



D6.3 – Data Management Plan (Issue 1)

Document Author(s)	Giota Sakellariou (EASN-TIS)
Document Contributor(s)	All Partners

Abstract

Impact Monitor aims at developing a coherent and holistic impact assessment framework and toolbox to support the European Commission in making science-based informed decisions for technology and policy assessment of the environmental, economic, and societal impact of European aviation R&I. In the frame of such a challenging project, the need to draw up a solid data management plan (DMP) is imperative. This deliverable discusses the first version of the Impact Monitor DMP and outlines an early-stage team effort to define the strategy upon which the reused and generated data will be appropriately managed in line with the provisioned data management policy and the FAIR principles. The FAIR principles, which stand for Findable, Accessible, Interoperable, and Reusable, provide a framework for ensuring that data is effectively managed and can be easily shared and utilized. The Impact Monitor DMP aims to adhere to these principles by establishing clear guidelines for data usage, storage, and sharing within the project. Additionally, the DMP will outline procedures for data documentation and metadata creation to enhance the discoverability and usability of the collected data. The current document will be frequently revised, depending on the data generation rate, and updated until the end of the project.

Keywords

Data management, FAIR principles, Open Science, DMP



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Authoring & Approval

Prepared by		
Name and Organization	Position and title	Date
Giota Sakellariou (EASN-TIS)	D&C Manager, Mrs	06/07/2023

Reviewed by		
Name and Organization	Position and title	Date
Michel van Eenige (NLR)	WP1 Lead, Dr	10/07/2023
Prajwal Shiva Prakasha (DLR)	Project Coordination Team, Mr	19/07/2023
Patrick Ratei (DLR)	Project Coordination Team, Mr	19/07/2023

Approved for submission by		
Name and Organization	Position and title	Date
Prajwal Shiva Prakasha (DLR)	Project Coordination Team, Mr	31/07/2023

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Table of Acronyms

Acronym	Description / Meaning
ATS	Air Transport System
CA	Consortium Agreement
CC 0	Creative Commons Public Domain Dedication
CC BY	Creative Commons Attribution International Public License
CDO	Continuous Descent Operations
CINEA	European Climate, Infrastructure and Environment Executive Agency
CPACS	Common Parametric Aircraft Configuration Schema
DA	Dashboard Application
DMP	Data Management Plan
DOI	Digital Object Identifier
EC	European Commission
EOSC	European Open Science Cloud
EU	European Union
FAIR	Findable, Accessible, Interoperable, Reusable
GA	Grant Agreement
IP	Intellectual Property
IPR	Intellectual Property Rights
MSBE	Model-Based System Engineering
OA	Open Access
PID	Persistent Identifier
R&I	Research & Innovation
SAF	Sustainable Aviation Fuels
URL	Uniform Resource Locator
WP	Work Package

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1. INTRODUCTION

According to the European Commission (EC), Data Management Plans (DMPs) are a key element of efficient data management. A DMP describes the data management life cycle for the data to be collected, processed and/or generated by a research project. In general terms, the research data should be 'FAIR', which means findable, accessible, interoperable, and re-usable. These principles precede implementation choices and do not necessarily suggest any specific technology, standard, or implementation.

As part of making research data FAIR, a DMP includes information on:

- the handling of research data during & after the end of the project,
- what data will be collected, processed and/or generated,
- which methodology & standards will be applied,
- whether data will be shared/made open access, and
- how data will be curated & preserved (including after the end of the project).

A DMP is required for all EU-funded projects, and Impact Monitor is not an exception. The Impact Monitor consortium is dedicated in complying with the open-access (OA) and FAIR data management practices that are mandatory by the Granting Authority; in this frame, a first version of a DMP is elaborated within the first six months of the project, as part of this deliverable. The DMP is a living document and shall be updated over the course of the project whenever significant changes arise, including new data, changes in consortium policies (e.g., new innovation potential, decision to file for a patent), or changes in consortium composition and external factors (e.g., new consortium members joining or old members leaving). An updated, final DMP will be delivered at the end of the project for the final review, as part of D6.5 – Data Management Plan (Issue 2).

