other relevant information about the project (e.g. a protocol, research proposal), please provide a link to these here.

#### 0.4 Your contact details

Please provide the following details:

Full name

Your role in the project (please refer to the [CRediT](https://casrai.org/credit/) contributor roles)

Telephone number

Email

ORCID

University

Faculty/Institute

Department/Research Group

#### 0.5 **List other people involved, including those at partner organisations in the project (if applicable)**

Please provide the following details for each of your collaborators:

Full name partner organization

Full name of person(s) involved

Their role(s) in the project (please refer to the [CRediT](https://casrai.org/credit/) contributor roles)

Telephone number

Email

ORCID

University

Faculty/Institute

Department/Research Group

Guidance: If you are working together with partner organisations, it is advised to set up collaboration agreements to address data ownership, authorship, (data management) responsibilities and intellectual property issues. For more information, see the [RDM LibGuide](https://libguides.vu.nl/rdm/collaboration) or contact the RDM Support Desk at [rdm@vu.nl](mailto:rdm@vu.nl).

#### 0.6 Funding organisation & grant number

#### 0.7 Project code (if applicable)

#### 0.8 Consulted data management expert (name, function and email)

Name: ..

Address: ..

Telephone: ..

Email: ..

University / partner organisation: ..

Date of consultation: DD / MM / YYYY

Guidance: You can request feedback on your DMP from data management experts behind the RDM Support Desk through the Request Feedback tab in DMPonline. Local Data Stewards are often also available to help you. The experts will help you with your DMP and provide suggestions, tips and resources for improvement. Some funders, including for example NWO, require a review of the DMP by an institutional expert before submission.

Your feedback request will be handled by a VU RDM expert. Please fill in their name(s) here when you have revised your DMP after feedback from the expert.

## 1. DATA DESCRIPTION

In this section, you are asked to specify and describe the types of data you will use or reuse (for example if you reanalyse an existing dataset with a new research question) in the proposed research project.  
  
**Important**: If you indicate at question 1 that your research involves sensitive or personal data then you get a different set of questions compared to when you indicate that the research involves non-sensitive data. Do not be alarmed that certain questions seem to be missing.

What are personal data?

Personal data are data that can be linked to a unique individual. This includes direct identification through identifiers such as name, address, IP-address, participant code, etc. It also includes  indirect identification through a combination of  information/data.

### Data collection

#### 1.1 Will you collect and/or process personal data in this project?

Yes → conditional route personal data

No → conditional route non-personal data

Personal data are data that can be linked to a unique individual, either directly through identifiers such as name, address, IP-address, participant code, etc., or indirectly through a combination of information.

If you collect and/ or process personal data in your project, you must comply with the General Data Protection Regulation (GDPR or AVG) and its Dutch Implementation Act for the GDPR (the UAVG). Please find more information on personal data and the GDPR in the [LibGuide](https://libguides.vu.nl/rdm/gdpr-privacy).

Almost all data about human subjects are personal data. Even if data about human participants don't include their names and/or contact information, these data can rarely be considered [anonymous](https://www.lcrdm.nl/files/lcrdm/2020-01/Anonymization%20-%20reference%20card%20for%20researchers.pdf) and non-personal. If you are uncertain whether or not the data you collect count as personal data, contact your [Faculty’s Privacy Champion](https://vunet.login.vu.nl/services/pages/categorydetail.aspx?cid=tcm%3a165-890669-16). They can help you to assess whether or not the GDPR applies to your research.

#### 1.2 Will you use existing data? If yes, what is their source?

When using existing data, consider whether conditions apply to the use and processing of this original data. For example, please check the licence applicable to the data. See the LibGuide for more context about licences.

For the reproducibility of results, you need to note which version of the existing data sets you use: if possible, please specify a link to or a persistent identifier for the existing dataset.

#### 1.3 Will you collect or produce new data? If yes, please describe how.

Briefly describe *how* you will collect or produce new data (e.g. a short description of the data collection methods, materials/equipment/hardware used, software services such as online questionnaires, any specific techniques utilized, etc).

#### 1.4 Describe the population/participants/subjects that will be studied

example answer: Students of a certain age range, athletes in a specific sport, minors, patients, refugees

Guidance: Try to provide a general description without specific personal details.

