

# DMP FEEDBACK TEMPLATE

A template for evaluating and feedbacking data management plans

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## Scope and purpose of this document

This document contains a matrix for facilitating giving feedback on data management plans (DMPs). The aim is to provide standardized text for many aspects of DMPs that can be copypasted during the feedback process. The intended audience consists mainly of research data management support staff who will be able to provide a more standardized workflow when feedbacking DMPs by using this template.

The template is extensive to maximise versatility. The aim is to provide RDM staff with many aspects to choose from depending e.g. on the researcher's ambition and the funding body's requirements. The template at hand does not follow templates of any specific funder but rather combines the templates and guides by Science Europe<sup>1</sup> and OSF<sup>2</sup> and incorporates some aspects of the Horizon Europe Template<sup>3</sup>.

The first two columns are labelled "Guidance for Researchers" and contain recommendations on the topics (column 1) and detailed aspects (column 2) that can be covered in a DMP. The consecutive columns "Performance Level" are dedicated to the evaluation of the recommendation in the second column. There are three categories of evaluation: "complete/detailed", "addressed issue, but incomplete" and "did not address". The content of the evaluation fields reflects the content of the recommendations.

How can this document be helpful? When feedbacking a DMP, RDM staff can go through the template and copy-paste the text of the respective performance level for giving feedback. Technical features to increase user-friendliness is something we are thinking about but depends on the available resources.

Throughout the document, we use different terms as synonyms for referring to data collecting/generating/producing.

<sup>1</sup> Science Europe. (2021). Practical Guide to the International Alignment of Research Data Management - Extended Edition. <u>https://doi.org/10.5281/zenodo.4915862</u>

<sup>2</sup> Whitmire, Amanda; Carlson, Jake; Westra, Brian; Hswe, Patricia and Parham, Susan Wells (2017): Rubric & related files. <u>https://osf.io/qh6ad/</u>

<sup>3</sup> European Commission (2021): Horizon Europe. Data Management Template, available at https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/referencedocuments;programCode=HORIZON.



## DMP Template

#### Administrative information

DMP Question	DMP Guidance	Performance Level			
Guidance for F	Researchers	Complete/detailed The DMP	Addressed issue, but incomplete The DMP	Did not address The DMP	
Administrativ e information	(1) List the minimal information required to identify the applicant and the references of the project.	(1) Contains the minimal information required to identify the applicant and the references of the project.	(1) Provides limited information, which makes it hard to identify who is responsible for the project.	(1) Does not provide sufficient information, which makes it hard to identify who is responsible for the project.	



#### 1. Data description and collection or re-use of existing data

1 DATA DESCRIPTION AND COLLECTION OR RE-USE OF EXISTING DATA					
Guidance for Researchers		Complete/detailed	Addressed issue, but incomplete / not detailed The DMP	<b>Did not address</b> The DMP	
<b>1a</b> Origin of the data: How will new data be collected or produced and/or how will existing data be re-used?	<ul> <li>(1) State which data will be collected during the research project, and which data will be reused or else state that there will be no research data handled in the project.</li> <li>(2) If data are re-used: Describe the origin of the existing data. How do you access the data? Are there any access restrictions and if so, how do you handle them? Which software and/or steps (e.g. conversion of data formats) are necessary to work with the data.</li> <li>(3) If data are re-used: State any constraints on the re-use of existing data and their consequences (e.g. lack</li> </ul>	<ol> <li>Differentiates clearly between data that is newly collected and that is reused or else argues that no research data will be handled in the project.</li> <li>If data are re-used: Clearly describes the origin of the existing data and how the data is accessed. Clearly mentions access restrictions if they exist, how they are handled and which software and/or steps (e.g. conversion of data formats) are necessary to work with the data.</li> <li>If data are re-used: Explains whether there are any constraints on the re- use of data and how these</li> </ol>	<ol> <li>Insufficient or unclear description of whether (and which) data is reused or newly collected or else, that no research data will be handled in the project.</li> <li>If data are re-used: Does not describe the origin of the existing data and how the data is accessed clearly. Gives insufficient or unclear information on access restrictions if they exist, how they are handled and which software and/or steps (e.g. conversion of data formats) are necessary to work with the data.</li> <li>If data are re-used: Does not give sufficient and/or clear information on possible constraints on the re-use of data and their potential effect on the research project (e.g. lack of documentation, lack of license/ no clarification of usage rights, guality.</li> </ol>	<ol> <li>Provides little or no details on where the data come from and what data will be collected or re-used or else, argues sufficiently that no research data will be handled in the project.</li> <li>If data are re-used: Does not describe the origin of the existing data and how the data is accessed. Gives little or no details on access restrictions if they exist, how they are handled and which software and/or steps (e.g. conversion of data formats) are necessary to work with the data.</li> <li>If data are re-used: Does not discuss constraints on the re-use of existing data (e.g. lack of documentation, lack of license/ no clarification of usage rights, quality, content or scope of existing data).</li> <li>If new data are generated: Does</li> </ol>	



