

D6.2

First Interim Data Management Plan covering ethical and data management issues

GRANT AGREEMENT N° 101059954

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Glossary

Abbreviation	Full form
APC	authors processing charge
CDI	citizen driven initiative
DMP	Data Management Plan
GA	Grant Agreement
M	month
PU	public

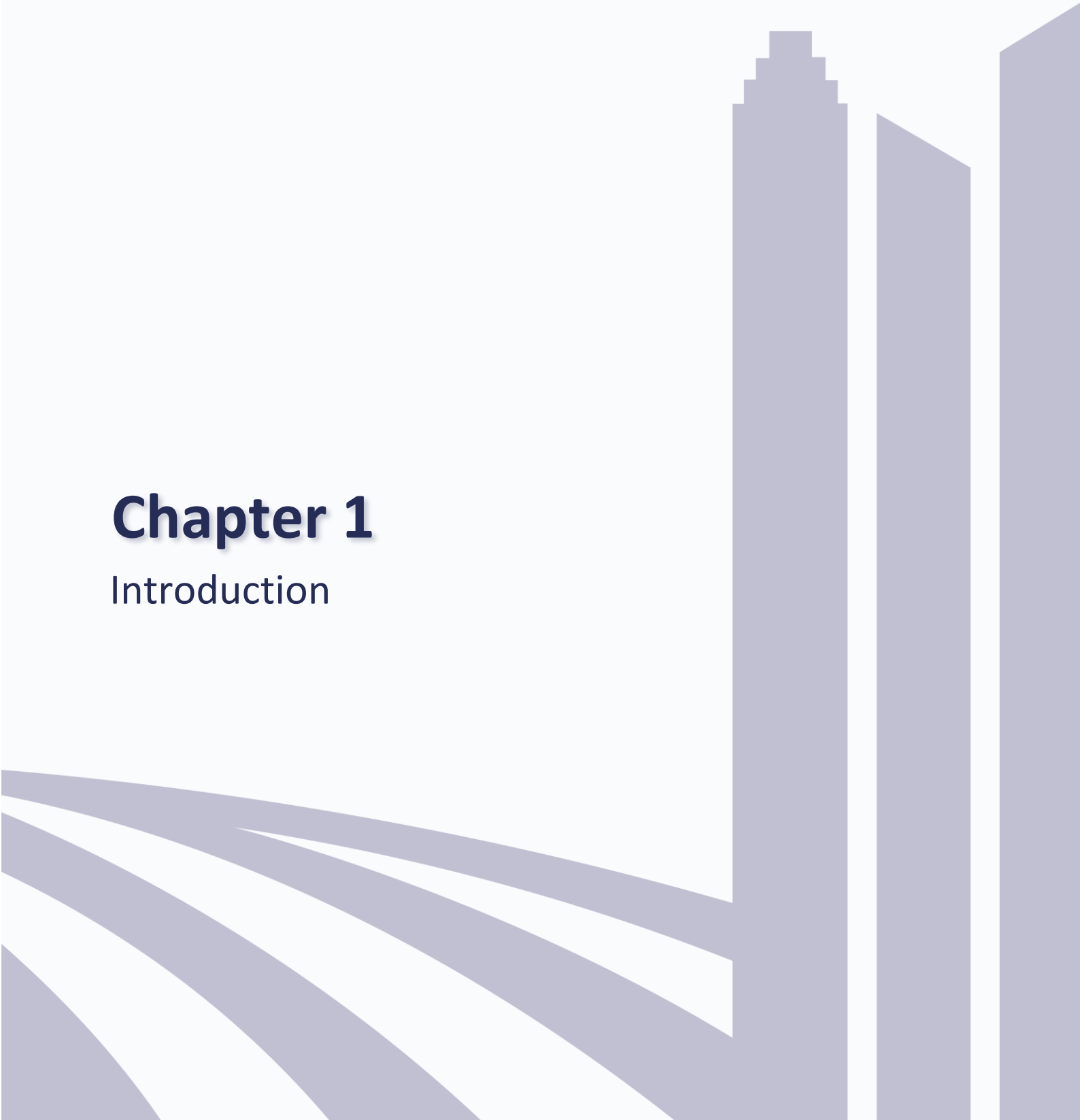
Executive Summary

The Data Management Plan (DMP) of FOSTER, Grant Agreement No. 101059954, describes the data that will be generated, analyzed, maintained, and disseminated during the lifetime of the project and how the data will be shared with the wider community. It will provide an overview of the data accessibility and its management in terms of use.