This report describes the initial DMP for the Impact Monitor project, which is funded by the Horizon Europe Programme under Grant Agreement number 101097011. The purpose of the DMP is to provide an overview of all datasets collected and generated by the project and to define the consortium's data management policy that is used regarding these datasets. Consequently, the deliverable is structured in three sections:

- Section 2 elaborates on the main principles upon which the data management policy for the Impact Monitor project is based on.
- Section 3 focuses on the DMP per Impact Monitor partner, constituting the overall DMP, and reports how all the expected data sets will be diffused and protected following the principles of Section 2.
- Section 4 concludes by summarizing the key points of this first version of the DMP and the plans for the next update.

2. DATA MANAGEMENT POLICY

Impact Monitor aims at developing a coherent and holistic impact assessment framework and toolbox to support the European Commission (EC) in making science-based informed decisions for technology and policy assessment of the environmental, economic, and societal impact of European aviation R&I. Specifically, the assessments will focus on greenhouse-gas emissions, local air-quality, and noise. The project focuses on demonstrating the collaborative assessment framework through example use cases at aircraft, airport, and air transport system level. The underlying system of systems architecting process will be supported by digital technologies for collaborative engineering.

The major developments within the Impact Monitor project can be divided into three distinct pillars:

1. Impact Monitoring Toolbox and interfaces to R&I;
2. Technical implementation and demonstration of the impact monitoring capability;
3. Dissemination and communication, including open-science practices and research data management.

Focusing on the third pillar, it is obvious that the application of open-science practices and data management constitute an integral part of the project's implementation.

2.1 Open-science practices

During the project implementation, a large amount of information will be collected, and a broad set of data will be produced. Bearing in mind the importance of Open Science and Open Innovation, the project will embrace these practices to foster a collaborative and open environment that improves the quality, efficiency, and responsiveness of the research. Sharing the project's work progress, results, and selected datasets will be carried out throughout the project. This will advance public knowledge and contribute to the research community by facilitating further research that builds on the findings. This will result in knowledge that can be leveraged to expedite solutions to both project challenges and others research challenges. In coherence with the data management plan, the Impact Monitor consortium will elaborate on an open science model for selecting findings delivered by the project. Specifically, the open outcomes of Impact Monitor will be the subset of project documents which can be classified as publicly releasable, and presentations veering project results to be communicated at public fairs, exhibitions, and conferences.

The results produced during the project which can be publicly released will be published in open access. Open access will be granted to selected research data underlying the scientific publications. Some tools that may be used for releasing information could include: a project-dedicated community in ZENODO (for both publications and open/public datasets), a GitHub profile for open-source digital tools, the European Open Science Cloud (EOSC) (for hosting and processing research data) and the Open Research Europe open-access publishing platform for the publication of research stemming from Horizon Europe funding across all subject areas.



2.2 Research data management

This process within the research lifecycle includes the organisation, storage, preservation, security, quality assurance, allocation of persistent identifiers (PIDs) and rules and procedures for sharing of data including licensing.

The beneficiaries will manage the digital research data generated in the action responsibly, in line with the FAIR principles and by taking all the following actions:

- establish a data management plan (and regularly update it) and deposit as soon as possible the data in a trusted repository;
- ensure open access — via the repository — to the deposited data, under the latest available version of the Creative Commons Attribution International Public License (CC BY) or Creative Commons Public Domain Dedication (CC 0) or a licence with equivalent rights, following the principle ‘as open as possible as closed as necessary’, unless providing open access would in particular:
 - be against the beneficiary’s legitimate interests, including regarding commercial exploitation, or
 - be contrary to any other constraints, in particular the EU competitive interests or the beneficiary’s obligations; if open access is not provided (to some or all data), this must be justified in the DMP;
- provide information via the repository about any research output or any other tools and instruments needed to re-use or validate the data.