#### 1.5 Do you process any of the following (personal) data ?

Name, Contact details, Addresses, Financial information, Information about family and personal relations, Digital information (e.g. IP addresses, user names, and such), National identification numbers (e.g. BSN), Data relating to criminal convictions and offences, Other, please specify below

Guidance: If you are unsure whether the data you collect is personal data, please contact the [Faculty Privacy Champion](https://vunet.login.vu.nl/services/pages/categorydetail.aspx?cid=tcm%3a165-890669-16). Background information on research and personal data is also available on the [**VU website**](https://vu.nl/en/employee/emergencies/research-data-with-personal-details). This includes the [**10 Key Rules on privacy in research**](https://assets.vu.nl/d8b6f1f5-816c-005b-1dc1-e363dd7ce9a5/b55f1a58-e848-4b92-8a74-b62c646d6590/10%20key%20Privacy%20rules%20in%20scientific%20research.pdf).

#### 1.6 Do you process the personal data based on informed consent?

- Yes, through a physical form

- Yes, with oral consent

- Yes, using digital consent

- Yes, in a way different from the options above

- No, answer the next question

"Informed consent is one of the founding principles of research ethics. Its intent is that human participants can enter research freely (voluntarily) with full information about what it means for them to take part, and that they give consent before they enter the research. Consent should be obtained before the participant enters the research (prospectively), and there must be no undue influence on participants to consent. The minimum requirements for consent to be informed are that the participant understands what the research is and what they are consenting to" (Source: [University of Oxford website](https://researchsupport.admin.ox.ac.uk/governance/ethics/resources/consent)). Multiple options are possible depending on the size and scope of the research. Multiple options are possible depending on the size and scope of the research.

1.7 On what legal ground will the data processing take place if it is not based on informed consent?

* Not applicable, I use informed consent
* Performance of a contract with the research participants (art. 6.1b GDPR)
* Legitimate interest (art. 6.1f GDPR)

If you are not sure what to mark as option(s), contact the [Faculty Privacy Champion](https://vu.nl/nl/medewerker/privacy-en-informatiebeveiliging/privacy-champions-informatie). More detailed information on article 6 of GDPR is available [online](https://gdpr-info.eu/art-6-gdpr/).

*1.8 Does the data collection include any of the following types of personal data?*

* Race or ethnic origin
* Political opinions
* Religious or philosophical beliefs
* Trade union membership
* Genetic data
* Biometric data for the purpose of identification of a natural person
* Data concerning health
* Data on a natural person's sex life or sexual orientation

The categories of data listed here are special categories of personal data which require more protection than normal personal data. If you are not sure what to mark as option(s), contact the [Faculty Privacy Champion](https://vu.nl/nl/medewerker/privacy-en-informatiebeveiliging/privacy-champions-informatie).

1.9 *If your research involves special categories of personal data (previous question) and you will not use explicit informed consent, what is the legal ground for the exemption?*

Scientific research often involves the processing of personal data. It is important for researchers to know what rules they have comply with when processing personal data. A summary description of 10 key rules concerning privacy and scientific research is [available here](https://libguides.vu.nl/rdm/gdpr-privacy) as background information. If you are not sure what to mark as option(s), contact the [Faculty Privacy Champion](https://vu.nl/nl/medewerker/privacy-en-informatiebeveiliging/privacy-champions-informatie).

#### 1.10 What kinds of outputs will you produce in this project? Please describe these data assets.

During your project, you may produce different types of research outputs, for instance different types of new data and intermediate stages of processed data, software or notes. It is useful to have an overview of these [*data assets*](https://libguides.vu.nl/rdm/dmp?#s-lg-box-wrapper-15125649); they can help you (and others) understand your research process and its outputs.

You can reuse this list of data assets to answer questions 3.1/3.2 and 4.1.

1. *Data assets* can be actual research data (in different stages), but also metadata (information about your data) needed to understand or reproduce your research results. Codebooks or lab journals, read-me files, research logs, protocols, measurement tools (hardware), consent forms, analysis syntax, algorithms and newly developed software (code) can also be data assets! For more information, see the LibGuide page on Data Assets.
2. Under *Description*, you can describe your data assets. Consider the type of data: physical measurements, questionnaire results, interviews, etc.
3. Under *Format*, you can indicate the format of your data assets: the way in which the data is encoded for storage, often reflected by the filename extension (for example pdf, xls, doc, txt, or rdf). In the final stages of the research it is recommended that data assets be saved as much as is possible in non-proprietary (/non-commercial) formats. This makes it easier to re-use the data using all kinds of software depending on a researchers' needs. This is also in line with the general societal & funders increased focus towards Open Science. The national archive DANS has an overview of [preferred formats](https://dans.knaw.nl/en/about/services/easy/information-about-depositing-data/before-depositing/file-formats).