				r,
	<ul> <li>of documentation, lack of license/ no clarification of usage rights, quality, content or scope of existing data).</li> <li>(4) If new data are generated: Briefly state the reasons why generating new data is necessary and why the re-use of any existing data sources has been considered but discarded.</li> <li>(5) If new data are generated: Explain which methods and software will be used for the data collection.</li> </ul>	<ul> <li>constraints affect the research project.</li> <li>(4) If new data are generated: Explains clearly why new data must be collected rather than reusing existing data.</li> <li>(5) If new data are generated: Explains clearly the data collection process including which software and methods will be used for generating the data collection.</li> </ul>	<ul> <li>content or scope of existing data).</li> <li>(4) If new data are generated: Does not give sufficient and/or clear information on why collecting new data is necessary (instead of re-using existing data).</li> <li>(5) If new data are generated: Does not give sufficient and/or clear information on the data generation process and/or lacks information concerning which methods and software is necessary for generating new data collection.</li> </ul>	not provide sufficient rationale for generating new data (instead of re- using existing data). (5) If new data are generated: Does not discuss how new data is generated and/or lacks information concerning which methods and software is necessary for generating new data collection.
<b>1b</b> What data (for example the type, formats, and volumes) will be generated or re- used?	<ol> <li>Give details on the data type: for example, numeric (databases, spreadsheets), textual (documents), image, audio, video, and/or mixed media.</li> <li>Give details on the data format for each data type and the corresponding software.</li> <li>Point out whether you use any proprietary formats, which ones and</li> </ol>	<ol> <li>Clearly defines data type(s).</li> <li>Gives details on the data formats for each data type and the corresponding software.</li> <li>Explains if any and which proprietary formats will be used and why. Discusses if data conversion strategies are applicable.</li> <li>Provides information</li> </ol>	<ol> <li>Does not discuss the data type (e.g. numeric (databases, spreadsheets), textual (documents), image, audio, video, and/or mixed media) clearly or sufficiently.</li> <li>Insufficient or unclear information on the format of each data type and the corresponding software and/or it is unclear to which type of data the information of format/software refers.</li> <li>Does not give sufficient or clear information if any and which</li> </ol>	<ol> <li>Provides no or little details on what data types (e.g. numeric (databases, spreadsheets), textual (documents), image, audio, video, and/or mixed media) will be generated</li> <li>No or little information on the format of each data type and corresponding the software including to which type of data the information of format/software refers .</li> <li>Does not give information if any and which proprietary formats will be used and why. Does not sufficiently</li> </ol>



why. If applicable, discuss data conversion strategies t non-proprietary formats. (4) Give details on the volumes (they can be expressed in storage space required (bytes), and/or in numbers of objects, files, and/or dataset dimensions)	about the estimated data volume.	<ul> <li>proprietary formats will be used and why. Does not sufficiently discuss if data conversion strategies are applicable.</li> <li>(4) Provides insufficient or unclear information on the estimated data volume (they can be expressed in storage space required (bytes), and/or in numbers of objects, files, rows, and columns).</li> </ul>	<ul> <li>discuss if data conversion strategies are applicable.</li> <li>(4) Does not provide an estimate of data volume (they can be expressed in storage space required (bytes), and/or in numbers of objects, files, rows, and columns).</li> </ul>
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#### 2. Documentation and data quality

2 DOCUMENTATION AND DA	TA QUALITY			
Guidance for Researchers		Complete/detailed The DMP	Addressed issue, but incomplete	Did not adress The DMP
			The DMP	
2a How will data be organized and documented?	<ul> <li>(1) Indicate how the data will be organised during the project. This can include naming conventions for files, version control, and folder structures.</li> <li>(2) Consider what documentation is needed to enable re-use. This may include information on the methods used to collect the data, analytical and procedural information, definitions of variables, units of measurement, and so on. The information can be captured for example in a database with links to each item, a 'readme' text file, code books, or lab notebooks. When will you draft this documentation?</li> <li>(3) How will you make this documentation material accessible (e.g. publication)</li> </ul>	<ul> <li>(1) Clearly indicates how the data will be organised during the project.</li> <li>(2) Clearly describes which documentation is needed to enable re-use, for example a database with links to each item.</li> </ul>	<ul> <li>(1) Insufficiently or incompletely indicates how the data will be organised during the project (for example naming conventions, version control strategy and folder structures).</li> <li>(2) Vaguely or incompletely mentions which documentation is needed to enable re-use (e.g. the methods used to collect the data, analytical and procedural information, definitions of variables, units of measurement, and so on.) Vaguely or incompletely mentions where the information will be recorded.</li> </ul>	<ul> <li>(1) Does not indicate how the data will be organised during the project (for example naming conventions, version control strategy and folder structures).</li> <li>(2) Provides no information, or only a very vague mention of documentation, without providing any detail or explanation (e.g. the methods used to collect the data, analytical and procedural information, definitions of variables, units of measurement, and so on). Does not provide details on where the information on metadata and</li> </ul>



