



#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

Open data and data management in the proposal

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Research and
Innovation

Open research data applicable by default

- Open access to research data is applicable by default in H2020

*"Grant beneficiaries under this WP part will engage in research data sharing **by default**, as stipulated under **Article 29.3** of the H2020 Model Grant Agreement (including the creation of a Data Management Plan). Participants **may however opt** out of these arrangements, both before and after the signature of the grant agreement."*

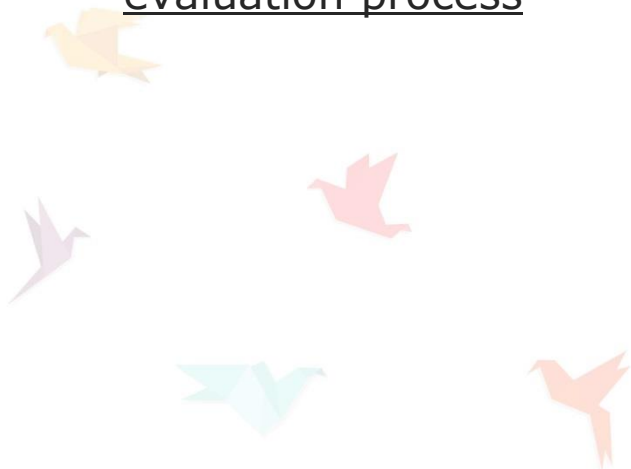
- **"as open as possible, as closed as necessary"** principle
 - Not necessary to open all research data
- Sound and FAIR data management is an essential part of **good research practice** and **research integrity**
 - As set out in European Code of Conduct for Research Integrity

Open research data applicable by default


- Types of data covered in Grant Agreement Art. 29.3:
Digital research data generated and/or collected during the action:
 - **underlying data:** *the data, including associated metadata, needed to validate the results presented in scientific publications*
 - **any other data** *including the associated metadata, as specified in the Data Management Plan*
- If you participate to ORDP you can still decide to keep certain data closed, eg for patenting and commercial exploitation, security issues, personal data protection, ...
 - **Partial opt-out** is possible, this needs to be specified in the Data Management Plan

Open research data applicable by default

- Possibility to *opt-out* during application stage or later
 - Applicable to RIA/IA/CSA full proposals (single stage and second stage):
Proposal submission form Part A – 5. Call specific questions
 - If you opt out: reason(s) need to be clarified
 - Participation to the Extended Open Research Data Pilot is not part of the evaluation process



Proposal submission form Part A

 European Commission Research & Innovation - Participant Portal Proposal Submission Forms	Go to <input type="text"/>
Proposal ID	Acronym

5 - Call specific questions

Extended Open Research Data Pilot in Horizon 2020

If selected, applicants will by default participate in the [Pilot on Open Research Data in Horizon 2020¹](#), which aims to improve and maximise access to and re-use of research data generated by actions.

However, participation in the Pilot is flexible in the sense that it does not mean that all research data needs to be open. After the action has started, participants will formulate a [Data Management Plan \(DMP\)](#), which should address the relevant aspects of making data FAIR – findable, accessible, interoperable and re-usable, including what data the project will generate, whether and how it will be made accessible for verification and re-use, and how it will be curated and preserved. Through this DMP projects can define certain datasets to remain closed according to the principle "as open as possible, as closed as necessary". A Data Management Plan does not have to be submitted at the proposal stage.

Furthermore, applicants also have the possibility to opt out of this Pilot completely at any stage (before or after the grant signature). In this case, applicants must indicate a reason for this choice (see options below).

Please note that participation in this Pilot does not constitute part of the evaluation process. Proposals will not be penalised for opting out.

We wish to opt out of the Pilot on Open Research Data in Horizon 2020.	<input type="radio"/> Yes	<input checked="" type="radio"/> No
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If opting out please indicate the reason(s) for not being able to participate in the Pilot:

Proposal submission form Part A

If opting out please indicate the reason(s) for not being able to participate in the Pilot:

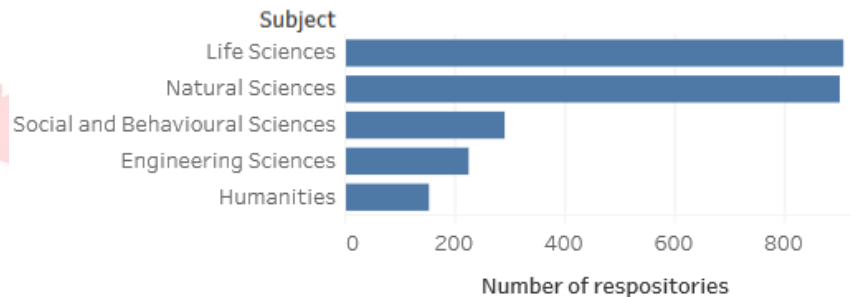
- the project does not generate any data	<input type="checkbox"/>
- to allow the protection of results (e.g. patenting)	<input type="checkbox"/>
- incompatibility with the need for confidentiality linked to security	<input type="checkbox"/>
- incompatibility with privacy/data protection	<input type="checkbox"/>
- achievement of the project's main aim would be jeopardised	<input type="checkbox"/>
- other legitimate reasons	<input type="checkbox"/>
Please specify the reason:	
<div style="border: 1px solid black; height: 80px;"></div>	
Remaining characters	300

Grant Agreement Art 29.3 Open data requirements

1. **Deposit** the research data preferably in a research data **repository**.