|  |  |  |
| --- | --- | --- |
| 1. **Data asset** | 1. **Description** | 1. **Format** |
| Raw data |  |  |
| Processed data |  |  |
| Analysed data |  |  |
| Research documentation  Analysis software |  |  |

*1.11 How much digital data storage will your project require?*

[ ] 0 - 50 GB

[ ] 50 - 500 GB

[ ] > 500 GB

[ ] other

If you are unsure about the amount of digital data storage needed, please ask colleagues about their datasets or make an estimation based on similar datasets that are openly available.

*1.12 Will you collect physical data? If yes, please describe these.*

Examples of physical data are informed consent forms, paper questionnaires/ response forms, Case Report Forms, biological samples, soil samples, archeological samples or biomaterials.

#### 1.13 Will you take measures to ensure data quality? Please describe these, if applicable.

If you will collect data for this research project, you want to prevent errors in your data during acquisition. How will you ensure the quality of the new data?

Are there standard quality checks in your field? Are there applicable Standard Operating Protocols (SOPs)?

For more information, please consult this [LibGuide page](https://libguides.vu.nl/rdm/data-collection?#s-lg-box-wrapper-15125660). If you want advice on quality assurance measures, contact the RDM Support Desk at rdm@vu.nl.

## 2. LEGAL AND ETHICAL REQUIREMENTS, CODES OF CONDUCT

In this section, you will describe the legal and ethical requirements that you have to comply with for your proposed research project.

### Relevant laws and legislation

#### 2.1 What legislation applies to your research project? Please tick the relevant boxes for your project.

[ ] General Data Protection Regulation (GDPR)/ Algemene Verordening Gegevensbescherming (AVG)

[ ] Medical Scientific Research with People Act (Dutch: WMO)

[ ] Experiments on Animals Act

[ ] Nagoya Protocol

[ ] Other, please specify.

In the Netherlands, there are several laws that pertain to scientific research. It is important to know with which laws your research must comply, as this may have consequences for the storage and security requirements for your data. Note that if your research project belongs to a larger, international project, you may have to comply with additional laws and legislation. Please contact your Faculty’s Privacy Champion and discuss with your international colleagues if you are unsure whether or not this applies to your project.

General Data Protection Regulation (GDPR)/ Algemene Verordening Gegevensbescherming (AVG) - Since you collect and/ or process personal data in your project, you must comply with the General Data Protection Regulation (GDPR or AVG) and its Dutch Implementation Act for the GDPR (the UAVG). Please find more information on personal data and the GDPR in the [LibGuide](https://libguides.vu.nl/rdm/gdpr-privacy). Please contact your [Faculty’s Privacy Champion](https://vunet.login.vu.nl/services/pages/categorydetail.aspx?cid=tcm%3a165-890669-16). They can help you to make sure your research project is compliant with the GDPR/AVG.

The Privacy Champion can also help you with issues like creating an informed consent form. An important issue in informed consent forms, is the possible future (re-)use of the data. You should always ask your Privacy Champion for advice when drawing up an informed consent form. The Libguide has guidance including [a specific checklist](https://libguides.vu.nl/rdm/gdpr-privacy).

**Medical Scientific Research with People Act** - If your project concerns medical scientific research and/or if your human participants are subject to procedures or are required to follow rules of behaviour, you may have to comply with the Medical Scientific Research with People Act (WMO in Dutch), and you may have to get approval for your project from the medical ethics committee. You can check whether your research is subject to the WMO [here](https://english.ccmo.nl/investigators/legal-framework-for-medical-scientific-research/your-research-is-it-subject-to-the-wmo-or-not). If you are still uncertain, contact your faculty's [ethical review board](https://vunet.login.vu.nl/services/pages/practicalinformation.aspx?cid=tcm%3a165-858762-16) or contact the METC (Medical Ethical Review Board) for the VUmc metc@vumc.nl

**Experiments on Animals Act** - If you will use animals for experimental or scientific purposes in your research project, you have to comply with the Experiments on Animals Act.

**Nagoya Protocol** - If you will use genetic materials from other countries for your research, you may have to comply with the Nagoya protocol. Please check https://www.vu.nl/nagoya for more information about the Nagoya protocol and on how the VU can support you with compliance.