Metadata of deposited data will be open under a Creative Commons Public Domain Dedication (CC 0) or equivalent (to the extent legitimate interests or constraints are safeguarded), in line with the FAIR principles (in particular machine-actionable) and provide information at least about the following:

- datasets (description, date of deposit, author(s), venue and embargo);
- Horizon Europe or Euratom funding;
- grant project name, acronym and number;
- licensing terms;
- persistent identifiers for the dataset, the authors involved in the action, and, if possible, for their organisations and the grant.

Where applicable, the metadata will include persistent identifiers for related publications and other research outputs.

2.3 Compliance with the FAIR Principles

According to the Horizon Europe guidelines, projects should provide open access to research data and outputs. In this frame, the Impact Monitor consortium demonstrates compliance with the relevant guidelines of the EC for effective data management via sound implementation of the FAIR principles, advocating for research data to be produced, collected, and processed within Impact Monitor being

Findable, Accessible, Interoperable and Reusable. Information classified as publicly releasable will adhere to these principles. A preliminary identification of the data types expected from Impact Monitor is as follows: 1) Numeric, 2) Visual, 3) Simulated (model, model type, computer code, data type, format), 4) Discipline-Specific Information, 5) Reused-Data, 6) Instrument-specific, and 7) Text. To ensure compliance with the **FAIR principles**, the Impact Monitor consortium will need to apply the specific measures described below:

- **Findability of data/research outputs:** Machine-readable metadata will accompany the generated datasets following standard metadata schemes. Both data and metadata will be assigned a globally unique and persistent identifier (e.g., DOI) and will be indexed in a searchable resource. Potential trusted repositories, for openly accessible Impact Monitor data are: ZENODO, Figshare, EOSC, Open Research Europe, or partner institutional repositories.
- **Accessibility of data/research outputs:** An essential measure for managing IPR considerations is the Consortium Agreement (CA) which will be signed between the Impact Monitor partners and which, among others, will describe the main IPR and Knowledge Management rules. For the Impact Monitor data and research outputs that are characterized as openly accessible, the consortium partners will follow two main routes: 1) Self-archiving at trusted repositories as mentioned above (e.g., Zenodo, Figshare, etc), and 2) Open access (OA) publishing, as required by Horizon Europe, to all publicly released scientific publications resulting from the project. OA will also be provided to all publicly releasable documents, deliverable reports and produced dissemination/communication materials via the Impact Monitor website.
- **Interoperability of data/research outputs:** The deposition of data, available in standardized formats, will be based on a DataCite standard characterized by controlled vocabulary, depending on the different types of metadata: a) Descriptive metadata (Author, Title, Abstract, Date, Location, Time, Data collection method), b) Structural metadata (links to related digital objects), c) Technical metadata (data format, hardware/software used, calibration, version, authentication, encryption, metadata standard).
- **Reusability of data/research outputs:** The project data will remain reusable by submitting it in standardized, wide-spread data formats. Possible embargo periods and specific restrictions regarding the re-use will be defined during the project implementation and will be reported in the DMP. The reusable data will be released with a clear and accessible data usage license (Open Definition license) which will allow further processing.
- All Impact Monitor partners will be responsible for ensuring that project-related data/research outputs are safely handled and stored.

Each Impact Monitor Partner has provided an introductory DMP, describing in general the project data types and formats along with their expected size, the strategy of how they will be rendered FAIR, the preferable open data sets, and the type of documentation that could validate data analysis and facilitate data reuse. These detailed DMPs of the project partners are summarized in the following section.



