Data Management Plan Template

This template is intended for creating a data management plan, based on the data management section that was part of your research proposal. NWO expects you to incorporate any comments received from the referees and/or the committee about the data management section in this data management plan.

What does NWO understand as research data?

Research data are the evidence that underpin the answer to research questions, and can be used to validate findings. Data can be quantitative information or qualitative statements collected by researchers in the course of their work by experimentation, observation, modelling, interview or other methods, or information derived from existing evidence.

For the purpose of NWO's data management policy, the definition of research data does not include physical objects such as scientific and archaeological collections, physical arts works or biobanks; however, digital information extracted from such objects are to be regarded as research data.

Software is also not included in the definition. NWO recognises that software (algorithms, scripts and code developed by researchers in the course of their work) may be necessary to access and interpret data. In such cases, the data management plan will be expected to address how information about such items will be made available.

About this template and how to proceed

You are kindly requested to complete the plan below and submit it to NWO before the start of the project. NWO will review the data management plan as quickly as possible. If necessary, NWO will call upon the help of (data) experts from your scientific discipline for the evaluation. As soon as the data management plan has been approved by NWO, the project can be started. It is advised to regularly review the data management plan when required during the course of the research project.

You are expected to consult with research data management support staff at your home institution for the completion of this plan. NWO strongly advises researchers to seek such support at an early stage. Plans that have not been consulted with institutional data management support staff will not be accepted.

You should submit the completed form via the online application system ISAAC. The main applicant has to submit the data management plan via his/her/their own ISAAC account. Data management plans not submitted via ISAAC will not be taken into consideration.

This template is in line with Science Europe's "Core Requirements for Data Management Plans".

0	General Information	
0.1	Name applicant and project number	Provide the name of the project leader and the project number provided by NWO.
0.2	Name of data management support staff consulted during the preparation of this plan	You are expected to consult with data management support staff at your home institution for the completion of this plan. **Plans that have not been consulted with institutional data management support staff will not be considered.**
	Date of consultation with support staff	-

1	What data will be collected or produced, and what existing data will be re-used?	
1.1	Will you re-use existing data for this research?	☐ Yes ☐ No
	If yes: explain which existing data you will re-use and under which terms of use.	NWO encourages the re-use of existing data wherever possible. Explain which existing data you will re-use and state any constraints on re-use of existing data if there are any.
1.2	If new data will be produced: describe the data you expect your research will generate and the format and volumes to be collected or produced.	Give details on the kind of data: for example numeric (databases, spreadsheets), textual (documents), image, audio, video, and/or mixed media. Give details on the data format: the way in which the data is encoded for storage, often reflected by the filename extension (for example pdf, xls, doc, txt, or rdf). Give preference to open and standard formats as they facilitate sharing and long-term re-use of data. Several repositories provide lists of such 'preferred formats' (see e.g. DANS File Formats and 4TU.ResearchData Preferred Formats).
1.3	How much data storage will your project require in total?	☐ 0 – 10 GB ☐ 10 – 100 GB ☐ 100 – 1000 GB ☐ >1000 GB

2	What metadata and documentation will accompany the data?
2.1	Indicate what documentation will accompany the data.	Consider what other documentation is needed to enable re-use. This may include information on the methodology used to collect the data, analytical and procedural information, definitions of variables, units of measurement, and so on. Consider how this information will be captured and where it will be recorded, for example in a database with links to each item, a 'readme' text file, file headers, code books, or lab notebooks.
2.2	Indicate which metadata will be provided to help others identify and discover the data.	To be findable, accessible, interoperable and reusable, data must be accompanied with descriptive information in the form of metadata. - Where these are in place, researchers are advised to use community metadata standards. The Research Data Alliance maintains a Directory of Metadata Standards. - Depositing data in a certified or trustworthy repository will typically involve providing information about the data according to a metadata standard scheme (typically Dublin Core or DataCite Metadata Schema). If this is the case for the data described in this plan, that can be specified here. Contact your university library and/or other institutional RDM support staff for further advice on metadata.

3	How will data and metadata be stored and backed up during the research?
3.1	Describe where the data and metadata will be stored and backed up during the project.	☐ Institution networked research storage ☐ Other (please specify)
	Explanation:	Give preference to the use of robust, managed storage with automatic backup, such as provided by IT support services of your home institution. Most research institutions have networked research drives, which offer ample storage space and data security for most purposes. Please specify if you make use of other storage solutions for storage and backup of research data during the project, in addition to or instead of the institutional research drive. This may be because you need more space than offered by your institution; to facilitate data sharing with collaborators; or because your data requires additional security. Please explain.