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#### 2.2 What legislation applies to your research project? Please tick the relevant boxes for your project.

[ ] Experiments on Animals Act

[ ] Nagoya Protocol

[ ] Other

In the Netherlands, there are several laws that pertain to scientific research. It is important to know with which laws your research must comply, as this may have consequences for the storage and security requirements for your data. Note that if your research project belongs to a larger, international project, you may have to comply with additional laws and legislation. Please contact your Faculty’s Privacy Champion and discuss with your international colleagues if you are not sure whether or not this applies to your project.

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**Nagoya Protocol** - If you will use genetic materials from other countries for your research, you may have to comply with the Nagoya protocol. Please check https://www.vu.nl/nagoya for more information about the Nagoya protocol and on how the VU can support you with compliance.

*2.3 Do you require approval of an ethical committee for this project? If yes, please indicate which ethical committee and whether you have obtained approval for this project.*

* Ethics Committee: …
* Approval status: Yes / No / Not yet
* Review code:
* Approval date: DD/MM/YYYY

If there are any ethical issues regarding data collection or processing, you may have to get approval for your project from your Faculty’s ethics committee.

#### 2.4 Will you work with data for which intellectual property and/ or confidentiality are an issue? If yes, please describe.

It is important to think about intellectual property rights and ownership. Some specific examples include:

- Your research concerns copyrighted material.

- Your research (data) concerns information from sensitive or confidential sources (e.g. data about a company’s sensitive commercial data or internal operations).

- Your research falls within an (inter)national collaboration, in which data ownership is divided among partner organizations. Make sure to cover matters of rights to control access to data for multi-partner projects and multiple data owners in the consortium agreement. Help with setting up agreements is [locally available](https://libguides.vu.nl/rdm/collaboration).

#### 2.5 Do you plan on generating a marketable product from your research project?

If (one of) your research outputs may be used for a patent or for a service or product with commercial goals, please contact IXA or the RDM Support Desk at [rdm@vu.nl](mailto:rdm@vu.nl) for support on intellectual property rights and exploitation of your research.

## 3. STORAGE AND BACK-UP DURING THE RESEARCH PROCESS

In this section, you will describe how you store, back-up and secure your data during the research process.

During the research process, you have to make sure your data are well-protected and secure. The security risks that accompany the acquisition, storage and processing of your research data will need to be addressed by appropriate security measures, both technical and organisational.

#### 3.1 What measures will you take to secure and protect data during the research process? Please describe, for each separate data asset you described for question 1.10, how you will ensure data security, where the data assets are stored & backed up, and who has authorization to access the asset.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data asset** | **Storage** | **Backup** | **Access** | **Security measures** |
| Raw data |  |  |  |  |
| Processed data |  |  |  |  |
| Analysed data |  |  |  |  |
|  |  |  |  |  |

Under **Storage**, please indicate where you will store your data during the research project. Also consider backups to prevent data loss. You can find more information on the LibGuide page on Data storage.

Under **Backup**, please indicate how backups are made to minimize the risk of data loss. This can be automated or manual backups and can include backups of physical as well as digital data assets

Under **Access**, please describe who has access to the data asset, which rights they have (e.g. access to view or to edit data). Please specify names and functions. If you are working with a large research team, who is responsible for access management and keeping access rights up to date?

Under **Security Measures**, please describe the measures you take to protect your data. Please consider security measures during collection, storage and sharing.

These measures may include anonymisation or pseudonymisation of personal data, encryption, passwords, and restricted access to both physical and digital data assets. Be specific about the measures you will take to secure the data. Please consult the LibGuide pages on [Data Protection](https://libguides.vu.nl/rdm/data-protection), [Storage](https://libguides.vu.nl/rdm/data-storage) and [Security measures](https://libguides.vu.nl/rdm/data-security) for more information.

To determine your security risks in terms of availability, integrity, confidentiality, and privacy, you can complete [this data classification tool (beta version)](https://libguides.vu.nl/data-classification). The results of this classification are the starting point for further discussion with IT for Research about appropriate technical and organisational security measures. Please include your Privacy Champion in these discussions.