3. DATA MANAGEMENT PLAN

This section provides a preliminary description of the DMP for the Impact Monitor project, that adheres to the principles covered in Section 2. The individual DMPs of the partners that have specified a preliminary plan for how they will share and safeguard their created and acquired data sets, combined with a tracking list detailing the types and formats of the shared information, constitute the overall Impact Monitor DMP. While the project is still in its early stages, the procedure and timeline for making the data sets accessible are currently unclear. Though it is provisioned that this DMP (Issue 1) will be updated until the end of the project, when a final 2nd Issue will be released.

3.1 Data Summary

The use of existing tools and data is in line with the project methodology and objectives, focusing on the development of a collaborative framework and toolbox using already-available tools and building on existing knowledge.

It is planned to reuse existing data to establish connections between the different tools, initiate the collaborative assessment workflows as part of the demonstration use cases, and for dissemination purposes. The pre-existing data will include disciplinary data from assessment tools and collaborative assessment data from the workflow, mostly acquired from the tools provided by other partners and other public resources.

Data is expected to be in various formats, including:

- .xml,
- .mdax
- .csv
- .kml
- .mpg
- .png
- .jpg
- .svg
- .raw
- .pdf
- .so6.
- .stp
- .txt
- .pptx
- .xlsx

These data may include input and output data associated with airport modelling, aircraft movements simulation, and noise, emissions, and third-party risk calculations, as well as data derived from previous projects and open-source studies. Other data will comprise data web public and institutional information at national and European level, which may be useful for regulatory and industrial stakeholders involved in air transport development perspectives and innovative opportunities, and data from public repositories about air space and air traffic (such as Eurocontrol). It is possible to reuse data on air traffic, weather, air space structure and air space costs, while aircraft and engine data may be reused for the development and validation of the dashboard components.

Generated data may include trajectory points, and tool-specific data combinations, aiming to enable the seamless simulations and runs of the proposed workflow.

The data size will mainly be below 10 MB and sometimes below 100 MB for disciplinary input and output data; in total, the size is not expected to exceed 1 GB.

The data reused or generated within the project may be useful for various stakeholders, including the public, the EC, aircraft design entities, researchers, regulatory and industrial stakeholders involved in air transport development perspectives and innovative opportunities, and sectors outside aviation. In general, data is reused and generated to fulfill the requirement of the dashboard application, i.e., to help researchers, scientists, analysts, and policy makers to be able to perform required studies and assessments.

3.2 FAIR Data

3.2.1 Findability

The open accessible generated data will be identified by a persistent identifier (PID), probably a DOI (Digital Object Identifier), managed via the ZENODO trusted data repository. The corresponding metadata will comprise search keywords and versioning of different releases to optimize search and potential reuse but will be discussed in detail in the final DMP.

3.2.2 Accessibility

The data model and framework will be openly available, providing open source and documentation. Some data, such as disciplinary input and output data from tools, will be closed access to the tool owners and other data will be closed access to the project team, based on the provisions of the Consortium Agreement. Other data shall be shared externally only after approval of each project partner involved in the data creation process.

The openly accessible data will be documented through the public deliverables. It will be deposited to commonly utilized trusted repositories that support data identification through DOI, including ZENODO, European Open Science Cloud (EOSC), and GitHub. Open data will be accessible through open, free, and universal protocols for information retrieval on the web, provided by the trusted repositories. Open data and metadata will be retained for the lifetime of these repositories. Should any software be required, proper information and documentation will be provided.

3.2.3 Interoperability

The project partners are dedicated in the production of interoperable data, not only within the consortium but also towards externals, using a common software used within the project. Qualified references to other data will also be determined. Consequently, the adoption of standards is highly promoted in the project, and already available standard data models are adapted to serve the project purposes.

3.2.4 Re-usability

The data model and framework will be open source and documented. The commonly utilized software is already open source, and the relevant documentation is available on the respective website. Deliverable reports will be provided for the utilisation and application of the Dashboard Application.



