European Commission: Horizon 2020 DMP - Initial DMP

1. Data summary

Provide a summary of the data addressing the following issues:

- State the purpose of the data collection/generation
- Explain the relation to the objectives of the project
- Specify the types and formats of data generated/collected
- Specify if existing data is being re-used (if any)
- Specify the origin of the data
- State the expected size of the data (if known)
- Outline the data utility: to whom will it be useful

2. FAIR data

2.1 Making data findable, including provisions for metadata:

- Outline the discoverability of data (metadata provision)
- Outline the identifiability of data and refer to standard identification mechanism. Do you make use of persistent and unique identifiers such as Digital Object Identifiers?
- Outline naming conventions used
- · Outline the approach towards search keyword
- Outline the approach for clear versioning
- Specify standards for metadata creation (if any). If there are no standards in your discipline describe what metadata will be created and how

Guidance:

The Research Data Alliance provides a <u>Metadata Standards Directory</u> that can be searched for discipline-specific standards and associated tools.

2.2 Making data openly accessible:

- Specify which data will be made openly available? If some data is kept closed provide rationale for doing so
- Specify how the data will be made available
- Specify what methods or software tools are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g. in open source code)?
- Specify where the data and associated metadata, documentation and code are deposited
- Specify how access will be provided in case there are any restrictions

Guidance:

Participating in the ORD Pilot does not necessarily mean opening up all your research data. Rather, the ORD pilot follows the principle "as open as possible, as closed as necessary " and focuses on encouraging sound data management as an essential part of research best practice.

The Commission recognises that there are good reasons to keep some or even all research data generated in a project closed. Where data need to be shared under restrictions, explain why, clearly separating legal and contractual reasons from voluntary restrictions.

Note that in multi-beneficiary projects it is also possible for specific beneficiaries to keep their data closed if relevant provisions are made in the consortium agreement and are in line with the reasons for opting out.

The <u>Registry of Research Data Repositories</u> provides a useful listing of repositories that you can search to find a place of deposit.

2.3 Making data interoperable:

- Assess the interoperability of your data. Specify what data and metadata vocabularies, standards or methodologies you will follow to facilitate interoperability.
- Specify whether you will be using standard vocabulary for all data types present in your data set, to allow inter-disciplinary interoperability? If not, will you provide mapping to more commonly used ontologies?

Guidance:

Inteoperability means allowing data exchange and re-use between researchers, institutions, organisations, countries, etc. (i.e. adhering to standards for formats, as much as possible compliant with available (open) software applications, and in particular facilitating recombinations with different datasets from different origins.

2.4 Increase data re-use (through clarifying licenses):

- Specify how the data will be licenced to permit the widest reuse possible
- Specify when the data will be made available for re-use. If applicable, specify why and for what period a data embargo is needed
- Specify whether the data produced and/or used in the project is useable by third parties, in particular after the end of the project? If the re-use of some data is restricted, explain why
- Describe data quality assurance processes
- Specify the length of time for which the data will remain re-usable

Guidance:

The <u>EUDAT B2SHARE</u> tool includes a built-in license wizard that facilitates the selection of an adequate license for research data.

Reasons for embargoes may include time to publish or seek patents. If an embargo is sought, specify why and for how long, bearing in mind that research data should be made available as soon as possible.

3. Allocation of resources

Explain the allocation of resources, addressing the following issues:

- Estimate the costs for making your data FAIR. Describe how you intend to cover these costs
- Clearly identify responsibilities for data management in your project
- Describe costs and potential value of long term preservation

Guidance:

Note that costs related to open access to research data are eligible as part of the Horizon 2020 grant (if compliant with the Grant Agreement conditions).

Costs are eligible for reimbursement during the duration of the project under the conditions defined in the H2020 Grant Agreement, in particular <u>Article 6</u> and <u>Article 6.2.D.3</u>, but also other articles relevant for the cost category chosen.

4. Data security

Address data recovery as well as secure storage and transfer of sensitive data

Guidance:

Also consider whether the data is safely stored in certified repositories for long term preservation and curation.

5. Ethical aspects

To be covered in the context of the ethics review, ethics section of DoA and ethics deliverables. Include references and related technical aspects if not covered by the former

Guidance:

Consider whether there are any ethical or legal issues than can have an impact on data sharing. For example, is informed consent for data sharing and long term preservation included in questionnaires dealing with personal data?