#### 3.2 What measures will you take to secure and protect data during the research process? Please describe, for each separate data asset you described for question 1.10, how you will ensure data security, where the data assets are stored & backed up, and who has authorization to access the asset.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data asset** | **Storage** | **Backup** | **Access** | **Security measures** |
| Raw data |  |  |  |  |
| Processed data |  |  |  |  |
| Analysed data |  |  |  |  |
|  |  |  |  |  |

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Under **Backup**, please indicate how backups are made to minimize the risk of data loss. This can be automated or manual backups and can include backups of physical as well as digital data assets

Under **Access**, you can describe who has access rights to the data asset (who can view and/or change the data). Please specify names and functions. If you are working with a large research team, who is responsible for access management?

Under **Security Measures**, please describe the measures you take to protect your data. Please consider security measures during collection, storage and sharing.

These measures may include encryption, passwords, and restricted access to both physical and digital data assets. Be specific about the measures you will take to secure the data.

Please consult the LibGuide pages on [Data Protection](https://libguides.vu.nl/rdm/data-protection), [Storage](https://libguides.vu.nl/rdm/data-storage) and [Security measures](https://libguides.vu.nl/rdm/data-security) for more information.

To determine your security risks in terms of availability, integrity, and confidentiality, you can complete [this data classification tool (beta version)](https://libguides.vu.nl/data-classification). The results of this classification are the starting point for further discussion with IT for Research about appropriate technical and organisational security measures.

*3.3 Which tools are used in the collection, processing or storage of data during research?*

Atlas.Ti \*, Castor, DropBox \*\*, Edugroepen, Google Workspace for education \*\*, Matlab \*, Microsoft Teams, NVivo, OneDrive, Open Science Framework (OSF), Qualtrics, Python (software) \*, R (software) \*, Research Drive (Surf), SciCloud \*, SciStor \*, Sharepoint, Surf Drive, SurfFilesender, Survalyzer, Yoda, Zivver, Zoom, Other

Guidance: If specific tools or software are used for research, this can mean that the software vendor that provides the software / tool is actively involved (directly or indirectly) in the data collection, processing and/or analysis. This can mean that a vendor could somehow have access to sensitive or personal data. The Vrije Universiteit Amsterdam has specific contracts with software vendors that cover issues like this and where their role as data processor is described.  
  
For the tools in the list above a contract with a vendor exists. When a tool has an asterisk (\*) behind the name, that means no external vendor is involved as data processor. See also [definitions](https://gdpr-info.eu/art-4-gdpr/) where GDPR is involved.  
  
\*\* means that the tool is not recommended as an option for research. Better options are: Research Drive, SciStor, Yoda or Open Science Framework.

*3.4 What other tools or software do you intend to use during your research?*

When you use tools or software that was not included in the list (see previous question) and/or you work together with other parties (like consortium partners) please provide the details here. Please add, if possible, the full legal name. Multiple roles are possible: IT-supplier, (project)partner, recipient of data, transcriber, supplier of data, etc.

#### 3.5 Is it necessary to transfer the (physical or digital) data assets to other locations or research partners? If yes, please describe how you secure the file transfer.

Since you are working with data that falls under the GDPR, contact your Faculty’s Privacy Champion to make sure that you are allowed to transfer the data to other locations. The GDPR puts specific restrictions on the transfer of data outside of the EU.

On VUnet, VU IT services lists options for transferring digital data within and outside the VU. On the RDM LibGuide, you can find information on protected File Sharing.

If data are collected remotely and need to be physically transferred back to the VU for secure storage, you should have a plan for how this can be done, with the security risks defined in your data classification in mind. Briefly describe here what your methods for safe transfer will be. Contact the RDM Support Desk for help if you are unsure how to proceed.

#### 3.6 Is it necessary to transfer the (physical or digital) data assets to other locations or research partners? If yes, please describe how you secure the file transfer.

On VUnet, VU IT services lists options for transferring digital data within and outside the VU. On the RDM LibGuide, you can find information on protected File Sharing.

If data are collected remotely and need to be physically transferred back to the VU for secure storage, you should have a plan for how this can be done. Please complete the data classification to determine the security risks. Briefly describe here what your methods for safe transfer will be. Contact the RDM Support Desk for help if you are unsure how to proceed.

