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Annotated ERC DMP template for the University of Copenhagen (UCPH)

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Comments: based on “ERC Data Management Plan Template” https://erc.europa.eu/sites/default/files/document/file/ERC-Data-Management-Plan.docx

The template and all guidance are also available in the DeiC DMP tool for UCPH users: https://dmp.deic.dk/

Horizon Europe: What is required?

As an ERC grant holder funded under a Horizon Europe ERC Work Programme, whose project generates research data, you are required to:

- ***Establish a data management plan (DMP)** and submit it as a deliverable of the project within the first six months of your project. Note that no DMP is needed at the application stage. You may justify in your DMP why you may not be able to provide open access to some or all data generated in the project, following the principle 'as open as possible as closed as necessary'. Acceptable reasons are in particular if providing open access would go against your legitimate interests, including regarding commercial exploitation, or if it would be contrary to any other constraints, in particular the EU competitive interests or your obligations under the grant agreement.*
- *As soon as possible and within the deadlines set out in the DMP, deposit the data in a trusted repository.*
- ***Ensure open access** to the deposited data as **soon as possible** and within the deadlines and conditions set out in the DMP, via the repository. Access has to be provided under a Creative Commons Attribution International Licence (CC BY) or a Creative Commons Public Domain Dedication (CC 0) or a licence/tool with equivalent rights, unless justified otherwise in your DMP.*
- *Provide information via the repository about any research outputs or any other tools and instruments needed to re-use or validate the data.*
- *The deposited research data must include **detailed metadata** that must be open under a Creative Common Public Domain Dedication (CC 0) or equivalent (to the extent legitimate interests or constraints are safeguarded), and must be in line with the FAIR principles (**F**indable, **A**ccessible, **I**nteroperable and **R**e-usable), in particular machine-actionable. You also need to provide information in the metadata at least about the following: datasets (description, date of deposit, author(s), venue and embargo); Horizon Europe funding; grant project name, acronym and number; licensing terms. The metadata also have to include persistent identifiers for the dataset (e.g. DOI), for the authors involved in the ERC-action (e.g. ORCIDs) and, if possible, for their organisations (e.g. ROR IDs) and the grant (e.g. Grant DOI). Where applicable, the metadata must include persistent identifiers for related publications and other research outputs.*

You are encouraged to manage research outputs other than publications and research data also in line with the FAIR principles, to describe your efforts in the DMP and to deposit the outputs in a trusted repository. Other research outputs may include software, algorithms, code, protocols, workflows, among others.

https://erc.europa.eu/manage-your-project/open-science

	Title	UCPH Guidance
1.	**1. Summary**	
1.1	dataset reference and name	Give an overview of the research data that you will collect or generate and use in the project. Research data can be quantitative and/or qualitative. Here, you should at least describe any research data that are in digital form. Additionally, you can include physical objects, software, models, etc. You should not include 'traditional' publications in journals or books and administrative project documentation. Group the research data according to different types or as distinct data sets, e.g. by their time, place and method of collection, their overall characteristics, or by work package. Provide a meaningful name / title or identifier for each data type / data set that you use as reference throughout the remaining document. Indicate to which extent you will reuse research data that have been generated or collected in a previous project, by external partners, or that are available in a public or commercial database, repository, archive, from literature, homepages, social media, etc. Note that existing data may underlie copyright restrictions or specific terms and conditions for their access and reuse.
1.2	origin and expected size of the data generated/collected	Refer to relevant documentation, methods, software and equipment used to collect or generate the different data types / data sets. For existing data, state where and how the data can be accessed and retrieved and which persons or organizations are responsible for them. If relevant, describe how you can assess the validity, integrity and completeness of those data. For each data type / data set, give an estimate on their expected amount and volume (e.g. number of files and file sizes). If that is unknown, indicate the scope of the data collection (e.g. number of repeated measurements or simulations, number of participants in a field study, time-span and frequency of observations, etc.). Note that the management of big data might require special infrastructure and generate additional costs.
1.3	data types and formats	Identify and indicate any data that contain personal, confidential or otherwise sensitive information and that require special protection. If known, specify the file formats.