The DMP is a living document in which information can be made available on a finer level of granularity through updates as the implementation of the project progresses and when significant changes occur. Updates of the DMP are planned for month 18 (M18), M36 and M48. The format of the DMP of FOSTER complies with the Horizon Europe guidelines. In general, the intention is to make data sets as open as possible for external parties to be reused.

Chapter 1

Introduction



Chapter 1 – Introduction

In FOSTER, we develop a platform as a space for exchange and repository, which includes a carefully tailored balance between open and protected spaces for being creative and open on the one hand, and for taking care of personal data individual private strategies of research institutions, persons and citizen driven initiatives (CDIs). This platform is central in the FOSTER project and will gain, provide and managing future food system knowledge generated by FOSTER activities. The data will be useful for any stakeholder beyond the FOSTER consortium who will become part of the FOSTER project e.g. as member of a FOSTER panel, participant of the FOSTER summer schools or participant of workshops organized, or who is in principal interested in food systems transformation.

We regard Open Science Practices as crucial for openness and trust in the project. This entails several aspects:

- In order for the platform to be a living space, it needs to fully adhere to the FAIR principles Findable, Accessible, Interoperable, and Re-usable not only within the research community but across all envisaged user groups. This is not only required to maximise the use of the knowledge by diverse actors across Europe and beyond, but also to coordinate and facilitate the knowledge base and its use within the project FOSTER and beyond.
- The platform serves as a meeting point, and we will systematically involve diverse groups into the generation of the knowledge base. The project will build the knowledge base within an open access infrastructure that fully complies with the FAIR principles both for publications and the underlying data and processes. The details will be laid out in this data management plan and will be set up by DIL and SPI.
- The platform will become a knowledge portal for science-based information about food systems. And of course, due to the nature of the portal, existing data and knowledge will be re-used in this platform, to describe the status quo but also as basis to generated new knowledge (e.g. in foresight exercises).
- Scientific publications of the project will be Open Access gold standard preferably in Full Open Access journals, the authors processing charges (APCs) are provided in the budget.
- Furthermore, within the platform, there will be protected spaces to generate and safeguard knowledge on sensitive topics especially in the realm of security but also on questions of innovation and competitiveness.

We provide dedicated spaces for confidential exchanges among actors, e.g. consortium members, learners of the academy and CDIs to internally exchange and debate their findings. For some outcomes (e.g. survey data) the access will be restricted to selected groups and saved in secured spaces on European servers such as e.g. own clouds of DIL, Fraunhofer, Wageningen Research or Oxford University (c.f. data management security).

Ten out of 18 FOSTER partners already today practice open science and have own data repositories: DIL* (under preparation), FHG-ISI*, UOXF*, IRTA*, WR, SPI, VU, TI (under preparation), SF and IAAC. Those partners marked with * (will) have their repositories connected to an Open Science Initiative (e.g. re3data, Databib, BioSharing, DataCite, OpenAIRE).

The most relevant information regarding the project data will be made available within the attached Excel table, which includes information about:

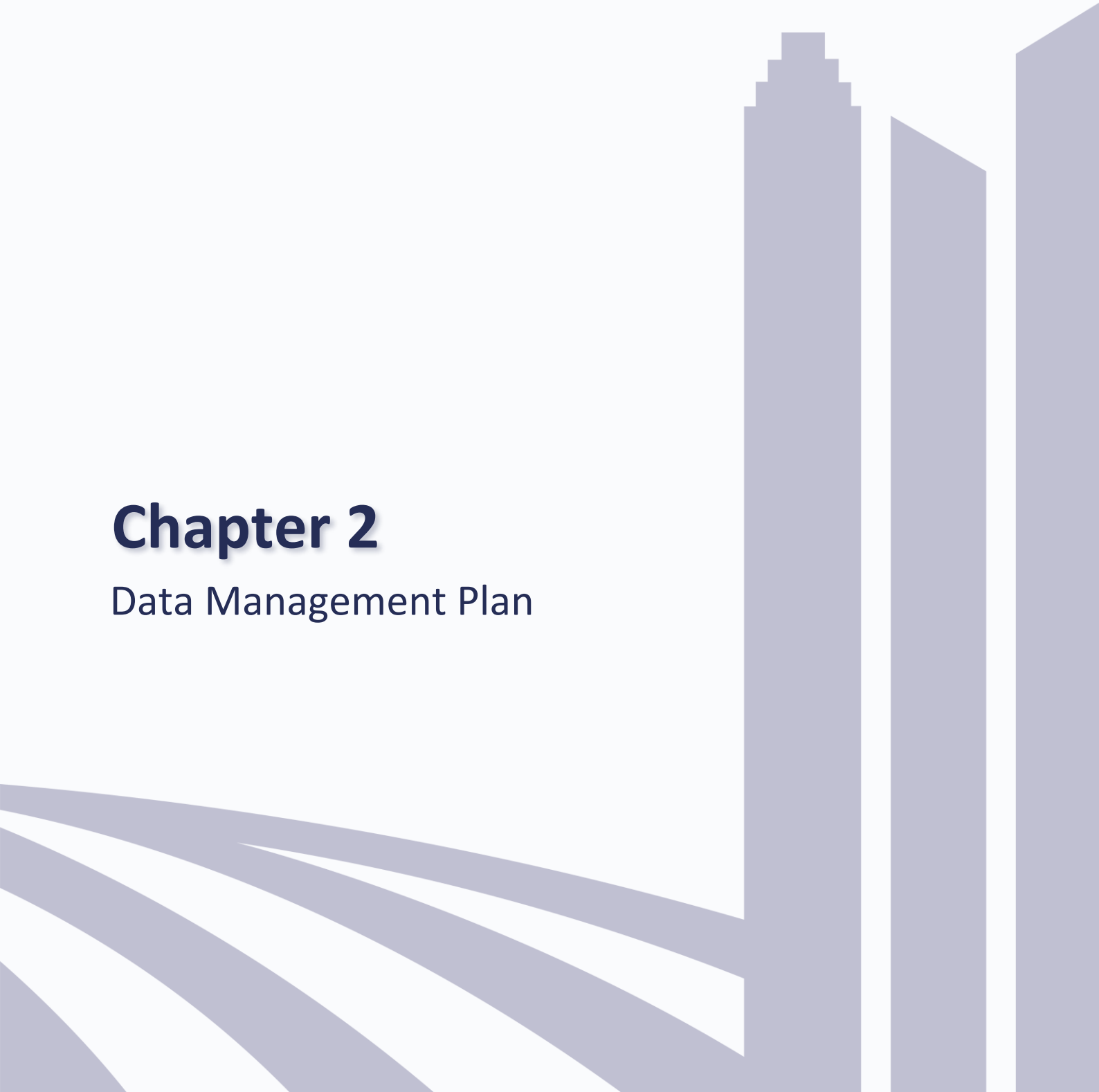
- The task leader / main partner of data
- Dataset no.
- Task no.
- Dataset name (name of task)
- Data subset
- Type of data
 - Descriptive
 - Quantitative
 - Qualitative
 - Methodologies
 - Other
- New / existing data
 - New
 - Existing
 - New & existing
- Origin / provenance of data
- Method of data capture
 - Experimental measurements
 - External publications, papers
 - External databases
 - Consumer survey
 - Expert interviews, questionnaires
 - Various
 - Other
- Format of data capture
 - Excel
 - Word
 - PDF

- Other
- Expected size
 - < 2 MB
 - 2 MB
 - unknown so far
- Quality control procedures
 - Certified methods (ISO, DIN, etc.)
 - Scientifically described method
 - Established in-house method
 - Internal review
 - In-house software
 - Commercially available software
 - None
 - Other
- Data Utility- who outside of the project consortium might use the data?
- Ethical issues
 - Yes
 - No
- Type of access
 - Open
 - Restricted: data needed for publications
 - Restricted: patent planned
 - Restricted: sensitive human data (GDPR)
 - Restricted: other sensitive data (IPR)
 - Restricted: other

This DMP is oriented towards the data management plan-template of the European Commission (<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=HORIZON>, see Project reporting templates, see data management plan (HE)).

Chapter 2

Data Management Plan



Chapter 2 – Data Management Plan

1. FAIR Data

Managing the data shall follow the principle of FAIR data:

- Making data findable, including provisions for metadata
- Making data openly accessible
- Making data interoperable
- Increase data re-use (through clarifying licences)

2. Allocation of Resources

The responsible partner for the overall data management is the project coordinator DIL. The cost for data management on project partner level is -if present- covered by 'other direct cost' of the respective partner. A budget for open access publication is planned for respective partners.