3.7 Do you transfer personal data outside of the European Economic Area (EEA)? If Yes, please provide additional information

* Country
* Reason of transfer
* Legal basis

Personal data may not be transferred to countries outside the [European Economic Area](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:European_Economic_Area_(EEA)) (EEA) or to international organizations, unless specific legal requirements are met. An international transfer takes place when personal data are stored on a server that is located in a country outside the EEA or when an organization outside the EEA receives or has access to the personal data. Examples of legal basis reasons are: explicit informed consent, [adequacy decision,](https://ec.europa.eu/info/law/law-topic/data-protection/international-dimension-data-protection/adequacy-decisions_en) and standard contractual clauses.

When in doubt, please contact your [Faculty's Privacy Champion](https://vu.nl/nl/medewerker/privacy-en-informatiebeveiliging/privacy-champions-informatie).

Important: these rules on data transfers do not apply on importing data to a country inside the EEA.

## 4. DATA ARCHIVING AND PUBLISHING

All research data, metadata and documentation used for research publications must be archived (for a mid-term period, usually 10 years after the last research publication made with the data) for verification purposes. This includes all data used in the scientific publication, including the original raw data. This is necessary for research integrity purposes and the data that are archived may need to be accessed and reviewed should there be any questions about your research findings. National funders like **NWO** have specific policies that deal with data archiving and the use/re-use of datasets created as part of projects funded by it. See the section policies and regulations in the [LibGuide](https://libguides.vu.nl/rdm/policies-regulations) for more information.

**Data asset publishing**

Publishing your data assets makes them available to other users for new research purposes. When you publish a data asset, you automatically meet the archiving requirements discussed above (publishing can be seen as public archiving).

At the VU, we subscribe to the FAIR principles. This means that all information necessary to recreate the research results should be Findable, Accessible, Interoperable, and Reusable.

Note that data assets do not necessarily need to be open (i.e. publicly available) to be FAIR: they should be “as open as possible, as closed as necessary”. For example, some data assets cannot be published (i.e. sensitive or confidential data), but only archived. It is important to think about which data assets should be archived and which can be published. See the [LibGuide](https://libguides.vu.nl/rdm/overview#s-lg-box-wrapper-15125632) for more information.

It is recommended that data assets be saved as much as is possible in non-proprietary (/non-commercial) formats. This makes it easier to re-use the data using all kinds of software depending on a researchers' needs. This is also in line with the general societal & funders increased focus towards Open Science. The national archive DANS has an overview of [preferred formats](https://dans.knaw.nl/en/about/services/easy/information-about-depositing-data/before-depositing/file-formats).  
When necessary, indicate whether potential users need certain types of hardware/ computing power/ proprietary software/ etc to access and (re-)use the data. Also consider the sustainability of software needed for accessing the data (e.g. [containerization](https://www.ibm.com/nl-en/cloud/learn/containerization) of analysis code).

### Data archiving and Findability

#### 4.1 Which data assets will be archived and which will be published?

#### 

The VU Research Data Management policy states that all data assets needed to reproduce the research outcome should be **archived**.

**Data asset publishing** is a separate goal with the intention of making data assets available to other users for new research purposes.

#### 

#### 4.2 Where will you archive your data assets?

* Archstor \*
* Darkstor \*
* DataVerseNL
* Open Science Framework (OSF)
* Yoda
* Other, see next question

The VU Research Data Management policy states that all data assets needed to reproduce the research outcome should be archived. At the VU, we have several storage options for archiving which are listed here. They differ in their suitability for sensitive data, dataset size, etc. You can find more information on the storage options on the [RDM LibGuide](https://libguides.vu.nl/rdm/selecting-archive). If you want advice on archiving options and what to include in the archive (paper documentation/data/ICFs) for your research project, please contact the RDM Support Desk at [rdm@vu.nl](mailto:rdm@vu.nl) .

For the tools in the list above a contract with a company exists. When a tool has an asterisk (\*) behind the name, that means no external company is involved as data processor. See also [definitions](https://gdpr-info.eu/art-4-gdpr/) where GDPR art.4 is involved.

#### 4.3 What other archive(s) do you intend to use to archive data assets?

* Name:
* Role:
* Country:

The VU Research Data Management policy states that all data assets needed to reproduce the research outcome should be archived. Often, the best archiving option is a domain-specific public repository. You can find a list of repositories [here](http://re3data.org/). When you use an external archive that is not included in the previous list (question before this) and/or you work together with other parties (like consortium partners) please list this information here. Please add, if possible, the full legal name.

Multiple roles are possible: (project)partner, recipient of data, Digital academic repository, etc.