- Repositories may be subject-based/thematic, institutional or centralised
- Useful resources:
 - www.re3data.org = Registry of Research Data Repositories
 - www.zenodo.org = free open repository

re3data.org
REGISTRY OF RESEARCH DATA REPOSITORIES



Grant Agreement Art 29.3 Open data requirements

2. Take measures to enable third parties to access, mine, exploit, reproduce and disseminate (free of charge for any user) the data

- Explain the conditions and the terms of use
- Apply a suitable **open data license**
 - Creative Commons Licences www.creativecommons.org
 - <http://opendefinition.org/guide/data>
 - [EUDAT B2SHARE tool](#) includes a license wizard facilitating the selection of an adequate license for research data.
- Provide metadata; make data citable
- Provide information & methods / software tools to access and use the data

Grant Agreement Art 29.3 Open data requirements

3. Data Management Plan

- Describe the data management lifecycle for the data to be collected, processed and generated by the project and explain how you will make the research data FAIR (Findable, Accessible, Interoperable, Reusable):
 - Handling of research data during and after the end of the project
 - What data will be collected, processed and/or generated
 - Which data will be shared/made open access; provide reasons for not sharing certain data
 - How will data be curated and preserved
- First version to be submitted within first 6 months = Deliverable (month 6)
- Needs to be updated over the course of the project

Data management in proposal preparation and evaluation

- Data management is evaluated under the impact award criterion:
 - Only applicable to RIA/IA/CSA full proposals (single stage & second stage)
 - *Quality of the proposed measures to exploit and disseminate the project results (including management of IPR) **and to manage research data where relevant.***
- Data management should be addressed in:

Project proposal Part B : Technical annex

Section 2.2 Measures to maximise impact

a) Dissemination and exploitation of results

- *As relevant, include information on how the participants will manage the research data generated and/or collected during the project*

Data management in proposal preparation and evaluation

- Not expected to have a fully developed Data Management Plan
 - First version of DMP (Deliverable in month 6), updates during project lifetime
- Following aspects should be addressed, as relevant:
 - What **types of data** will be collected, processed, generated?
 - What **standards** will be used?
 - How will the data be **exploited and/or shared/made accessible** for verification and re-use? If data cannot be made available, explain why.
 - How will the data be **curated and preserved**, including after the end of the project?
- Data management should be aligned with the dissemination & exploitation strategy and Intellectual Property Rights (IPR) requirements

Open access to publications in proposal preparation

- Open access to publications should be addressed in:

Project proposal Part B : Technical annex

Section 2.2 Measures to maximise impact

a) Dissemination and exploitation of results

- *Outline the strategy for knowledge management and protection. Include **measures to provide open access** (free on-line access, such as the 'green' or 'gold' model) to peer reviewed scientific publications which might result from the project.*

Allocation of resources

- Costs related to open access to data and publications are eligible
- Ensure **resource and budgetary planning** for:

Research Data Management

- Person(s) responsible for data management
 - Clearly identify roles and responsibilities in the proposal
- Deliverable for initial Data Management Plan (month 6), updates needed during the project lifetime
- Managing data storage, flows and exchange within the project (or external)
- Include the resources needed for making data FAIR, data storage, data security, data quality assurance, ...

Open access to publications

Data standards

- Where relevant
 - Link your project with ongoing standardization work
 - Involve standardization partner
- Useful links:
 - CEN-CENELEC Guidance on how to integrate standards in H2020 proposals

http://www.cencenelec.eu/news/publications/Publications/Standards_Horizon2020.pdf

- Metadata Standards Directory <http://rd-alliance.github.io/metadata-directory/standards/>

References to open research data in the SC5 Work Programme Introduction

- *All activities funded under this WP are **encouraged** - wherever applicable - **to use data** resulting from or made available through initiatives of the EC:*
 - GEOSS and Copernicus data, products and information
 - Geo-localization services and data provided by EGNOS and GALILEO
 - ESA Earth Science data
 - *All activities related to **Earth observation data and other spatial data** should comply at best with :*
 - INSPIRE - Infrastructure for Spatial Information in the EC
- <http://inspire.ec.europa.eu/>
- Follow the GEOSS Data Sharing Principles & to register data in GEO data portal

<http://www.earthobservations.org>

References to open research data in the SC5 Work Programme Introduction

- *Beneficiaries are also encouraged to use **FIWARE** for some or all of their platform developments, when relevant*
 - platform offers open source tools (Application Programming Interfaces) for processing & analysing Big Data, connecting to Internet of Things
 - technical support and online training
 - www.fiware.org



Useful links and references

Data management

- H2020 Participant Portal – open access and data management
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-access_en.htm
- H2020 Guidelines on FAIR Data Management in Horizon 2020
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf
- EUDAT initiative: services, infrastructure and training on data management
<https://eudat.eu/>

Open access to publications

- Open Access Infrastructure for Research in Europe (OpenAIRE):
www.openaire.eu
- Registry of Open Access Repositories: <http://roar.eprints.org/>
- Directory of Open Access Repositories: <http://www.openoar.org/>

Thank you!

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www.ec.europa.eu/research

Participant Portal

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

Sli.do #H2020SC5 → Room Open Data and Data management

SUPPORT → Research Enquiries Service