So far, there are no further costs foreseen to make the resulting project data available. A ZENODO community, which is open to the public, will be opened to publish the data.

3. Data Security

The project internal data is stored on the projects SharePoint, which is administrated by the project coordinator DIL. The long-term data availability will be ensured using the repository ZENODO, where an own community for the FOSTER project will be created.

4. Ethics

According to the FOSTER GA activities within FOSTER will comply with EU and national law and will make use of the ethics issues checklists of the EC document: EU Grants - How to complete your ethics self-assessment.

Project activities encompass working with human participants including vulnerable groups and specific methodological tools as for example surveys, questionnaires, interviews or focus groups. The participation will

be on a voluntary basis and informed consent will be obtained in advance. The respective '2.3 Ethics issue checklist' will be applied for any activity regarding the above mentioned tools.

Any operation of processing of personal data (e.g. collection of contact details, recording of sessions, consultations etc.) will be done in accordance with the ethics provision set out in the Grant Agreement (Annex 5 HE Rules on ethics and research integrity). Personal data from project beneficiaries will be stored on the projects SharePoint that will be administrated by coordinator DIL. Access to this online SharePoint is restricted to staff from beneficiaries working on the FOSTER project. Individuals are asked for their consent before their data is disclosed in SharePoint. The respective '4.3 Ethics issue checklist' will be applied.

The respective '8.3 Ethics issue checklist' will be applied: The Machine Learning/Artificial Intelligence algorithms used in this project will be integrated in a human-led process, and as such be subject to supervision regarding the input and output data. The data used will never include medical data or any other privacy-related information, only freely accessible & published data (such as research papers, news articles, reports and public blog entries). When providing output data to others in the context of this project, it will be made transparent how this data was created.”

For the management of the project, the organization of online and physical meetings, personal data as name, e-mail, address and phone number is shared among partners. This data is captured in the FOSTER contact list on SharePoint. The list is regularly updated. Only those members who got access to the MS Teams group FOSTER, our SharePoint, get access to this contact list. The members who accepted the invitation to the SharePoint are aware that their personal data is made available in the above mentioned contact list, and they agreed by the Consortium Agreement that they keep this information confidential.

Project partners who are representing CDIs in FOSTER will answer questionnaires / inquiries. These documents will include a chapter regarding informed consent for data sharing and long term preservation be included in questionnaires dealing with personal data.

5. Other Issues

5.1 Frequently Asked Questions (FAQ)

What is meant by 'data'?

A data itself is just a figure, letter, code or word. Without a context any data is useless. Hence when we speak about data in this context we actually mean 'dataset'. A dataset is a set of files containing research data and related documentation to give context to this research data and be sufficient to make the data re-useable.

What should a dataset include?

A dataset should comprise all files and documentation necessary to verify and/or reproduce the research. This includes:

- All data files (raw data, processed data, code etc.) used in the data collection, processing, and analysis. Files that are irrelevant to verification and/or reproduction or that are too large for archiving can be excluded.
- Sufficient documentation to understand the production, provenance, processing, interpretation, and relationships between the data files.

A dataset is often an excel file but can also be a word document, PDF or another format.

Which of my data do I have to "manage"?

Those data needed to validate results presented in scientific publications have to be mentioned in the DMP. Other data e.g. used for any other kind of publications or data that is not published at all, can but does not have to be mentioned in the DMP.

I do not have any data at the moment (in Month 6)!

The DMP is a living document. The first version of the DMP will list data expected in the FOSTER project. This means you should think about which data you are going to produce. For Month 18, 36 and 48 we will update the DMP.

Who is paying my efforts to deliver data to the DMP?

Data management efforts are eligible cost within FOSTER. Hence, the time (person months) you spent for data identification, processing, curation and storage are eligible personal cost occurred in your work package. If additional repository costs occurred, they might be eligible as well – check this with the coordinator.

Where to store the dataset?

Data should be stored in online data bases, so called repositories. The repository has to be open accessible. There are existing plenty of repositories to be used for the storage of scientific data. We need to elaborate on this and we will suggest the best option to the FOSTER consortium. One option for a data repository is Zenodo.

If you belong to a large institution or company, you might already have an own repository or library that you have to use to store your relevant data. Often, scientific journals also work with repositories, like Figshare (Springer, Wiley) or Mendeley data (Elsevier). You can or have to use these when you publish in their journals.

