Data Management Plan

D8.2

Date: 31/05/2021

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Table of Contents

1. Technical References

1.1. Deliverable Information

Project Acronym	FOODRUS
Project Title	An innovative collaborative circular food system to reduce food waste and losses in the agri-food chain
Grant Number	101000617
Project Coordinator	Ainhoa Alonso, Universidad de Deusto Ainhoa.alonso@deusto.es
Project Duration	November 2020 – April 2024

Deliverable No.	8.2
Dissemination level[1]	Public
Work Package	8
Task	8.2
Lead beneficiary	Deusto
Contributing beneficiaries	ENG
Due date of deliverable	30/04/2021
Actual submission date	31/05/2021

[1] PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

1.2. Document History

Version	Date	Beneficiary	Author/Reviewer
1	30/04/2021	Deusto	Deitze Otaduy & Ainhoa Alonso
2	14/05/2021	ENG	Dario Pellegrino
3	14/05/2021	Free Food	Zuzana Madajova

1.3. Summary

The FOODRUS project will test 23 circular solutions to limit food loss and waste across three food value chains: vegetables and prepared salads (Spain); meat and fish (Denmark); and bread (Slovakia).

The solutions will empower and engage all stakeholders in the local food systems, creating a sense of community and building a multi-actor alliance to tackle the challenge of food loss and waste. FOODRUS will also empower citizens in order to make them an active part of the solution.

To promote the replicability of the tested solutions FOODRUS will prepare best practice toolkits involving six European regions as Followers, to replicate and adapt the solutions in Valencia (Spain), Cluj-Napoca (Romania), Budapest (Hungary), Linz (Austria), Plovdiv (Bulgaria) and Halandri (Greece).

1.4. Disclaimer

Any dissemination of results must indicate that it reflects only the author's view and that the Agency and the European Commission are not responsible for any use that may be made of the information it contains.

2. Introduction

Each project in the EC's Horizon 2020 program must define what kind of results are generated or collected during the project's runtime and when and how they are published openly. The Data Management Plan (DMP) has been structured by following the guidelines provided by the European Commission in 2016.

As stated in "A European strategy on the data value chain", the intelligent use of data enables the creation of new products and services and has the potential to transform Europe's service industries and significantly increase their efficiency. In the public sector, it will lead to cost reduction of operations, an increase of efficiency and better and more personalised services for citizens.

The aim of FOODRUS´s Data Management Plan is to provide an analysis of the main elements of the data management policy that are going to be used by the consortium.

The results of the FOODRUS project will produce an improvement in the food value chains in terms of food waste and loss prevention and reduction. These services that will be developed are expected to be based on the combination of Open Government Datasets with user-generated data through sensor and third party data to give place to added value datasets.

The FOODRUS project's partners are committed to offering as much information as possible generated by the project through Open Access. Such information includes scientific publications issued by the project consortium, white papers published, open source code generated, anonymous interview results, or datasets used for gathering stakeholders´ feedback.

The present document constitutes the first version of FOODRUS`s Data Management Plan (DMP). The main objective of this DMP is to provide an analysis of the main elements of the data management policy that are going to be used by the consortium. It has the following characteristics:

● It is a document outlining how all the research data generated will be handled during the project life, and even after it is completed, describing, whether and how these datasets will be shared or allowed data re-use and also allow validation of results presented in scientific publications generated by the project.

● It is also a document outlining how all the research data and non-scientific documents generated during the lifetime of the project will be handled in terms of sharing policies, archiving and storage and preserving time.

● It is not a fixed document; it evolves and gains more precision and substance during the lifespan of the project. Therefore, the DMP will be updated at least every year to reflect any modification over the original plan. Thus, this report will be delivered in M6 as a first draft, and as a final report at the end of the project, M42. Updated versions will be prepared in M18 and M30.

