

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 recognizes 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

This template is in line with Science Europe's "[Core Requirements for Data Management Plans](#)".

You are kindly requested to complete the plan below and submit it to NWO within four months after the awarding of the grant. 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 plan¹. 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.

We strongly advise you to complete this plan through [DMP-online](#), a web-based tool created by the Digital Curation Centre that helps to create, review, and share data management plans that meet institutional and funder requirements. DMP-online makes it easy to share the plan with institutional data management support staff for comments and advice. Some Dutch universities have institutional instances of the tool that allow you to sign in with your institutional credentials. Through the tool, you will benefit from additional guidance and explanations. A PDF of the plan can be downloaded at the end for submission into ISAAC.

¹ Academic and research institutions in the Netherlands provide professional support for research data management. Relevant contacts can be found on the [RDM in the Netherlands](#) website.



0 General Information	
0.1 Name applicant and project number	Neggers, Margot DataScienceAI-2
0.2 Name of data management support staff consulted during the preparation of this plan	Neggers, Margot
Date of consultation with support staff	27-9-24
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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.	<ul style="list-style-type: none"> Quantitative and qualitative data will be gathered from the target population, SME employees. This approach was selected to capture both statistical relationships and nuanced employee perspectives. Quantitative data Collection will be done using a survey that will be distributed strictly to SME employees. The survey will be administered online using Qualtrics to ensure broad accessibility of respondents. This data will be stored in xls format. Qualitative data Collecting data will allow a deeper exploration we will perform interviews that will be guided by a series of open-ended questions they will either be conducted on Zoom or in person depending on the participant's preferences. This data will be stored in a pdf. <p>The data will be collected using an online platform and will be secured and anonymized.</p> <p>The interview transcripts will be analysed using thematic analysis, along with other complementary techniques. Thematic analysis often follows a six-step process: familiarisation, coding, generating themes, reviewing themes, defining and naming themes, and writing up.</p>



1.3 How much data storage will your project require in total?	<input checked="" type="checkbox"/> 0 – 10 GB <input type="checkbox"/> 10 – 100 GB <input type="checkbox"/> 100 – 1000 GB <input type="checkbox"/> > 1000 GB
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2	What metadata and documentation will accompany the data?	
2.1	Indicate what documentation will accompany the data.	<p>The data collected will be stored in numeric (survey data) and textual (interview transcripts) formats using common file types such as .csv, .xlsx, and .txt to ensure accessibility and long-term usability. To enhance data reuse, comprehensive documentation will be provided, including a codebook that defines variables, units of measurement, and missing data handling. Each dataset folder will contain a README file detailing its contents and purpose, while the primary README.md at the root will offer an overview of the entire structure. Additionally, a Data Management Plan (DMP) will outline data collection methods, ethical considerations, and version history, along with any scripts or tools used for data cleaning and analysis, which will include in-line comments and descriptive headers for clarity. This structured and well-documented approach will ensure transparency, reproducibility, and ease of use for future researchers.</p>
2.2	Indicate which metadata will be provided to help others identify and discover the data.	<p>We will contact the university library for further advice on metadata</p>
3	How will data and metadata be stored and backed up during the research?	
3.1	<p>Describe where the data and metadata will be stored and backed up during the project.</p> <p>Explanation:</p>	<p><input checked="" type="checkbox"/> Institution networked research storage <input type="checkbox"/> Other (please specify)</p> <p>For this project, we will primarily use OneDrive. OneDrive offers secure, cloud-based storage with automatic backup features, ensuring data integrity and accessibility. It is integrated into the institutional network, providing a high level of security and data protection, which is essential for research data management.</p>
3.2	<p>How will data security and protection of sensitive data be taken care of during the research?</p> <p>Explanation:</p>	<p><input type="checkbox"/> Not applicable (no sensitive data) <input type="checkbox"/> Default security measures of the institution networked research storage <input checked="" type="checkbox"/> Additional security measures (please specify)</p> <ul style="list-style-type: none"> • Data Anonymization: All identifying information will be removed from the data. Participants will be assigned unique identification numbers to maintain anonymity in both survey responses and interview transcripts. • Secure Storage Solutions: Recorded interviews will be stored on an encrypted platform (such as OneDrive) to



ensure that only authorized personnel have access to the data. Survey responses will be stored in Qualtrics, which complies with data protection standards.