	along with the research data or as a separate publication). If the documentation material and the data are published in different locations, how will you make sure that they refer to each other and are findable?			documentation will be recorded.
<b>2b</b> What data quality control measures will be used?	<ul> <li>(1) Explain how the consistency and quality of new and re-used data will be controlled and documented. This may include processes such as calibration, repeated samples or measurements, standardised data collection procedures/capture, data entry validation, peer review of data, or representation with controlled vocabularies.</li> <li>(2) Explain how data provenance (i.e. the origin and changes of data) will be documented.</li> </ul>	<ul> <li>(1) Clearly describes the approach taken to ensure and document quality control for new and re-used data.</li> <li>(2) Explains clearly how data provenance (i.e. the origin and changes of data) will be documented.</li> </ul>	<ul> <li>(1) Insufficiently or incompletely describes the approach taken to ensure and document quality control for new and re-used data. This may include processes such as calibration, repeated samples or measurements, standardised data collection procedures/capture, data entry validation, peer review of data, or representation with controlled vocabularies.</li> <li>(2) Does not give sufficient and/or clear information on how the documentation of data provenance (i.e. the origin and changes of data) will be guaranteed.</li> </ul>	<ul> <li>(1) Does not provide details on how data quality is controlled and documented for new and re-used data. This may include processes such as calibration, repeated samples or measurements, standardised data collection procedures/capture, data entry validation, peer review of data, or representation with controlled vocabularies.</li> <li>(2) Lacks information on how the documentation of data provenance (i.e. the origin and changes of data) will be guaranteed.</li> </ul>



#### 3. Storage and backup during the research process

2 STODAGE AND BACKLID DUDING THE DESEADOR DOGGESS

3 STURAGE AND BAUKUP DURING THE RESEARCH PROCESS				
Guidance for Researchers		<b>Complete/detailed</b> The DMP	Addressed issue, but incomplete The DMP	<b>Did not adress</b> The DMP
<b>3a</b> How will data and documentation be stored and backed up during research activities?	<ul> <li>(1) Data storage: Describe where the data will be stored during research activities. It is recommended to store data in at least two separate locations. Give preference to the use of robust, managed storage with automatic backup, such as provided by IT support services of the home institution. Storing data on laptops, stand-alone hard drives, or external storage devices such as USB sticks is not recommended.</li> <li>(2) Mention how often the backup will be performed.</li> <li>(3) Explain how the data will be recovered in the event of data corruption or data loss.</li> </ul>	<ol> <li>(1) Clearly describes the location where the data will be stored during the research activities. Clearly mentions if robust, managed storage with automatic backup (for example storage provided by the home institution) is used. Alternatively, it clearly explains why institutional storage will not be used (and for what part of the data) and describes the (additional) locations, storage media, and procedures that will be used for storing data.</li> <li>(2) Clearly describes how often backups will be performed.</li> <li>(3) Clearly explains how the data will be recovered in the event of data corruption or data loss.</li> </ol>	<ul> <li>(1) Insufficiently or unclearly describes the location where the data will be stored during the research activities. Unclearly mentions if robust, managed storage with automatic backup (for example storage provided by the home institution) is used.</li> <li>Alternatively, it unclearly explains why institutional storage will not be used (and for what part of the data) and describes the (additional) locations, storage media, and procedures that will be used for storing data. Preference to the use of robust, managed storage with automatic backup, such as provided by IT support services of the home institution is insufficiently described.</li> </ul>	(1) Does not describe the location where the data will be stored during the research activities. Does not mention if robust, managed storage with automatic backup (for example storage provided by the home institution) is used. Alternatively, it does not explain why institutional storage will not be used (and for what part of the data) and describes the (additional) locations, storage media, and procedures that will be used for storing data. No preference to the use of robust, managed storage with automatic backup, such as provided by IT support services of



			<ul> <li>(2) Insufficiently or unclearly describes how often backups will be performed.</li> <li>(3) Insufficiently and/or unclearly explains how the data will be recovered in the event of data corruption or data loss.</li> </ul>	<ul> <li>the home institution is described.</li> <li>(2) Does not give details on how often backups will be performed.</li> <li>(3) Does not explain how the data will be recovered in the event of data corruption or data loss.</li> </ul>
<b>3b</b> How will data security and protection of sensitive data be taken care of during the research project?	<ul> <li>(1) Explain who will have access to the data during the research process and how access to data is controlled, especially in collaborative partnerships.</li> <li>(2) Describe your considerations of data security (in terms of physical security, network security, and security of computer systems and files), particularly if your data is sensitive (for example containing personal data or confidential information). Describe the main risks and how these will be managed.</li> <li>(3) Explain which institutional and/or national data security</li> </ul>	<ul> <li>(1) Clearly describes who will have access to the data during the research process and how access to data is controlled, especially in collaborative partnerships.</li> <li>(2) Clearly describes the (additional) security measures (in terms of physical security, network security, and security of computer systems and files) that will be taken to ensure that stored and transferred data are safe, especially when sensitive data are involved. Describes the main risks and how these will be managed.</li> <li>(3) Clearly explains which institutional and/or national</li> </ul>	<ul> <li>(1) Insufficiently or unclearly describes who will have access to the data during the research process and how access to data is controlled, especially in collaborative partnerships.</li> <li>(2) Insufficiently or unclearly describes the (additional) security measures (in terms of physical security, network security, and security of computer systems and files) that will be taken to ensure that stored and transferred data are safe, especially when sensitive data are involved. Does not sufficiently describe the main risks and how these will be managed.</li> </ul>	<ul> <li>(1) Does not mention who will have access to the data during the research process and how access to data is controlled, especially in collaborative partnerships.</li> <li>(2) Does not describe (additional) security measures (in terms of physical security, network security, and security of computer systems and files) that will be taken to ensure that stored and transferred data are safe, especially when sensitive data are involved and/or does not describe the</li> </ul>