The figure below shows a diagram of the steps of the DMP and the possible uses of the data sets generated once and was managed from the Plan.
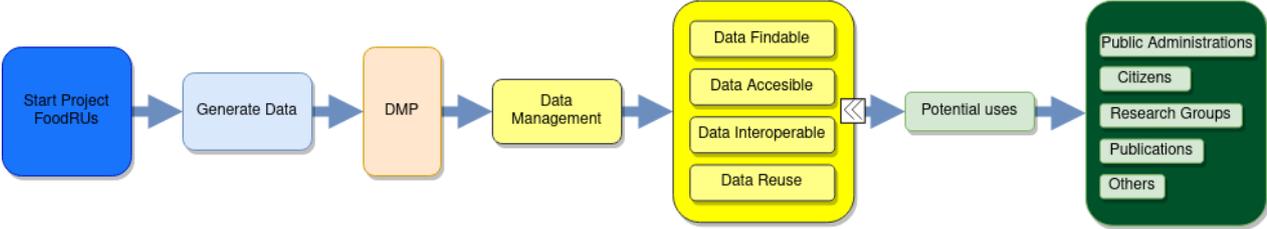
Figure 1. DMP Stages. Source: Own elaboration

3. H2020 Open Access Requirements

The European Union supports Open Innovation by requiring that projects funded under the European Union Framework Programme for Research and Innovation, Horizon 2020, must ensure open access (free online access for any user) to all peer-reviewed scientific publications related to the results.

In addition, all projects that are Horizon 2020 funded under the 2017 work programme, including the FoodRUs project, are by default part of the Open Research Data Pilot (ORD pilot). The ORD pilot aims to enhance and maximise access to and re-use of research data generated by Horizon 2020 projects and takes into account the need to balance openness and protection of scientific information, commercialisation and intellectual property rights (IPR), privacy concerns, security and data management and preservation issues.

Article 29 of the FoodRUs Grant Agreement governs the obligation to disseminate results. In the scope of the data management plan, Article 29.2 and 29.3 are of particular relevance outlining open access requirements to scientific publications and open access requirements to research data.

This section will outline the requirements and considerations that need to be addressed in order to meet these requirements and objectives.

3.1. Open Access to Scientific Publications

Article 29.2 mandates that scientific publications must be made available in an accessible, timely manner and that bibliographical metadata must be also available in a standardised format with certain key inclusions. Simultaneously, research data necessary for validation of the research must also be deposited in the relevant repository.

29.2 Open access to scientific publications

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

In particular, it must:

(a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications;

Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

(b) ensure open access to the deposited publication — via the repository — at the latest:

(i) on publication, if an electronic version is available for free via the publisher, or

(ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.

(c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms "European Union (EU)" and "Horizon 2020";

- the name of the action, acronym and grant number;

- the publication date, and length of embargo period if applicable, and

- a persistent identifier.

In order to fulfil with the Art. 29.2 - Open access to scientific publications of the FoodRUs Grant Agreement, the consortium is committed to ensure open access of scientific publications by uploading them to public repositories. A public repository is intended to be a publically maintained, long-term repository that provides access to everybody without any user accounts or passwords such as institutional repositories or disciplinary repositories (e.g., arXiv, bioRxiv, PubMed). Open access through the publisher alone is not sufficient.

FoodRUs consortium will uploading scientific publication to Zenodo (or compliant institutional university or research centres repositories). Zenodo is an open and free repository, searchable and structured with flexible licensing, allowing storing all types of data: datasets, images, presentations, publications and software. When not available through the publisher, Zenodo provides the option to generate a persistent identifier (i.e., DOI). Any entry in Zenodo is also automatically indexed in OpenAIRE as well as in the reporting section of the FoodRUs project towards European Commission. OpenAIRE already provides a virtual space where all the publications will be automatically listed. It is responsibility of each FoodRUs consortium partner to ensure open access to scientific publication creating the corresponding entry on the Zenodo portal. Reference to the funding scheme will be reflected as indicated in Art. 29.4 and reported below.

"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000617".

3.2. Open Access to Research Data

Participants in the Open Research Data Pilot must comply with the legal requirements as outlined in Article 29.3 of the FoodRUs Grant Agreement: Open access to research data.

29.3   Open access to research data

Regarding the digital research data generated in the action ('**data**'), the beneficiaries must:

49

Grant Agreement number: 101000617 — FOODRUS — H2020-RUR-2018-2020 / H2020-RUR-2020-1

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(a) deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:

(i)   the data, including associated metadata, needed to validate the results presented in scientific publications, as soon as possible;

(ii)   not applicable;

(iii)   other data, including associated metadata, as specified and within the deadlines laid down in the 'data management plan' (see Annex 1);

(b) provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).

This does not change the obligation to protect results in Article 27, the confidentiality obligations in Article 36, the security obligations in Article 37 or the obligations to protect personal data in Article 39, all of which still apply.