If specific archives are used this can mean that an (external) company that provides the repository has access to sensitive or personal data. The Vrije Universiteit Amsterdam has specific contracts with external companies that cover issues like this and where their role as data processor is described. If you want advice on archiving options and what to include in the archive (paper documentation/data/ICFs) for your research project, please contact the RDM Support Desk at [rdm@vu.nl](mailto:rdm@vu.nl).

#### 4.4 For how long will the data be available in the archive?

In its RDM policy, the VU states that all publication-related data assets should be **archived** for at least ten years after the corresponding research article/chapter/book for verification and replication of research. However, you may have to comply with laws that extend (or shorten) this period (for example, the Medical Scientific Research with People Act states a 15-year period after that last treatment of the last participant). Note that if you make the data assets available for reuse by **publishing** them, they are in principle available for the foreseeable future. You can find more information on archiving policies in the RDM LibGuide.

#### 4.5 For how long will the data be available in the archive?

In its RDM policy, the VU states that all publication-related data assets should be **archived** for at least ten years after the corresponding research article/chapter/book for verification and replication of research. However, you may have to comply with laws that extend (or shorten) this period. Note that if you make the data available for reuse by **publishing** them, they are in principle available for the foreseeable future. You can find more information in the RDM LibGuide.

*4.6 Where will you publish your data assets?*

Data assets can only be shared in external repositories with which the VU has a processing agreement. Discuss with your Faculty’s Privacy Champion whether or not you can share data in an external repository. Do this as early as possible in your research; don’t wait until you are ready to share your data.

*4.7 Where will you publish your data assets?*

If possible, select a domain specific repository to archive your data assets. Do this as early as possible in your research; don’t wait until you are ready to share your data. The [Re3data website](http://re3data.org/) has a list of many repositories that are available.

#### 4.8 How will you ensure your data assets get a persistent identifier (e.g. a DOI-code)?

A [persistent identifier (PID)](https://libguides.vu.nl/rdm/data-publication?#s-lg-box-wrapper-15125676) is a durable reference to a digital dataset document, website or other object. You get a persistent identifier when you publish your data asset in a repository (e.g. DataverseNL/ Open Science Framework/ Zenodo). Note that if you store your data in ArchStor or DarkStor, you will receive a unique code that serves as a proxy for an identifier.

#### 4.9 Will you register your datasets in an online registry other than PURE? If yes, where?

Registering your data assets in an online registry increases the findability of your work. According to the VU RDM policy, you should register your data assets in the PURE Research Portal, even if you cannot share the actual datasets themselves publicly due to legal, intellectual property, privacy- or security-related issues.

You can find information on how to register your data assets in PURE here.

If you want advice on other available online registries specific to your faculty or field, you can search [the re3data registry](https://www.re3data.org/) or contact the RDM Support Desk at [rdm@vu.nl](mailto:rdm@vu.nl) .

#### 4.10 Are there restrictions to data publishing? If yes, please specify the reasons and list the data assets you do not wish to share publicly.

Even though archiving your data assets is mandatory, you may have data assets that you cannot make available to other researchers due to legal, intellectual property, privacy- or security-related issues. Your Faculty’s Privacy Champion can help with issues regarding privacy; for other concerns, please contact the RDM Support Desk.

#### 4.11 Are there restrictions to data publishing? If yes, please specify the reasons and list the data assets you do not wish to share publicly.

Even though archiving your data assets is mandatory, you may have data assets that you cannot make available to other researchers due to legal, intellectual property, privacy- or security-related issues. Please contact your Faculty Data Steward or the RDM Support Desk if you have questions regarding data sharing.

#### 4.12 When will you share the data? If not immediately after completion of the project, please specify the reasons.

By default, the VU RDM policy encourages data sharing immediately after completion of the project. However, in some cases, you may want to set an embargo period before sharing your data, for example when there are other projects that make use of the same data. Even though the data under embargo are not yet accessible to others, the stated intention of sharing breeds trust between researchers and with the public and encourages Open Science. Grant providers like NWO and ZonMw have specific [**policy guidelines**](https://eur05.safelinks.protection.outlook.com/?url=https%3A%2F%2Flibguides.vu.nl%2Frdm%2Fpolicies-regulations%3F%23s-lg-box-wrapper-15594401&data=04%7C01%7Cm.cruz%40nwo.nl%7C2465501b19bc499fbe7e08d9fdd97e42%7C81e63bdd534e4aaf855a4c017eec7126%7C0%7C0%7C637819932862455070%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=1vZ9hf3%2B3ZevEBlrJs4zREyfzRa6UlAqJxvbtEpC6Io%3D&reserved=0) and [**requirements**](https://eur05.safelinks.protection.outlook.com/?url=https%3A%2F%2Flibguides.vu.nl%2Frdm%2Frdm-requirements&data=04%7C01%7Cm.cruz%40nwo.nl%7C2465501b19bc499fbe7e08d9fdd97e42%7C81e63bdd534e4aaf855a4c017eec7126%7C0%7C0%7C637819932862455070%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=nfxD3xlQxPX185TYpjdD%2Bcmbd4GYLYnVR76VBJ11ZUY%3D&reserved=0) on this. Please check the LibGuide for both.