### 4. Legal and ethical requirements, codes of conduct

4 LEGAL AN	4 LEGAL AND ETHICAL REQUIREMENTS, CODES OF CONDUCT					
		Complete/detailed	Addressed issue, but	Did not adress		
Guidance fo	or Researchers	The DMP	incomplete	The DMP		
			The DMP			
<b>4a</b> If personal data are processed, how will compliance with legislation on personal data and data protection be ensured?	<ul> <li>(1) State if personal data are processed (collected, analysed, deleted, etc) during the research project, and which kind of personal data are processed (see here for examples).</li> <li>(2) Describe what the legal basis for processing the personal data is, such as informed consent. This applies to all steps of data processing, including preservation and sharing of personal data.</li> <li>(3) Describe anonymization/pseudonymisation procedures for preservation and sharing of personal data.</li> <li>(4) Describe how personal data will be handled after the end of the research project and who is responsible (e.g. for deleting data</li> </ul>	<ol> <li>(1) Clearly indicates if personal data are processed (collected, analysed, deleted, etc) during the research project, and which kind of personal data are processed.</li> <li>(2) Clearly describes what the legal basis for processing the personal data is, such as informed consent. Clearly applies this to all steps of data processing, including preservation and sharing of personal data.</li> <li>(3) Clearly describes anonymization/pseudonymisation procedures for preservation and sharing of personal data.</li> <li>(4) Clearly describes how personal data will be handled after the end of the research project and who is responsible.</li> </ol>	<ul> <li>(1) Insufficiently or unclearly explains if personal data are processed (collected, analysed, deleted, etc) during the research project, and which kind of personal data are processed (see here for <b>examples</b>).</li> <li>(2) Insufficiently and/or unclearly describes what the legal basis for processing the personal data is, such as informed consent. Applies this only to some steps of data processing.</li> <li>(3) Insufficiently and/or unclearly describes anonymization/pseudonymisati on procedures for preservation and sharing of personal data.</li> <li>(4) Insufficiently and/or unclearly describes how personal data</li> </ul>	<ol> <li>Does not mention if personal data are processed (collected, analysed, deleted, etc) during the research project, does not clearly state that no personal data will be processed and/or does not mention which kind of personal data are processed (see here for <b>examples</b>).</li> <li>Does not describe what the legal basis for processing the personal data is, such as informed consent.</li> <li>Does not describe anonymization/pseudony misation procedures for</li> </ol>		



	after the end of the project or the end of obligations concerning reproducibility of research).		will be handled after the end of the research project and who is responsible (e.g. for deleting data after the end of the project or the end of obligations concerning reproducibility of research).	preservation and sharing of personal data. (4) Does not describe how personal data will be handled after the end of the research project and who is responsible (e.g. for deleting data after the end of the project or the end of obligations concerning reproducibility of research).
<b>4b</b> How will other legal aspects, such as intellectual property rights and usage rights, be managed? What legislation is applicable?	<ul> <li>(1) If you are re-using data, explain whether there are any restrictions regarding use, sharing and/or publication. How do these affect your research project and how are they mitigated?</li> <li>(2) Which usage rights are associated with the data sources you use (e.g. terms of use of social media platforms/data bases/research infrastructure like telescopes or lab equipment)?</li> <li>(3) Explain who has the right to use the data during the research project and in what way (e.g. in case someone changes affiliation). If applicable, mention how this question is covered in a</li> </ul>	<ul> <li>(1) Clearly explains whether there are any restrictions regarding use, sharing and/or publication if data is re-used. Clearly describes how these restrictions affect the research project and how they are mitigated.</li> <li>(2) Clearly describes which usage rights are associated with the data sources.</li> <li>(3) Clearly explains who has the right to use the data during the research project and in what way (e.g. in case someone changes affiliation). If applicable, mentions how this question is covered in a</li> </ul>	<ol> <li>Insufficiently and/or unclearly explains whether there are any restrictions regarding use, sharing and/or publication if data is re-used. Insufficiently describes how these affect the research project and how they are mitigated.</li> <li>Insufficiently and/or unclearly describes which usage rights are associated with the data sources (e.g. terms of use of social media platforms/data bases/research infrastructure like telescopes or lab equipment).</li> <li>Insufficiently and/or unclearly explains who has the right to</li> </ol>	<ul> <li>(1) Does not explain whether there are any restrictions regarding use, sharing and/or publication if data is re-used. Does not describe how these affect the research project and how they are mitigated.</li> <li>(2) Does not describe which usage rights are associated with the data sources (e.g. terms of use of social media platforms/data bases/research infrastructure like telescopes or lab equipment).</li> </ul>