As an exception, the beneficiaries do not have to ensure open access to specific parts of their research data under Point (a)(i) and (iii), if the achievement of the action's main objective (as described in Annex 1) would be jeopardised by making those specific parts of the research data openly accessible. In this case, the data management plan must contain the reasons for not giving access.

Article 29.3 requires that research data, and its associated metadata be made available through a research data repository to third parties. In accordance with the updated Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020 (Version 3.2 March 2017), FoodRUs project will identify and make accessible different types of research data (in digital form) including statistics, experiment results, observations from field work, survey results, interview recordings and images.

FoodRUs, as part of the ORD Pilot, is expected to deposit generated and collected data in an open online research data repository. FoodRUs has selected the ZENODO repository as its data archive of choice, based on compliance of the repository structure, and facilities and management FAIR data principles. ZENODO is an OpenAIRE and CERN collaboration that allows researchers to deposit both publications and data, providing tools to linking them to these through persistent identifiers and data citations. ZENODO is set up to facilitate the finding, accessing, re-using and interoperating of data sets, which are the basic principles that ORD projects must comply with. The guidelines provided by ZENODO will be used by FoodRUs to ensure the right format of data is uploaded to comply with FAIR principles.

4. Management procedure.

Data generation is a complex and prolonged process that requires multi-stakeholder bodies to work together, including the person responsible for the DMP (a responsible per partner) who will be responsible for management and control of the data sets, as well as the different partners involved in the production of information generated during the course of the Project.

Partners and external experts who support the project FOODRUS should complete a template for each of the data sets generated. This template is included in Annex I, Template dataset, to the present document.

Annex II is formed by the sum of all templates generated throughout the FOODRUS project.

A complete procedure has been defined in the template in order to report on how the data sets collected and documents generated during the course of the Project are archived, stored, shared, retained, etc. These templates are in editable Excel sheet format to facilitate its edition and to complete the data fields which are defined.

Each partner shall send the full templates for each data set generated to their responsible for the DMP. Besides, and provided that the licensing is possible, each partner will be responsible for choosing the best licensing option for their generated data sets, among the different options for Creative Commons (CC) licenses:

✓ Freeing content globally without restrictions

✓ Attribution alone

✓ Attribution + ShareAlike

✓ Attribution + Noncommercial

✓ Attribution + NoDerivatives

✓ Attribution + Noncommercial + ShareAlike

✓ Attribution + Noncommercial + NoDerivatives

In addition, the responsible for each data set will be in charge of storeging in the proper repository depending on the level of confidentiality:

1) When a private dataset is generated this will be stored in a private repository by the owner of the dataset guaranteeing the fulfillment of the European and the local Data Protection Laws.

2) When an open dataset is generated this will be properly anonymized before its publication in Zenodo (the common repository chosen by the consortium). This does not preclude uploading them to any other repository where the information fits.

Following the European Union requirements that projects funded under the European Union Framework Programme for Research and Innovation, Horizon 2020, must ensure open access, wherever possible, datasets will be open to the public, previously duly anonymized. The responsible of the DMP shall inform each of the partners the need to keep their templates up to date, so as to incorporate regular changes and updates. This updating of the data process shall be carried out within six-month periods, if there have been modifications.

The person responsible for the DMP shall collect all the templates generated during the course of the Project, which are stored on the Drive unit of the Project until the final version is incorporated in the latest version of the DMP deliverable.

This latest version, before being stored, should be reviewed under the defined procedures in the deliverable D9.1 Ethics requirements.

The person responsible for carrying out updates for each template of the DMP should link their updates to each one and store them in the corresponding DRIVE folder (FOODRUS_DMP_Datasets).