Regarding the reuse of data, specific restrictions will be applied in accordance with legal and contractual constraints. Some data will be closed access to the tool owners and project team only as described in the accessibility section, due to IPR restrictions. The openly accessible data will remain reusable by releasing it in standardized, wide-spread data formats, along with documentation. The data usage license (Open Definition license) that will be used for the release of the open and reusable data, as well as any further data quality assurance processes, will be discussed at consortium level, and described in the final DMP. No embargo periods or specific restrictions regarding the reuse of the open data are foreseen.

3.3 Other Research Outputs

The framework will be open access, whereas models and tools will stay disclosed at project partner level. The workflow process data is expected to stay within the project consortium, but part of the workflow results data may be made publicly available. The specific context will be based on the provisions of the Consortium Agreement. The research outputs will be available and shared via the public deliverables, the website, and the trusted repositories used. Description of the software and workflows will be provided through the public deliverable reports. Possible additional research outputs, such as specialized models and research papers, will be managed through open access databases.

3.4 Allocation of resources

The costs for making data and other research outputs FAIR are covered by the project grant, including the costs for developing and releasing the website. The selected trusted repositories are free to use and support long term preservation of data, and the coordinator provides a common working environment to facilitate consortium collaboration, without any further costs. If costs for dissemination activities become necessary, they will be covered by the project grant, the budget assigned for publications. FAIR data will be accessible for a minimum time period of 10 years; the necessary resources will be elaborated in the final DMP.

3.5 Data Security

Sensitive data produced or used in the project are stored in different repositories. Partners store unshared data on personal drive and personal cloud spaces (e.g. GitLab and GitHub). Data within the project is shared on the Teamsite (powered by Microsoft Sharepoint), which is basically a tool for collaboration within the project. The Teamsite is managed by DLR and is accessible only to invited partners with their personal accounts and credentials. Although it has an extendable storage quota and includes an automatic versioning system, the tool does not provide an archive or backup system and is therefore not meant for long-term preservation.

3.6 Ethics

There are no ethical or legal issues related to the sharing of data that according to the Project Grant Agreement should be made openly accessible (e.g. those made available through public



deliverables). However, tool outputs can be only shared within the Consortium, and often with limitations, in accordance with the Consortium Agreement.

Data will be safely stored in trusted repositories for long-term preservation and curation. Regarding the data retained by the project partners, it will be safely stored in and retrieved from the respective data servers, following each entity's internal procedures for data storage and maintenance.



4. DISCUSSION

This deliverable discusses the first version of the Impact Monitor DMP and outlines an early-stage team effort to define the strategy upon which the reused and generated data will be appropriately managed in line with the FAIR principles. Section 2 showcased the open-science practices to which the project complies, the applied methodology for research data management, and the actual measures that will be enforced to ensure that the data management is implemented in accordance with the FAIR principles, allowing data to be findable, accessible, interoperable, and reusable. Section 3 presented the preliminary strategy of how the consortium will manage, store, and make available the reused and generated datasets within the project.

From this initial DMP, it is quite clear that existing data will be exploited, along with the pre-existing software tools that the partners provide in this joint effort. The reuse of data is actually incorporated in the project's scope and objectives, for delivering the collaborative assessment workflows and the framework evaluation through the demonstration use cases. Input and output data will be in a variety of formats, basically compatible with the existing tools that the partners bring in the project, and their size is expected to be relatively small, allowing for efficient data storage.

Regarding the FAIR principles, the partners acknowledged the importance of identifying the data by a persistent identifier (PID), with DOI (Digital Object Identifier) being the most prominent option. Metadata will comprise mainly search keywords, to optimise findability. Regarding accessibility, the input and output data will be closed to the tool owners and other categories will be closed to the project team, based on the provisions of the Consortium Agreement. The openly accessible data will be stored in trusted repositories that support data identification, open and free protocols for information retrieval on the web and long-term storage. Furthermore, the consortium is dedicated in the production of interoperable data, by adopting standards and already available standard data models. Finally, due to the open-source nature of the primary software, the data model and framework will be open source and documented, which leads to increased reusability. On the other hand, models and tools will stay disclosed with each project partner, while the workflow process data is expected to stay within the project consortium. In case (part of) the workflow results data will be made publicly available, the consortium uses public deliverables, the project website, and the trusted repositories.