	multi-partner project, for example through a consortium agreement. (4) Explain who has the rights to license the data and decide on access modalities? If applicable, mention how this question is covered in a multi-partner project, for example through a consortium agreement.	multi-partner project, for example through a consortium agreement. (4) Clearly explains who has the rights to license the data and decide on access modalities. If applicable, mentions how this question is covered in a multi- partner project, for example through a consortium agreement.	<ul> <li>use the data during the research project and in what way (e.g. in case someone changes affiliation). If applicable, insufficiently mentions how this question is covered in a multipartner project, for example through a consortium agreement.</li> <li>(4) Insufficiently and/or unclearly explains who has the rights to license the data and decide on access modalities. If applicable, insufficiently mentions how this question is covered in a multipartner project, for example through a consortium agreement.</li> </ul>	<ul> <li>(3) Does not explain who has the right to use the data during the research project and in what way (e.g. in case someone changes affiliation). Does not mention how this question is covered in a multi-partner project, for example through a consortium agreement.</li> <li>(4) Does not explain who has the rights to license the data and decide on access modalities. If applicable, does not mention how this question is covered in a multi-partner project, for example through a consortium agreement.</li> </ul>
<b>4c</b> What ethical issues and codes of conduct apply, and how will they be	(1) Consider which ethical issues affect your research data (how data are generated, analysed, shared, published and preserved etc.). Follow the national and international codes of conducts and institutional ethical guidelines.	(1) Clearly describes which ethical issues affect research data (how data are generated, analysed, shared, published and preserved etc.) and follows the national and international codes of conducts and institutional ethical guidelines.	(1) Insufficiently and/or unclearly describes which ethical issues affect research data (how data are generated, analysed, shared, published and preserved etc.) and insufficiently follows the national and international codes of conducts and institutional ethical guidelines.	(1) Does not describe which ethical issues affect research data (how data are generated, analysed, shared, published and preserved etc.) and does not follow the national and international codes of



taken into account?	(2) Describe the process of ethical review that is applicable to your research project (either mandatory or optional, for example by an ethics committee).	(2) Clearly describes the process of ethical review that is applicable to the research project.	(2) Insufficiently and/or unclearly describes the process of ethical review that is applicable to the research project (either mandatory or optional, for example by an ethics committee).	<ul> <li>conducts and institutional ethical guidelines.</li> <li>(2) Does not describe the process of ethical review that is applicable to the research project (either mandatory or optional, for example by an ethics committee).</li> </ul>



#### 5. Data sharing and long-term preservation

5 DATA SHARING AND LONG-TERM PRESERVATION					
Guidance for Pr	asaarahara	Complete/detailed	Addressed issue, but	Did not adress	
Guidance for Re	esearchers		The DMP		
<b>5a_1</b> How will data be made findable?	<ul> <li>(1) Findability: Explain how the data and/or metadata will be made findable and mention the services you use for publishing your (meta)data e.g. deposit in a trustworthy data repository.</li> <li>(2) Findability: Indicate which persistent identifier (PID) is assigned to the data and on what level is the PID allocated (collection of data, individual data objects, subsets). If PIDs are not used, explain why.</li> <li>(3) Findability: Indicate which metadata will be provided to help others identify and discover the data: Use community metadata standards by archiving your</li> </ul>	<ol> <li>(1) Findability: Clearly explains how the data and/or metadata will be made findable and mentions the services used for publishing (meta)data.</li> <li>(2) Findability: Clearly indicates which persistent identifier (PID) is assigned to the data and on what level the PID is allocated (collection of data, individual data objects, subsets). If PIDs are not used, clearly explains why.</li> <li>(3) Findability: Clearly describes which metadata will accompany data and documentation. Indicates which metadata standard the repository uses, and/or clearly explains why community standards are not applicable to the project.</li> </ol>	<ul> <li>(1) Findability: Insufficiently and/or unclearly explains how the data and/or metadata will be made findable and insufficiently mentions the services used for publishing (meta)data e.g. deposit in a trustworthy data repository or indexing in a catalogue or registry.</li> <li>(2) Findability: Insufficiently and/or unclearly indicates which persistent identifier (PID) is assigned to the data and on what level the PID is allocated (collection of data, individual data objects, subsets). If PIDs are not used, insufficiently and/or unclearly explains why.</li> <li>(3) Findability: Insufficiently or unclearly describes which metadata will accompany data and documentation. Only vaguely describes the metadata standard that will be followed and/or unclearly explains why community</li> </ul>	<ul> <li>(1) Findability: Does not explain how the data and/or metadata will be made findable and mentions the services used for publishing (meta)data e.g. deposit in a trustworthy data repository or indexing in a catalogue or registry.</li> <li>(2) Findability: Does not indicate which persistent identifier (PID) is assigned to the data and on what level the PID is allocated (collection of data, individual data objects, subsets). If PIDs are not used, does not explain why.</li> <li>(3) Findability: Does not give information on metadata, or on which metadata standards are used. Does not explain</li> </ul>	