3.2	How will data security and protection of sensitive data be taken care of during the research?	☐ Not applicable (no sensitive data) ☐ Default security measures of the institution networked research storage ☐ Additional security measures (please specify)
	Explanation:	Consider data protection, particularly if your data is sensitive – for example, containing personal data, politically sensitive information or information relating to religion and health, trade secrets or national security information. Describe the main risks and how these will be managed. Inquire with your institution's research support staff whether your intended storage solution meets your institution's data security policy if your research involves sensitive data.

4	**How will you handle issues regarding the processing of personal information and intellectual property rights and ownership?**	
4.1	Will you process and/or store personal data during your project?	☐ Yes ☐ No
	If yes, how will compliance with legislation and (institutional) regulation on personal data be ensured?	If yes, NWO strongly recommends that you seek advice from specialised support staff at your university or institute. You must ensure that when dealing with personal data, data protection laws (for example GDPR/ Dutch AVG) are complied with.
4.2	How will ownership of the data and intellectual property rights to the data be managed?	- Explain who will be the owner of the data, meaning who will have the rights to control access. - Make sure to cover these matters of rights to control access to data for multi-partner projects and multiple data owners in the consortium agreement. - Indicate whether intellectual property rights are affected. If so, explain which and how they will be dealt with.

5	**How and when will data be shared and preserved for the long term?**	
5.1	How will data be selected for long-term preservation?	☐ All data resulting from the project will be preserved for at least 10 years ☐ Other (please specify)

	Explanation:		Indicate what data must be retained or destroyed for contractual, legal, or regulatory purposes. Indicate how it will be decided what data to keep. Describe the data to be preserved long-term.
			NWO expects you to preserve the data resulting from your project for at least ten years, unless legal provisions or discipline-specific guidelines dictate otherwise.
5.2	Are there any (legal, IP, privacy related, security related) reasons to restrict access to the data once made publicly available, to limit which data will be made publicly available, or to not make part of the data publicly available?	☐ Yes ☐ No	
	If yes, please explain.		Indicate whether there are any restrictions on the re-use of the data. If it is necessary to restrict access to certain parts of the data or to apply a data sharing agreement, explain how and why. Explain what actions will be taken to overcome or to minimize restrictions.
5.3	What data will be made available for re-use?	☐ All data resulting from the project will be made available ☐ Other (please specify)	
	Explanation		Indicate what data will be made available for re-use. This selection may differ from the data that is preserved, when the data are so large that it is unfeasible to deposit the data in a repository in its entirety, or if there are reasons that prohibit making data available for re-use as specified in the previous question. As much as possible, research data should be made publicly available for re-use. **As a minimum, NWO requires that the data underpinning research papers should be made available to other researchers at the time of the article's publication, unless there are valid reasons not to do so.** The guiding principle here is 'as open as possible, as closed as necessary.' Due consideration is given to aspects such as privacy, public security, ethical limitations, property rights and commercial interests.
5.4	When will the data be available for re-use, and for how long will the data be available?	☐ Data available as soon as article is published ☐ Data available upon completion of the project ☐ Data available after completion of project (with embargo)	
	Explanation		Explain when the data will be made available. Indicate the expected timely release. Explain the reason and duration of any embargo periods. Explain whether exclusive use of the data will be claimed and if so, why and for how long. Indicate whether data sharing will be postponed or restricted for example to publish, protect

		intellectual property, or seek patents. **As a minimum, NWO requires that the data underpinning research papers should be made available to other researchers at the time of the article's publication, unless there are valid reasons not to do so.**
5.5	In which repository will the data be archived and made available for re-use, and under which license?	- Indicate where the data will be deposited and made available for re-use. Repository Finder can help you find an appropriate repository to deposit your research data. - Indicate whether a persistent identifier will be pursued. Typically, a trustworthy, long-term repository will provide a persistent identifier. - Indicate under which license the data may be re-used. Check the commonly used Creative Commons licenses. - Indicate whether the repository is certified. In case no such repositories can be found or are suitable, NWO advises adherence to the following minimum selection criteria: provision of persistent and unique identifiers; use of metadata standards that are broadly accepted by the scientific community; provision of information that is publicly available; enabling access to data under well-specified conditions and following open and standard access protocols; provision of information about licenses and permissions; ensuring persistence of data and metadata.
5.6	Describe your strategy for publishing the analysis software that will be generated in this project.	Indicate whether potential users need specific tools or software (e.g. specific scripts, codes or algorithms developed during the project) to access, interpret and (re-)use the data. Indicate how these items will be made available. Consider the sustainability of software needed for accessing and interpreting the data. Check the Five Recommendations for FAIR Software.

6	Data management costs	
6.1	What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?	Explain how the necessary resources (for example time) to prepare the data for sharing/preservation (data curation) have been costed in. Indicate whether additional resources will be needed to prepare data for deposit or to cover any charges from data repositories. If yes, explain how much is needed and how such costs will be covered**.** Please elaborate on the budget in your NWO grant application, if appropriate.