For making the data and other research outputs FAIR, no additional costs are foreseen. The compliance with the open-science practices and the FAIR principles is covered by the project grant. The proposed trusted repository is free for upload and download, while the common working environment within the consortium is provided by the coordinator. Data produced or reused may be stored in different repositories, with the individual partners being responsible for the safe keeping and preservation, enforcing their in-house data safety procedures. The data sharing will be supported by the common working environment, which enables access to authenticated users. Lastly, no ethical issues on data management are foreseen.

To sum up, projects partners are currently working together to develop a comprehensive framework that aligns with the FAIR principles and addresses any potential challenges or limitations. The DMP will be frequently updated to ensure effective data management throughout the entire project's



lifecycle, and the final 2nd Issue will comprise a detailed analysis of the project's data management practices and any necessary adjustments or improvements.



ANNEX – DMP QUESTIONNAIRE

All partners are invited to report their plans regarding data management so as to be in line with the mandatory Open Science (OS) practices set by the EC.
Please complete as many fields of the questionnaire as possible following **3 main steps**:

- Insert the Beneficiary name
- Provide your answers or select them from a dropdown menu, wherever available, in each of the Thematic Areas (I-VI)/ Be mindful of the helpful pop-up info in column A
- Elaborate on your answers, whenever needed, in the comment area

Beneficiary Name

I. Data summary	Answers related to the generated/reused project data	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. Will you re-use any existing data and what will you re-use it for? State the reasons if re-use of any existing data has been considered but discarded.		
2. What types and formats of data will the project generate or re-use?	<i>Example: Data types and formats simulation data (Text, graphics): .txt, .jpeg</i>	
3. What is the purpose of the data generation or re-use and its relation to the objectives of the project?		
4. What is the expected size of the data that you intend to generate or re-use?	<i>Example: 50MB</i>	
5. What is the origin/provenance of the data, either generated or re-used?	<i>Example: another research program (specify its name)</i>	
6. To whom might your data be useful ('data utility'), outside your project?		

Ila. Making data findable, including provisions for metadata	Please carefully read the explanatory notes, where available, in column A by setting your mouse cursor on the question and provide your detailed answers.	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. Data and metadata should be identified by a persistent identifier (PID). Which identifier do you plan to use?	<i>Example: DOI (Digital Object Identifier)</i>	
2. Machine-readable metadata will accompany the generated datasets following standard metadata schemes. What types metadata will be created?	<i>Example: - Documentation will include a standardized folder structure, codebooks (metadata about the data), logbooks (metadata about data processing), analysis plans, input and output files from databases and statistical software - The following metadata will be provided (as Excel file) for each experiment: Experiment number, Condition, Date, Entity, Description, Format</i>	
3. Will search keywords be provided in the metadata to optimize the possibility for discovery and then potential re-use?		
4. Will metadata be offered in such a way that it can be harvested and indexed? Which searchable resource do you plan to use for indexing?		