	<ul> <li>data with a trusted repository, indicate which metadata standards (for example DDI, TEI, EML, MARC, CMDI) will be used, or explain why community standards are not applicable to your project.</li> <li>(4) Findability: Explain whether the metadata are operated in a way that allows for harvesting and indexing.<sup>4</sup></li> </ul>		standards are not applicable to the project.	why community standards are not applicable to the project in case they are not used.
<b>5a_2</b> How will data be made accessible?	<ol> <li>Accessibility: Explain when the data will be shared. Indicate whether data sharing will be postponed or restricted for example to publish research findings, protect intellectual property, or seek patents. If such an embargo applies, explain how long it will last.</li> <li>Accessibility: Give information on how long the data will be accessible.</li> </ol>	<ul> <li>(1) Accessibility: Clearly explains when the data will be shared. Clearly indicates whether data sharing will be postponed or restricted for example to publish research findings, protect intellectual property, or seek patents. If such an embargo applies, clearly explains how long it will last.</li> <li>(2) Accessibility: Clearly gives information on how long the data will be accessible.</li> </ul>	<ul> <li>(1) Accessibility: Insufficiently and/or unclearly explains when the data will be shared. Insufficiently and/or unclearly indicates whether data sharing will be postponed or restricted for example to publish research findings, protect intellectual property, or seek patents. If such an embargo applies, insufficiently and/or unclearly explains how long it will last.</li> <li>(2) Accessibility: Insufficiently and/or unclearly gives information on how long the data will be accessible.</li> </ul>	<ul> <li>(1) Accessibility: Does not explain when the data will be shared. Does not indicate whether data sharing will be postponed or restricted for example to publish research findings, protect intellectual property, or seek patents. If such an embargo applies, does not explain how long it will last.</li> <li>(2) Accessibility: Does not give information on how long the data will be accessible.</li> </ul>

<sup>&</sup>lt;sup>4</sup> European Commission (2021): Horizon Europe. Data Management Template.



	<ul> <li>(3) Accessibility: Explain what access conditions will apply to allow re-use of your data. E.g., will the data be openly accessible, or will there be access restrictions? In the latter case, which? Explain what action will be taken to overcome or to minimize restrictions.</li> <li>(4) Accessibility: If access is restricted, indicate how access will be granted (e.g. requests handled directly by the repository, access committees or other mechanisms).</li> </ul>	<ul> <li>(3) Accessibility: Clearly explains what access conditions will apply to allow re-use of your data.</li> <li>(4) Accessibility: If access is restricted, clearly indicates how access will be granted (e.g. requests handled directly by the repository, access committees or other mechanisms).</li> </ul>	<ul> <li>(3) Accessibility: Insufficiently and/or unclearly explains what access conditions will apply to allow re-use of your data. E.g., will the data be openly accessible, or will there be access restrictions? In the latter case, insufficiently and/or unclearly explains what action will be taken to overcome or to minimize restrictions.</li> <li>(4) Accessibility: If access is restricted, insufficiently and/or unclearly indicates how access will be granted (e.g. requests handled directly by the repository, access committees or other mechanisms).</li> </ul>	<ul> <li>(3) Accessibility: Does not explain what access conditions will apply to allow re-use of your data. E.g. will the data be openly accessible, or will there be access restrictions? In the latter case, which? Does not explain what action will be taken to overcome or to minimize restrictions.</li> <li>(4) Accessibility: If access is restricted, does not indicate how access will be granted (e.g. requests handled directly by the repository, access committees or other mechanisms).</li> </ul>
<b>5a_3</b> How will data be made interoperable?	<ul> <li>(1) Interoperability: Indicate whether potential users need specific tools to access and use the data. Consider the sustainability of software needed to access the data.</li> <li>(2) Interoperability: How does your research data relate to other data e.g. which standardized formats, codes, protocols,</li> </ul>	<ol> <li>Interoperability: Clearly indicates whether potential users need specific tools to access and use the data.</li> <li>Interoperability: Clearly indicates how research data relate to other data e.g. which standardized formats, codes, protocols, procedures, references etc. are used.</li> </ol>	<ul> <li>(1) Interoperability: Insufficiently and/or unclearly indicates whether potential users need specific tools to access and use the data. Consider the sustainability of software needed to access the data.</li> <li>(2) Interoperability: Does not indicate clearly how research data relate to other data e.g. which standardized formats, codes, protocols, procedures, references etc. are used.</li> </ul>	<ul> <li>(1) Interoperability: Does not indicate whether potential users need specific tools to access and use the data. Consider the sustainability of software needed to access the data.</li> <li>(2) Interoperability: Does not indicate how research data relate to other data e.g. which standardized formats, codes,</li> </ul>