2.	**2. Making Data Findable**	
2.1	dataset description: metadata, persistent and unique identifiers e.g., DOI	Metadata provide information about the content, structure and context of research data. For each data type / data set, describe the metadata that you will create. General metadata for research data include: • Names of creators, authors and contributors • Collection dates and locations • Descriptive keywords • Definitions for abbreviations, parameters, units, etc. Metadata standards provide unambiguous and universal ways of describing research data and help others to interpret the data in the originally intended manner. Whenever possible, adhere to metadata standards that are broadly accepted and used in your research discipline. The Metadata Standards Catalog from the Research Data Alliance lists common examples: https://rdamsc.bath.ac.uk/ A persistent identifier provides a stable and permanent link to a resource that is available online. Examples for persistent identifiers are: • Digital Object Identifier (DOI) • Handle • Archival Resource Key (ARK) • Unique record identifier (UID) • Database accession number For each data type / data set, indicate whether you will deposit the data in an online repository, database or archive that issues persistent identifiers for stored items (see also Question 2 in the next Section).
3.	**Making Data Openly Accessible**	
3.1	which data will be made openly available and if some datasets remain closed, the reasons for not giving access	For each data type / data set, indicate whether you will make the data openly available to others – that means free of charge, without access restrictions and with as little legal and technical barriers as possible. Note that Horizon Europe grant holders are expected to make their data openly available by default and must state any reasons for keeping data closed or for restricting access to data. Legitimate reasons include: • Legal, ethical or contractual obligations • Matters of security or confidentiality • Commercial interests • Copyright restrictions for existing data Personal data may only be made available according to the rules set out in the General Data Protection Regulation and the Danish Data Protection Act: https://kunet.ku.dk/work-areas/research/data/personal-data/disclosure/

		Contact the Tech Transfer Office for help with the dissemination of research data underlying cooperation agreements, and for questions regarding commercialization of results, patents and Intellectual Property Rights: https://kunet.ku.dk/work-areas/research/innovation_and_business/
3.2	where the data and associated metadata, documentation and code are deposited (repository?)	For each data type / data set, indicate, whether you will upload the data to a trusted repository and refer to a general description of that repository (e.g. the repository's homepage or a related publication). The Registry of Research Data Repositories (re3data) provides a very extensive and comprehensive overview of both general and discipline-specific repositories and their main features: http://www.re3data.org/ Research data repositories are considered trustworthy when they as minimum: • Can ensure the online availability of deposited data and metadata for at least five years. • Are recognized and used by other researchers (in the same field). • Provide clear terms and conditions for providers and users of deposited data and metadata. • Are run by an active, sustainable and reputable organization. Trusted repositories also have to support the FAIR principles and must therefore: • Issue persistent identifiers. • Adhere to common metadata standards. • Make the metadata findable online. • Make the data accessible online. • Provide a standard reuse license.
3.3	how the data can be accessed (are relevant software tools/methods provided?)	For each data type / data set that you will make available (either openly or restricted), describe how others will be able to retrieve the data. Data deposited in a repository will typically be available to others for direct download (from a web portal and/or through API's). For each data type / data set that you will not make openly available, define who will be authorized to access the data and under which conditions. Describe how you will enable access to authorized users, e.g. by defining roles and permissions for folders and files on a shared network drive. Some research data repositories allow for restricted access to deposited files, meaning that access can be granted to individual users or by request only. Note that any restrictions will require a permanent contact person managing access requests also after the end of the project. For each data type / data set that uses non-standard or non-open formats, describe relevant documentation and indicate specific software (and version) and/or equipment required to open and process the data.