6. Other

Refer to other national/funder/sectorial/departmental procedures for data management that you are using (if any)

European Commission: Horizon 2020 DMP - Detailed DMP

1. Data summary

State the purpose of the data collection/generation

Explain the relation to the objectives of the project

Specify the types and formats of data generated/collected

Specify if existing data is being re-used (if any)

Specify the origin of the data

State the expected size of the data (if known)

Outline the data utility: to whom will it be useful

2.1 Making data findable, including provisions for metadata [FAIR data]

Outline the discoverability of data (metadata provision)

Outline the identifiability of data and refer to standard identification mechanism. Do you make use of persistent and unique identifiers such as Digital Object Identifiers?

Outline naming conventions used

Outline the approach towards search keyword

Outline the approach for clear versioning

Specify standards for metadata creation (if any). If there are no standards in your discipline describe what metadata will be created and how

Guidance:

The Research Data Alliance provides a <u>Metadata Standards Directory</u> that can be searched for discipline-specific standards and associated tools.

2.2 Making data openly accessible [FAIR data]

Specify which data will be made openly available? If some data is kept closed provide rationale for doing so

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Participating in the ORD Pilot does not necessarily mean opening up all your research data. Rather, the ORD pilot follows the principle "as open as possible, as closed as necessary " and focuses on encouraging sound data management as an essential part of research best practice.

The Commission recognises that there are good reasons to keep some or even all research data generated in a project closed. Where data need to be shared under restrictions, explain why, clearly separating legal and contractual reasons from voluntary restrictions.

Note that in multi-beneficiary projects it is also possible for specific beneficiaries to keep their data closed if relevant provisions are made in the consortium agreement and are in line with the reasons for opting out.

Specify how the data will be made available

Guidance:

For example by deposition in a repository. The <u>Registry of Research Data Repositories</u> provides a useful listing of repositories that you can search to find a place of deposit. If you plan to deposit in a repository, it is useful to explore appropriate arrangements with the identified repository in advance.

Specify what methods or software tools are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g. in open source code)?

Specify where the data and associated metadata, documentation and code are deposited

Specify how access will be provided in case there are any restrictions

Guidance:

For example is there a need for a data access committee.

2.3 Making data interoperable [FAIR data]

Assess the interoperability of your data. Specify what data and metadata vocabularies, standards or methodologies you will follow to facilitate interoperability.

Guidance:

Inteoperability means allowing data exchange and re-use between researchers, institutions, organisations, countries, etc. (i.e. adhering to standards for formats, as much as possible compliant with available (open) software applications, and in particular facilitating recombinations with different datasets from different origins.

Specify whether you will be using standard vocabulary for all data types present in your data set, to allow inter-disciplinary interoperability? If not, will you provide mapping to more commonly used ontologies?

2.4 Increase data re-use (through clarifying licenses) [FAIR data]

Specify how the data will be licenced to permit the widest reuse possible

Guidance:

The <u>EUDAT B2SHARE</u> tool includes a built-in license wizard that facilitates the selection of an adequate license for research data.

Specify when the data will be made available for re-use. If applicable, specify why and for what period a data embargo is needed

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Specify whether the data produced and/or used in the project is useable by third parties, in particular after the end of the project? If the re-use of some data is restricted, explain why

Describe data quality assurance processes

Specify the length of time for which the data will remain re-usable

3. Allocation of resources

Estimate the costs for making your data FAIR. Describe how you intend to cover these costs

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Clearly identify responsibilities for data management in your project

Describe costs and potential value of long term preservation

Guidance:

Consider who decides what data will be kept and for how long

4. Data security

Address data recovery as well as secure storage and transfer of sensitive data

Guidance:

Also consider whether the data is safely stored in certified repositories for long term preservation and curation.

5. Ethical aspects

To be covered in the context of the ethics review, ethics section of DoA and ethics deliverables. Include references and related technical aspects if not covered by the former

Guidance:

Consider whether there are any ethical or legal issues than can have an impact on data sharing. For example, is informed consent for data sharing and long term preservation included in questionnaires dealing with personal data?

6. Other

Refer to other national/funder/sectorial/departmental procedures for data management that you are using (if any)

European Commission: Horizon 2020 DMP - Final review DMP

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