Other questions might come up later and the FAQs will be updated if necessary.

Appendixes



Appendixes

Appendix A. Data Set Overview WP1

Table 1: Data Set Overview WP1

Task Leader / main partner of data	Data set No.	Task No.	Dataset name (Name of Task)	Data subset	Type of data	New/Existing data	Origin /provenance of data	Method of data capture	Format of data capture	Expected size	Quality control procedures	Data Utility- who outside of the project consortium might use the data?	Ethical issues?	Type of access (open / restricted)
FHG-ISI	1	1.1	Literature review and mapping the state of the art in Food Systems	Reviewing and mapping literature around EU Food Systems (first wave until M 6, then monitoring). We quantify where possible and link the database (repository) to existing platforms, e.g. Foresight4Food, FOX etc. Mapping methods to be used in Foresight and for the identification of new topics, structures and processes including a description of the methods (until M 12) and a discussion of their improvements during the course of the project.	Descriptive	Existing	Various	External publications, papers	Other	> 2 MB	Internal review	other projects/researchers working with food systems etc.	No	Open
FHG-ISI	2	1.2	Foresight and semi-automated Horizon Scanning	AI-based, topic modelling for first clustering, human clustering in workshops, descriptions of new issues and topics in a standardized way (templates), conceptualized Futures Workshops with heterogeneous or selected stakeholder groups. The automated analysis is performed twice (at the beginning and update during the course of the project).	Descriptive	New & existing	Newly created document	Other	Other	> 2 MB	Internal review	internal use only	No	Open
FHG-ISI	3	1.3	Identification & description of new trends, developments, disruptions & threats	resulting from own searches, FOSTER academy work and beyond, manage and classify these data in a living database for mutual learning and exchange. Clustering data and describing new developments in a kind of template and inserting them into the living documents of the platform database. Documents are retrievable for different stakeholders (inside the consortium and outside) with dashboards to play around with the results, explanations how to use the data etc. Short surveys on uncertain issues to gain necessary data for analysis and for providing dashboards	Descriptive	New & existing	Various	External publications, papers	Other	> 2 MB	Internal review	end results (clustered, no raw data) are provided for the public, for policy-makers, for CDIs on the platform	No	Open

FHG- ISI	4	1.4	Scenario s of EU 2040	<p>The environment of future EU Food Systems. Alternative, possible scenarios are developed in a morphological process (key factors and alternatives) and described for further use in combination with teaching scenario work in WP 2. The scenario factors and alternative developments are derived from the Horizon Scanning, and grouped systematically to check for missing issues. The alternatives are enhanced in one or two workshops (if virtual workshops: 2) by bringing together groups of experts and representatives of citizen groups for discussing potential pathways into the future. Workshops are combined with scenario learning in the FOSTER Academy, WP2. The alternatives are checked for consistency in a matrix by the FOSTER scenario team. Those alternatives that “fit together” (are consistent) are combined by a software (e.g. Consentia) into scenario paths, which have to be discussed,enhanced and formulated in raw scenarios. The raw scenarios are discussed in another one or two workshops with experts and stakeholders, e.g. from the CDIs to have direct effects on their thinking. The project team refines the 3 to 5 scenarios and writes their “stories”, which it hands over to WP 2+3 for learning and own paths into the future, and to WP 4 to discuss implications for policy-making and governance</p>	Descript ive	New	Newly created docume nt	Various	Word	unknown so far	Other	the scenarios will be public and can be used by the Academy, the public, CDIs or policy makers. They are no raw data but processed images of different futures.	No	Open
FHG- ISI	5	1.5	Sense- making for priority setting	<p>Assessment (“measurement”) and indicators/ criteria describing the Food System 2.0 are developed and formulated as input into the knowledge database and for the selection of new topics. In this task, the new topics and signals from the Horizon Scanning phase are analysed, assessed according to selected criteria, and the most promising topics are selected. Recommendations for new “future themes” are made and combined with the CDIs’ and policymakers’ knowledge. One (new) future topic for citizen science and/ or a new lab is selected for the region of Lower Saxony (DE) and described as a prototype. DIL is the partner from the consortium ready to realize this new future topic as a real-life project in the region of Lower Saxony by preparing a concrete follow-up project. For this, a practical implementation concept (strategy, draft broad plan) is developed in one or more creative joint workshops with different stakeholders from the consortium and the region.</p>	Descript ive	New & existing	newly created docume nt	Various	Other	unknown so far	Other	internal use only	No	Open