A descriptive synthesis for the procedure which explains the DMP generation in the FOODRUS project is included below:
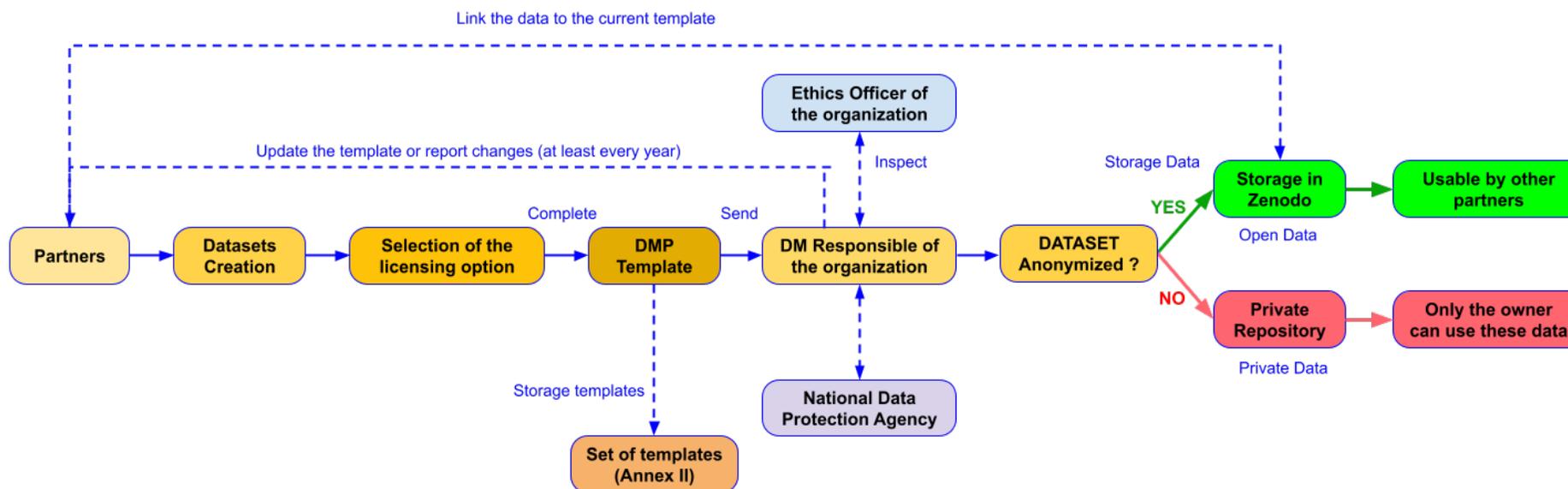
Figure 2. DMP Procedure. Source: Own elaboration.

5. Description of the templates.

The following template has been prepared to answer all the questions regarding the use of research data. It is a set of questions to know in detail the type of data that will be generated in each case, and the way they will be managed.

The elements of the template for the research data management template are the following ones:

1. Data Summary.

2. Fair Data (Data Findable, Accessible, Interoperable and reuse).

   2.1. Data Findable.

   2.2. Data Accessible.

   2.3. Data Interoperable.

   2.4. Data Reuse.

3. Data Management and allocation of resources.

4. Ethical and Legal Aspects.

5. Other Aspects.

This template has been designed for the purpose to enable future users to:

1. build on top of existing research results and data,

2. avoid redundancy,

3. participate in open innovation,

4. read about the results of a project or inform citizens,

5. understand and reconstruct scientific conclusions.

The first part collects a brief description of the project FOODRUS, the funding, the project leader, the consortium members and the duration of the project.

5.1. Template of Dataset

5.1.1. Data Summary

The first section of the template is designed to obtain an overall synthesis from the dataset generated, specifying the data set name and the work package to which it belongs.

Furthermore, in order to complete this general description, it is necessary to include the typology of data with a short description, as well as the data source and the methodology followed.

In addition, it is relevant that the dataset can be linked with the Project's objectives and results. Therefore, within this first section, it seems appropriate that data could be contextualized in order to understand the need for generating this information to achieve the objectives pursued.

Finally, it is relevant to provide a brief description of the external data sources to be used in its generation process, when possible. For example, the origin of the data, its relevance, license for use, date, etc.

5.1.2. Fair data

Data Findable

The concept of findability refers to the viability of the information to be located by other users. Therefore, in this section, several subsections have been designed to deal with the ease of access to data. Those paragraphs concern the type of linked data, based on the Tim Berners-L classification.

On the other hand, several aspects of data related to the standard and metadata formats have to be fulfilled, specifying the metadata type as well as the identification of the process for storing documents. A link has been provided to help partners select a metadata standard.

It is also necessary to define the ontology. The Ontologies is a formal naming and definition of the types, properties, and interrelationships of the entities. Indicating whether it has been defined its own or a defined one has been used. A link has been provided to help partners select ontologies models.

In addition, information about the existing and potential data users must be collected. It is necessary to specify search channels that could be used by the different users to reach them.

Data Accessibility

In this section, it is necessary that the accessibility of data is provided. For this reason, a number of subsections have been devised. They will provide information about the nature of the data, whether they are public or private or whether the owner of the data intends to publish or share.