	procedures, references etc. do you use?			protocols, procedures, references etc. are used.
<b>5a_4</b> How will data be made re-useable?	<ul> <li>(1) Re-use: Explain under which license the data and documentation material will be shared.</li> <li>(2) Re-use: Indicate whether potential users need specific tools to re-use the data. Consider the sustainability of software needed to interpret and re- use the data.</li> <li>(3) Re-use: Explain the expected re-use potential by discussing foreseeable research uses (and/or users) for the data.</li> <li>(4) Re-use: Explain how you will ensure version control/provenance for published data.</li> </ul>	<ul> <li>(1) Re-use: Clearly explains under which license the data will be shared.</li> <li>(2) Re-use: Clearly indicates whether potential users need specific tools to re-use the data. Clearly considers the sustainability of software needed to interpret and re-use the data.</li> <li>(3) Re-use: Clearly explains the expected re-use potential by discussing foreseeable research uses (and / or users) for the data.</li> <li>(4) Re-use: Clearly describes version control/provenance for published data.</li> </ul>	<ul> <li>(1) Re-use: Insufficiently and/or unclearly explains under which license the data will be shared.</li> <li>(2) Re-use: Insufficiently and/or unclearly indicates whether potential users need specific tools to re-use the data. Clearly considers the sustainability of software needed to interpret and re-use the data.</li> <li>(3) Re-use: Insufficiently and/or unclearly explains the expected re-use potential by discussing foreseeable research uses (and / or users) for the data.</li> <li>(4) Re-use: Insufficiently and/or unclearly describes version control/provenance for published data.</li> </ul>	<ol> <li>Re-use: Does not explain under which license the data will be shared.</li> <li>Re-use: Does not indicate whether potential users need specific tools to re-use the data. Does not consider the sustainability of software needed to interpret and re- use the data.</li> <li>Re-use: Does not explain the expected re-use potential by discussing foreseeable research uses (and/or users) for the data.</li> <li>Re-use: Does not describe version control/provenance for published data.</li> </ol>
<b>5b</b> How will data for preservation be selected,	(1) Indicate where the data will be deposited and/or refer to 5a_1. If no trusted repository is proposed,	(1) Clearly indicates where the data will be deposited and/or refer to Section 5a_1. If no trusted repository is proposed, clearly	(1) Insufficiently and/or unclearly indicates where the data will be deposited and/or refers to Section 5a_1. If no trusted repository is proposed, insufficiently	(1) Does not indicate where the data will be deposited and/or does not refer to Section 5a_1. If no trusted repository



and where data will be preserved long-term (for example in a data repository or archive)?	<ul> <li>demonstrate in the data management plan that the data can be preserved beyond the research project (i.e. long-term preservation) and that the preservation policies as well as procedures have been checked (including any metadata standards, and costs involved).</li> <li>(2) Indicate which data must be preserved. Indicate how it will be decided what data to keep. Describe the data to be preserved long-term and add details on data formats or types that will be used for making data available.</li> <li>(3) Indicate for how long data will be preserved. This should be in alignment with funder, institutional, or national policies and/or legislation, or community standards.</li> <li>(4) Indicate if and which data must be destroyed (for contractual, legal, ethical or other reasons, see also</li> </ul>	<ul> <li>demonstrates in the data management plan that the data can be preserved beyond the research project (i.e. long-term preservation) and that the preservation policies as well as procedures have been checked (including any metadata standards, and costs involved).</li> <li>(2) Clearly indicates which data must be preserved. Clearly indicates how it will be decided what data to keep. Clearly describes the data to be preserved long-term and add details on data formats or types that will be used for making data available.</li> <li>(3) Clearly indicates for how long data will be preserved.</li> <li>(4) Clearly indicates if and which data must be destroyed (for contractual, legal, ethical or other reasons, see also Section 4a). Clearly states who is responsible if this is foreseen after the end of the research project.</li> <li>(5) Clearly indicates what happens to data that are not preserved long-term (i.e. not published),</li> </ul>	<ul> <li>and/or unclearly demonstrates in the data management plan that the data can be preserved beyond the research project (i.e. long-term preservation) and that the preservation policies as well as procedures have been checked (including any metadata standards, and costs involved).</li> <li>(2) Insufficiently and/or unclearly indicates which data must be preserved. Insufficiently and/or unclearly indicates how it will be decided what data to keep. Insufficiently and/or unclearly describes the data to be preserved long-term and add details on data formats or types that will be used for making data available.</li> <li>(3) Insufficiently and/or unclearly indicates for how long data will be preserved. This should be in alignment with funder, institutional, or national policies and/or legislation, or community standards.</li> <li>(4) Insufficiently and/or unclearly indicates if and which data must be destroyed (for contractual, legal, ethical or other reasons, see also Section 4a). Insufficiently and/or unclearly states who is responsible if this is foreseen after the end of the research project.</li> </ul>	<ul> <li>is proposed, does not demonstrate in the data management plan that the data can be preserved beyond the research project (i.e. long- term preservation) and that the preservation policies as well as procedures have been checked (including any metadata standards, and costs involved).</li> <li>(2) Does not indicate which data must be preserved. Does not indicate how it will be decided what data to keep. Does not describe the data to be preserved long-term and adds no details on data formats or types that will be used for making data available.</li> <li>(3) Does not indicate for how long data will be preserved. This should be in alignment with funder, institutional, or national policies and/or legislation, or community standards.</li> <li>(4) Does not indicate if and which data must be destroyed (for contractual, legal, ethical or other reasons, see also</li> </ul>
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<ul> <li>Section 4a). If this is foreseen after the end of the research project, who responsible?</li> <li>(5) If some data is not preserved long-term (i.e. not published), indicate what happens to this data both during the project ar after the project ends.</li> <li>(6) What happens to files in your working directory aft the end of the research project? Who will be responsible for the data after the end of the research project? Who will be responsible for the data after the end of the research project? Who will be responsible for the data after the end of the research project? Who will be responsible for the data after the end of the research project? Who will have access to this data?</li> </ul>	<ul> <li>both during the project and after the projects ends.</li> <li>(6) Clearly describes what happens to the data the working directory after the end of the research project, who will be responsible for the data after the end of the research project and who will have access to this data.</li> <li>(6) Clearly describes what happens to files in the working directory after the end of the research project, who will be responsible for the data after the end of the research project, who will be responsible for the data after the end of the research project and who will have access to this data.</li> </ul>	<ul> <li>(5) Insufficiently and/or unclearly indicates what happens to data that are not preserved long-term (i.e. not published), both during the project and after the projects ends.</li> <li>(6) Insufficiently and/or unclearly describes what happens to files in the working directory after the end of the research project, who will be responsible for the data after the end of the research project and who will have access to this data.</li> </ul>	<ul> <li>Section 4a). Does not indicate who is responsible after the end of the research project?</li> <li>(5) Does not indicate what happens to data that are not preserved long-term (i.e. not published), both during the project and after the projects ends.</li> <li>(6) Does not describe what happens to files in the working directory after the end of the research project, who will be responsible for the data after the end of the research project and who will have access to this data.</li> </ul>
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#### 6. Data management responsibilities and resources