4.	**Making Data Interoperable**	
4.1	which standard or field-specific data and metadata vocabularies and methods will be used	For each data type / data set, refer to e.g. standards for metadata (including vocabularies, taxonomies and ontologies), file naming conventions, common formats, protocols, templates, standard procedures and best practices for documentation and dissemination of research data in your field. For metadata standards, refer also to Question 1 in Section 2. • Vocabularies provide unambiguous definitions for names, variables, parameters and other metadata. • Taxonomies structure names, variables, parameters and other metadata in a hierarchy. • Ontologies include definitions for the possible relations between names, variables, parameters and other metadata.
5.	**Increase Data Re-Use**	
5.1	what data will remain re-usable and for how long, is embargo foreseen	For each data type / data set, indicate when you will make the data available to others. Note that you may publish a description of the data and corresponding metadata even before releasing the actual data. Some research data repositories allow for applying embargo periods, during which public access to deposited files is restricted or blocked. For each data type / data set, specify the expected retention period of the data (after the end of the project). If certain data have to be discarded or deleted, indicate whether a description of those data and associated metadata will remain available. Where applicable, refer to the specifications of the chosen online repository, database, archive or catalogue on how long deposited data and metadata remain available. Note that according to UCPH's Policy for Research Data Management, data underlying publications should be available for a minimum of 5 years, see: https://research.ku.dk/integrity/documents/UCPH_Policy_for_Research_Data_Management_2022.pdf
5.2	how the data is licensed	By default, (digital) research data collected or generated in Horizon Europe projects must be made available under a Creative Commons Public Domain Dedication (CC0) waiver, or Creative Commons Attribution (CC BY 4.0) usage license (or equivalent): • CC0 is a copyright waiver that allows others to "copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission." • CC BY 4.0 allows others to freely share and adapt the work as long as they "give appropriate credit, provide a link to the license, and indicate if changes were made". For each data type / data set that you will make available to others, indicate the waiver or usage license that you will apply. For data that you will deposit in an online repository, database or archive, refer to the available options for applying waivers and usage licenses within the repository, database or archive.

		Justify any reasons for making data available under a more restrictive usage license or under non-standard terms and conditions.
5.3	data quality assurance procedures	Quality assurance processes include measures and procedures for ensuring the integrity, completeness and validity of newly generated and existing data. Where applicable, refer to standards and best practices in your field. For each data type / data set that you will make available to others, specify relevant documentation on where and how the data have been collected, processed and analyzed. Describe how the documentation will be made available to others (e.g. within the data, as part of the description of the data, in the associated metadata, in a ReadMe file or as references to separate publications).
6.	**Allocation of Resources and Data Security**	
6.1	estimated costs for making the project data open access and potential value of long-term data preservation	Costs for managing research data can relate to infrastructure (e.g. for additional storage or increased security), licenses (e.g. for software or databases) and staff (data manager, programmer, trainer, etc.), depending on the types and amounts of material and data and the complexity of the project. These extensive guidelines from Utrecht University can help you estimate costs for research data management: https://www.uu.nl/en/research/research-data-management/guides/costs-of-data-management Refer to the Grant Agreement for eligible costs. Indicate how you will cover any costs for research data management in your project that are not covered or that exceed the funds provided through the grant.
6.2	procedures for data backup and recovery	Note that you might use different types of infrastructure solutions at different stages in the project and for different purposes (e.g. for data analysis, sharing and preservation) and that you should adapt the security provisions accordingly. Find an overview of UCPH's storage and sharing solutions on the Research Portal: https://kunet.ku.dk/work-areas/research/data/facilities-for-data-storage-and-sharing-in-active-projects/ Research projects containing personal data and biobanks must be registered in UCPH's joint record of biobanks and record of research projects containing personal data, using a specific registration form: https://kunet.ku.dk/work-areas/research/data/personal-data/personal-data-in-research-projects-and-biobanks/ Projects involving personal data must also carry out a risk assessment. In some cases with a high risk for data subjects, a Data Protection Impact Assessment (DPIA) is required as well. Find more information about risk and impact assessments on the Research Portal: https://kunet.ku.dk/work-areas/research/data/personal-data/impact-assessment/

6.3	transfer of sensitive data and secure storage in repositories for long term preservation and curation	Legal, ethical and contractual obligations as well as any other concerns due to sensitivity, confidentiality and security might restrict the sharing of research data outside the project. Refer to ethical approvals and cooperation agreements as well as the project's ethics deliverables, where relevant. Find UCPH's guidelines and requirements for research involving personal data on the Research Portal: https://kunet.ku.dk/work-areas/research/data/personal-data/