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Iib. Making data accessible	Please carefully read the explanatory notes, where available, in column A by setting your mouse cursor on the question and provide your detailed answers.	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. In which trusted repository will you deposit the openly accessible data?	<i>Example: ZENODO, Figshare, European Open Science Cloud, Open Research Europe, or partner institutional repositories</i>	
2. Have you explored appropriate arrangements with the identified repository where your data will be deposited?		
3. Does the repository ensure that the data is assigned an identifier? Will the repository resolve the identifier to a digital object?		
4. Will all data be made openly available? If certain datasets cannot be shared (or need to be shared under restricted access conditions), explain why, clearly separating legal and contractual reasons from intentional restrictions. Note that in multi-beneficiary projects it is also possible for specific beneficiaries to keep their data closed if opening their data goes against their legitimate interests or other constraints as per the Grant Agreement.		
5. If an embargo is applied to give time to publish or seek protection of the intellectual property (e.g. patents), specify why and how long this will apply, bearing in mind that research data should be made available as soon as possible.		
6. Will the data be accessible through a free and standardized access protocol?		
7. If there are restrictions on use, how will access be provided to the data, both during and after the end of the project?		
8. Will the collected/generated data require special software, hardware or any specific technique or tools to be accessed or "read"? If so, will it be possible to include the relevant software/ tools (e.g. in open-source code)?		
9. How long will the data remain available and findable? Will metadata be guaranteed to remain available after data is no longer available?		
10. Will documentation or reference about any software be needed to access or read the data be included?		

Iic. Making data interoperable	Please carefully read the explanatory notes, where available, in column A by setting your mouse cursor on the question and provide your detailed answers.	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. What data and metadata vocabularies, standards, formats or methodologies will you follow to make your data interoperable to allow data exchange and re-use within and across disciplines? Will you follow community-endorsed interoperability best practices? Which ones?	<i>According to the GA, the deposition of data, available in standardized formats, will be based on a DataCite standard characterized by controlled vocabulary, depending on the different types of metadata: a) Descriptive metadata, b) Structural metadata, c) Technical metadata</i>	
2. Will your data include qualified references to other data (e.g. other data from your project, or datasets from previous research)?		

Iid. Increase data re-use	Please carefully read the explanatory notes, where available, in column A by setting your mouse cursor on the question and provide your detailed answers.	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. The project data will remain reusable by submitting it in standardized, wide-spread data formats. Will you provide documentation to validate data analysis and facilitate data re-use (e.g. readme files with information on methodology, codebooks, data cleaning, analyses, variable definitions, units of measurement, etc.)?		
2. Will you pose embargo periods or specific restrictions regarding the re-use of data?		
3. The reusable data should be released with a clear and accessible data usage license (Open Definition license) which will allow further processing. Please specify the license type.		
4. Describe all relevant data quality assurance processes.		



III. Other Research Outputs	Describe the other research outputs that the project will generate	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. In addition to the management of data, beneficiaries should also consider and plan for the management of other research outputs that may be generated or re-used throughout the project. Such outputs can be either digital (e.g. software, workflows, protocols, models, etc.) or physical (e.g. new materials, antibodies, reagents, samples, etc.). Please shortly specify.		
2. How these research outputs will be managed and shared, or made available for re-use, in line with the FAIR principles?		

IV. Allocation of resources	Describe the other research outputs that the project will generate	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. What will the costs be for making data or other research outputs FAIR in the project (e.g. direct and indirect costs related to storage, archiving, re-use, security, etc.)?		
2. How will these costs be covered? Note that costs related to research data/output management are eligible as part of the Horizon Europe grant (if compliant with the Grant Agreement conditions)		
3. How will long term preservation be ensured? Discuss the necessary resources to accomplish this.		

V. Data security	How will the data be curated and preserved, including Data storage and backup, during and after the end of the project?	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. What provisions are or will be in place for data security (including data recovery as well as secure storage/archiving and transfer of sensitive data)?		
2. Will the data be safely stored in trusted repositories for long term preservation and curation?		

VI. Ethics	How will the data be curated and preserved, including Data storage and backup, during and after the end of the project?	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. Are there, or could there be, any ethics or legal issues that can have an impact on data sharing?		

VII. Other issues	How will the data be curated and preserved, including Data storage and backup, during and after the end of the project?	Comment Area: Participants are encouraged to elaborate here on their answers whenever it is needed
1. Do you, or will you, make use of other national/funder/sectorial/departmental procedures for data management? If yes, which ones (please list and briefly describe them)?		