Appendix B. Data Set Overview WP2

Table 2: Data Set Overview WP2

Task Leader / main partner of data	Dataset No.	Task No.	Dataset name (Name of Task)	Data subset	Type of data	New/Existing data	Origin /provenance of data	Method of data capture	Format of data capture	Expected size	Quality control procedures	Data Utility-who outside of the project consortium might use the data?	Ethical issues?	Type of access (open/ restricted)
UOXF	6	2.1	Questionnaire to guide summer school content	This will be used to establish from CDIs the degree to which each (i) already engages with citizen science and policy formulation; (ii) would be able to embrace and strengthen its citizen science capacity; and (iii) what more they would like to learn about food system dynamics. It will be used to guide semi-structured interviews (to be undertaken by T3.1) to ensure information thus gathered helps in designing the Summer Schools (T2.2).	Descriptive	New	Various	Various	Word	< 2 MB	Internal review	N/A	No	Restricted: other
UOXF	7	2.2	Annual Co-learning Summer Schools	The summer schools will be centred on CDIs in WP3 and will be designed to build capability in working within transdisciplinary arenas across sectors based on RRI principles and will include young scientists. They will address systemic barriers in development pathways with the aim of changing 'mindsets' to co-learning to boost the ERA. The summer schools will be designed based on the baseline of knowledge of the CDIs as identified by T3.1 and will result in information useful for the Academy.	Descriptive	New & existing	Various	Various	Other	> 2 MB	Internal review	N/A	No	Restricted: data needed for publications

UOXF	8	2.3	ERA Food System Leaders Alumnus	This will be built by ensuring the participants in co-learning workshops are linked and by encouraging the exchange of people working in 'mainstream' food systems science and citizen science for mutual learning and knowledge transfer across disciplines. These will be supported by insights from WP3 and WP4.	Descriptive	New	Various	Expert interviews, questionnaires	Excel	> 2 MB	Other	N/A	No	Restricted: data needed for publications
UOXF	9	2.4	Coordinate the writing of a set of "learning papers"	The learning papers will capture the learnings and insights from the whole project, and apply food systems, resilience, and foresight thinking to the findings for the optimal application of tools and approaches in order to achieve the underlying vision. The learning papers will be collaborative and interdisciplinary in nature.	Descriptive	New	Various	Various	Word	> 2 MB	Other	N/A	No	Restricted: data needed for publications

Appendix C. Data Set Overview WP3

Table 3: Data Set Overview WP3

Task Leader / main partner of data	Data set No.	Task No.	Data set name (Name of Task)	Data subset	Type of data	New/Existing data	Origin /provenance of data	Method of data capture	Format of data capture	Expected size	Quality control procedures	Data Utility-who outside of the project consortium might use the data?	Ethical issues?	Type of access (open / restricted)
UHOH	10	3.1	Engaging the CDIs in a baseline assessment	The academic linking partners on-site will conduct semi-structured interviews with their respective CDI based on in-depths questions about their structure and ambitions, theory of change, their embedding in networks and institutions, relevant R&I governance structures (including current AKIS mechanisms in place), areas of action, target groups, gaps and needs and success stories. The interview results will then be processed, evaluated, compared and published in a report which forms the basis for the needs and gaps assessment (T3.2) as well as for selecting promising system innovative bottom-up dynamics (T3.3).	Descriptive	New & existing	Various	Expert interviews, questionnaires	Word	> 2 MB	Other	N/A	No	Restricted: data needed for publications
UHOH	12	3.3	Engage the CDIs on-site in building new linkages between citizens, policy maker	Based on the findings of the scenario analysis from WP1, the scenarios/co-learning workshops from WP2 (Academy), as well as the identified governance mechanisms (WP4) each CDI will prioritise selected items in respect to the action research agenda developed in T3.2, facilitated by their knowledge partner. The selected item/activity will be implemented in three steps. The preparation phase where plans are operationalised, the execution phase where the involved jointly work on selected items and a feedback and revision phase where joint collaboration is discussed in the light of observed barriers and facilitators. Two workshops per CDI will be organised and provide the framework to apply the process as described.	Descriptive	New & existing	various	Various	Word	> 2 MB	Other	N/A	No	Restricted: data needed for publications