6 DATA MANAGEI	6 DATA MANAGEMENT RESPONSIBILITIES AND RESOURCES					
Guidance for Res	earchers	Complete/detailed The DMP	Addressed issue, but incomplete The DMP	<b>Did not adress</b> The DMP		
<b>6a</b> Who (for example role, position, and institution) is responsible for research data management (RDM) in the research project?	<ul> <li>(1) Outline the roles and responsibilities for RDM (e.g. data collection, metadata production, quality assurance, data curation, storage and backup, data archiving, and data sharing). Name responsible individual(s) where possible.</li> <li>(2) For collaborative projects, explain the co- ordination of RDM responsibilities across partners.</li> <li>(3) Indicate who is responsible for the DMP and its revisions.</li> </ul>	<ul> <li>(1) Clearly outlines the roles and responsibilities for RDM (e.g. data collection, metadata production, quality assurance, data curation, storage and backup, data archiving, and data sharing). Names responsible individual(s) where possible.</li> <li>(2) For collaborative projects, clearly explains the co-ordination of RDM responsibilities across partners.</li> <li>(3) Clearly indicates who is responsible for the DMP and its revisions.</li> </ul>	<ul> <li>(1) Insufficiently and/or unclearly outlines the roles and responsibilities for RDM (e.g. data collection, metadata production, quality assurance, data curation, storage and backup, data archiving, and data sharing). Names responsible individual(s) where possible.</li> <li>(2) For collaborative projects, insufficiently and/or unclearly explains the co- ordination of RDM responsibilities across partners.</li> <li>(3) Insufficiently and/or unclearly indicates who is responsible for the DMP and its revisions.</li> </ul>	<ul> <li>(1) Does not outline the roles and responsibilities for RDM (e.g. data collection, metadata production, quality assurance, data curation, storage and backup, data archiving, and data sharing). Does not name responsible individual(s) where possible.</li> <li>(2) For collaborative projects, does not explain the co-ordination of RDM responsibilities across partners.</li> <li>(3) Does not indicate who is responsible for the DMP and its revisions.</li> </ul>		



<b>6b</b> What resources (for example financial and time) will be dedicated to RDM and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re- usable)?	(1) Explain how the necessary resources for all RDM activities have been costed in (e.g. storage costs, hardware costs, staff time, costs of preparing data for deposit, and repository charges).	(1) Clearly explains how the necessary resources for all RDM activities have been costed in (e.g. storage costs, hardware costs, staff time, costs of preparing data for deposit, and repository charges).	(1) Insufficiently and/or unclearly explains how the necessary resources for all RDM activities have been costed in (e.g. storage costs, hardware costs, staff time, costs of preparing data for deposit, and repository charges).	(1) Does not explain how the necessary resources for all RDM activities have been costed in (e.g. storage costs, hardware costs, staff time, costs of preparing data for deposit, and repository charges).
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