#### 4.13 Please indicate the license and/ or terms of use under which you share your data.

By specifying a license and defining the terms of use, you can manage the purposes for which your data assets can be used by others. Most repositories allow you to specify a license and terms of use for your shared data assets. For example, the standard license in the DataverseNL repository is Creative Commons Zero Waiver (others can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission), but it provides other license options.

You can find more information on licensing on the RDM LibGuide. If you want advice on licensing, contact the RDM Support Desk at rdm@vu.nl.

### 5. DOCUMENTATION

In this section, you can describe how you will document the data for your proposed research project. How will you make sure future you and other researchers can read, understand and reuse your data assets?

#### 

#### 5.1 How will you document your project?

**Documentation** of your research is important for the reusability of your data assets. Consider what kinds of documentation you will produce during your research project. Examples may include codebooks or lab journals, read-me files, research logs, protocols.

[**Metadata**](http://libguides.vu.nl/researchdata/metadata) are information about your data. Using a standard way of documenting your data makes it easier for other researchers to work with and reuse your data assets. Metadata standards exist for different research fields. You can find examples of metadata standards and more information [here](https://fairsharing.org/standards/).

If you want advice on metadata and documentation for your research project, contact the RDM Support Desk at rdm@vu.nl.

#### 5.2 **What metadata and documentation will accompany the data assets?**

Consider how you will document your research process (e.g. in cleaning/processing scripts, algorithms and code comments). Metadata standards may include data and variable naming conventions, file and folder structure, instruction files and versioning protocols for your data assets and documentation.

#### 5.3 What methods, software or hardware are needed to access and use your data?

It is recommended that data assets be saved as much as is possible in non-proprietary (/non-commercial) formats. This makes it easier to re-use the data using all kinds of software depending on a researchers' needs. This is also in line with the general societal & funders increased focus towards Open Science. The national archive DANS has an overview of [preferred formats](https://dans.knaw.nl/en/about/services/easy/information-about-depositing-data/before-depositing/file-formats).

When necessary, indicate whether potential users need certain types of hardware/ computing power/ proprietary software/ etc to access and (re-)use the data. Also consider the sustainability of software needed for accessing the data (e.g. [containerization](https://www.ibm.com/nl-en/cloud/learn/containerization) of analysis code).

## 6. DATA MANAGEMENT RESPONSIBILITIES AND RESOURCES

### Responsibility

#### 6.1 Who will be responsible for management of the data assets **during** the project? Please specify their name, position, role in the project, and faculty/ institution/ group.

You can reuse the information you filled in under question 0.4 and 0.5.

#### 6.2 Who will be responsible for management of the data assets **after completion** of the project (e.g. the project lead/ dedicated data manager/ department head)? Please specify their name, position, role in the project, and faculty/ institution/ group.

You can reuse the information you filled in under question 0.4 and 0.5.

#### 6.3. For data that are only available upon request, what methods will be used to handle requests for access and how will data be made available to those requesting access?

Note that “department heads are responsible for arranging agreements with researchers in their departments regarding the management of research data, particularly when a researcher’s employment is ending.” (VU RDM policy 2020).

### Necessary resources

#### 6.4 What resources (for example financial and time) will be dedicated to research data management? Please estimate their cost.

Examples of resource costs include:

- storage costs (these may depend on necessary data security level)

- costs for research data management support (see a cost overview for IT services here)

- additional costs for Open Access publication

For general advice on budget management for research projects, please contact VU Project Control as early as possible. You can find some information on RDM costs [here](https://libguides.vu.nl/rdm/rdm-costs).

If you would like advice on resource costs for your research project, contact the RDM Support Desk at rdm@vu.nl.