Appendix D. Data Set Overview WP4

Table 4: Data Set Overview WP4

Task Leader / main partner of data	Data set No.	Task No.	Dataset name (Name of Task)	Data subset	Type of data	New/Existing data	Origin /provenance of data	Method of data capture	Format of data capture	Expected size	Quality control procedures	Data Utility-who outside of the project consortium might use the data?	Ethical issues?	Type of access (open/ restricted)
WR	14	4.1	Identify types of policy support for mission-oriented innovation on food systems transformation	Inventory of relevant prior Horizon projects in an Excel file; folder and Excel with relevant scientific literature; inventory of relevant policy on the EU-level as well as in NL and ES	Qualitative	Existing	Newly created document	External publications, papers	Excel	unknown so far	Internal review		No	Restricted: data needed for publications
SPI	15	4.2	Bottom-up identification of improved R&I governance mechanisms to support food systems transformation	This task will be done through a literature review, by mapping desired governance mechanisms with the CDIs, in the identification of drivers and barriers in food systems innovation ecosystems, among the different participating actors.	Descriptive	Existing	Newly created document	Various	Word	< 2 MB	Internal review		No	Open
WR	16	4.3	Ground-proof improved R&I governance mechanisms to support food systems transformation	Minutes of meetings; descriptions of field experiences; evidence collected through literature; to eventually provide an analysis of the governance mechanisms employed by the CDIs and the results of this (the 'groundproof')	Qualitative	New & existing	Various	Various	Word	unknown so far	Internal review		No	Restricted: data needed for publications
SPI	17	4.4	Strengthen science-policy interfaces for food system science and transformation at EU level	These recommendations will be built on FOSTER results and activities, advices from the external expert panel, providing recommendations for moving from AKIS to FOKIS and promote aligned and coordinated R&I policies.	Descriptive	New	Newly created document	Various	PDF	< 2 MB	Internal review		No	Open

Appendix E. Data Set Overview WP5 and WP6

Table 5: Data Set Overview WP5 and WP6

Task Leader / main partner of data	Data set No.	Task No.	Dataset name (Name of Task)	Data subset	Type of data	New/Existing data	Origin /provenance of data	Method of data capture	Format of data capture	Expected size	Quality control procedures	Data Utility-who outside of the project consortium might use the data?	Ethical issues?	Type of access (open/ restricted)
SPI	18	5.1	Communication Plan, Methods and Tools	Developed from own research, on the development of planned communication tools, materials and actions including the project's visual identity and branding, communication channels and tools per stakeholder groups and project activity. The email list obtained from the Newsletter subscription will not be used for non-authorized activities.	Descriptive	New	newly created document	Various	PDF	< 2 MB	Internal review		No	Open
SPI	19	5.2	Dissemination, exploitation and sustainability	Development of a Dissemination, exploitation and sustainability plan, that will envision the exploitation of each valuable outcome from each WP and the project as a whole with external stakeholders. Additionally, FOSTER outcomes will be used for the sustainability strategy of the different CDIs, in a scalable methodology.	Descriptive	Existing	Newly created document	Other	Word	< 2 MB	Internal review		No	Open
ECSA/SPI	20	5.3	Scaling out and deep FOSTER CDIs to European youth, women, and underrepresented communities	This will be done based on the developed solutions and knowledge from FOSTER CDIs to other local initiatives, young scientists and citizens, based on Foster developed activities.	Descriptive	New & existing	Newly created document	Other	Word	< 2 MB	Internal review	Other CDIs	No	Open
DIL	21	5.4	Science – Policy Contextualisation and Dialogue on FOSTERs results	series of position papers that tune in with the results from the projects along the four transversal themes will be written	Descriptive	New & existing	Newly created document	Various	Word	< 2 MB	Internal review		No	Restricted: data needed for publications
BIOS/SPI	22	5.5	Advocating to FOSTER R&I food systems transformation at the European level	Public dissemination of the project results at the final European networking conference, a two days event. This will produce four policy briefs as a culminating result of the conference and the outcomes of the project	Descriptive	New & existing	Newly created document	Other	Other	> 2 MB	Internal review		No	Open

DIL	23	6.3	Data management plan	The Data Management Plan (DMP) of FOSTER describes the data that will be generated, analyzed, maintained and disseminated during the lifetime of the project and how the data will be shared with the wider community. It will provide an overview of the data accessibility and its management in terms of use.	Descriptive	New & existing	Newly created document	Other	Word	< 2 MB	Internal review		No	Open
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