- **Institutional Compliance:** The chosen storage solutions will be verified with the institution's research support staff to ensure that they comply with the institution's data security policies. This includes confirming that appropriate measures are in place for handling sensitive data.
- **Data Access Control:** Access to the raw data will be limited strictly to the research team and supervisors to minimize the risk of unauthorized access. All team members will be informed about the importance of data confidentiality.
- **Informed Consent:** Prior to participation, all participants will receive a consent form outlining the study's purpose, confidentiality measures, and their rights. This will also include information on how their data will be stored and used, reinforcing their understanding of the data protection protocols.

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?

To ensure compliance with legislation and institutional regulations on personal data during our project, we will implement the following measures:

- **Explicit Consent:** Participants will provide informed consent before data collection, understanding their rights and the study's purpose.
- **Data Minimization:** We will only collect necessary data related to job roles and industry, avoiding sensitive personal information.
- **Anonymization:** Personal data will be anonymized to prevent identification of participants.
- **Secure Storage:** Data will be stored on a secure, encrypted platform, approved by our institution, ensuring protection against breaches.



	<ul style="list-style-type: none"> • Access Control: Access will be restricted to the research team and supervisors, preventing unauthorized access.
4.2 How will ownership of the data and intellectual property rights to the data be managed?	<ul style="list-style-type: none"> • Data Ownership: The research team will retain ownership of the collected data, with rights to control access. This means that access will be restricted to authorized team members and supervisors involved in the project. • Intellectual Property Rights: Intellectual property rights will primarily concern any findings or innovations arising from the analysis of the data. As such, the intellectual property generated will belong to the research team

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?	<input checked="" type="checkbox"/> All data resulting from the project will be preserved for at least 10 years <input type="checkbox"/> Other (please specify)
Explanation:	All data resulting from this project will be preserved for a minimum of 10 years. After the project is completed, the data will be securely stored by Breda University of Applied Sciences (BUAs) and made available for future student research and educational purposes
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? If yes, please explain.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Some data containing personal information will be anonymized in line with privacy laws and will only be accessible internally for future research at BUAs. Aggregate and anonymized data will be made publicly available where applicable.
5.3 What data will be made available for re-use? Explanation	<input type="checkbox"/> All data resulting from the project will be made available <input checked="" type="checkbox"/> Other (please specify) Data will be made available within BUAs for future student research projects after the completion of this project. De-identified and aggregate data will be accessible for reuse by future students under the supervision of the university, ensuring compliance with legal and ethical guidelines.



5.4 When will the data be available for re-use, and for how long will the data be available?	<input type="checkbox"/> Data available as soon as article is published <input checked="" type="checkbox"/> Data available upon completion of the project <input type="checkbox"/> Data available after completion of project (with embargo)
Explanation	<p>The data will be made available for re-use upon the completion of the project. There will be no immediate embargo period, unless required by further institutional or legal stipulations. However, access may be delayed for up to 6 months if needed to protect intellectual property or pending publication. The data will remain available for at least 10 years after the project is concluded</p>
5.5 In which repository will the data be archived and made available for re-use, and under which license?	<p>The data will be archived in the BUas Data Repository (university-specific repository). This repository ensures long-term data preservation and accessibility, providing a persistent identifier (such as a DOI) to facilitate data citation.</p> <p>The data will be made available under the Creative Commons Attribution (CC BY 4.0) license, allowing others to share, adapt, and use the data commercially, provided appropriate credit is given to the original authors.</p> <p>The chosen repository complies with international standards for data storage and sharing, including the provision of persistent identifiers and metadata standards accepted by the scientific community. It follows standard open access protocols and ensures the persistence of data and metadata for future use.</p>
5.6 Describe your strategy for publishing the analysis software that will be generated in this project.	<p>Any software, scripts, or algorithms developed during the project will be made publicly available through the same repository used for data storage, such as the BUas Data Repository or another open-access platform like GitHub. The software will be published under a CC BY 4.0 license, ensuring that others can freely use, modify, and distribute the tools if appropriate credit is given.</p> <p>The software will be provided with clear documentation to ensure ease of use. This will enable future researchers and users to access, interpret, and reuse both the data and software. We will also ensure that the software adheres to the Five Recommendations for FAIR Software to promote long-term accessibility and reusability.</p>

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)?	<p>Data management and FAIR compliance will primarily require staff time for data curation, documentation, and preparing metadata. These tasks will be carried out by the project team, with support from the university's data management services. Any costs related to the long-term storage of data in an approved repository, including repository fees, will be covered by BUas. At present, it is anticipated that additional budget allocations may be required to cover repository submission fees or specialized data curation services, though exact amounts will be confirmed based on the university's available funding and policies. Further elaboration on the budget will be detailed in the grant application if necessary</p>
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