In this sense, if the data owner intends to publish it, he/she must specify when this will be done.

Lastly, possible problems that may exist in data sharing must be identified. For example, the confidentiality of data collected, the file size, etc.

Data Interoperability

Interoperability is the ability of two (or more) systems or components to exchange information and use the information exchanged.

Several subsections have been included in this section to indicate the type of data format for possible data exchange, as well as methods or software that are necessary to access and manipulate them.

Data Reuse

In response to questions referring to the reuse of data, three subsections have been defined.

In the first one, the licensing terms and possible license restrictions must be indicated.

In the second subsection, a list of copyright holders and creations protected by the laws on Intellectual Property must be defined.

Finally, the third subsection shall contain a list with restrictions or permissions that could be defined to reuse the data, indicating the list of roles/individuals (internal and external) with the corresponding access limitations, including who has the authority to grant additional access.

5.1.3. Data Management and allocation of resources

Regarding data management, several sub-sections have been created concerning data curation, understood as maintaining, preserving and adding value to digital research data throughout its lifecycle, from creation and initial storage to the time when it is archived for posterity or becomes obsolete and is deleted. The main purpose of data curation is to ensure that data is reliably retrievable for future research purposes or reuse.

Furthermore, two key aspects have been included: to specify the main data storage medium and the location of the data, where they are going to be stored. A link has been provided to help partners select an open data infrastructure.

Another important part in the management of the data is related to backups, which are the total or partial copies of relevant information as support for possible eventualities. In this sense, it should be detailed how these backups will be performed, as well as if there will be replicas, etc.

Finally, it should be indicated, if necessary, how to manage the data versions generated during the course of the Project.

5.1.4. Ethical and Legal Aspects

This section covers aspects regarding informed consent in data collection and information protection in data storage and access. Fulfilment of Ethical requirements are detailed in D9.1 - D9.2

Finally, a section is included to identify the legal aspects that affect the data.

5.1.5. Other Aspects

This last section shall provide some other aspects considered significant in the dataset, and which have not been included in this template.

Finally, Annex II consists of the sum of all completed templates throughout the FOODRUS project.

6. List of datasets.

The DMP aims to provide both a detailed list and description of all the datasets that will be generated and used during the lifetime of the FOODRUS project.

Dataset name	Dataset Reference	Description	Pilot (*)			Project level
			Danish	Slovak	Spanish	
Pilots Monitoring	FRUS_Pilot Monitoring	KPIs of the project • Baseline values • Monitoring values End user behaviour • Consumption patterns • Generation • Separation • Monitoring of the impact of the social actions • Best practices on FLW prevention and circular economy solutions	x	x	x	
User Data	FRUS_User Data	Data regarding the users of the tools • Id • Name, surname • Email • Pilot	x	x	x	
E-learning platform materials	E-Learning_reg istration_dat a	Data needed for the registration and use the e-learning materials • name, surname • username • gender • stakeholder/organization • age • email • notification consent				x
Process Data	FRUS_Proce ssMonitoring _Partner	Data regarding the process variables that may have influence on FLW generation • ID Entity	x	x	x	

		• ID Pilot • ID product • ID Process/subprocess • Variable • Source • Time • ID FLW category • Amount FLW				
Cold chain	FRUS_Coldhain_Pilot	Data regarding cold chain monitoring • ID Entity • ID Pilot • ID Product • Temperature • Humidity • Time • Geolocation • ID FLW • Amount FLW	x	x	x	
Secondary products	FRUS_SecondaryProducts	Data regarding the revalorization of food production and manufacturing losses (secondary products) • ID Generator • ID Secondary Product Producer • ID FLW category • Amount of FLW • ID Secondary Product • Time • Amount of Secondary Product	x	x	x	
Last mile delivery	FRUS_LastDelivery_Pilot	Data regarding food transactions by last mile solutions • ID Pilot • ID Last Mile solution • ID Operator • ID Product/Secondary Product Producer • ID user • Geolocalisation • ID Product/Secondary Product • Transactions • Time	x	x	x	

Stocks data	FRUS_StocksData	Data regarding stocks • ID Pilot • ID Entity • ID Product • Geolocalisation • Amount of product • Amount of FLW category • Time	x	x	x	
Audit data	FRUS_AuditData_Pilot	Data needed for FLW certification • ID Pilot • ID Entity • ID Process/Subprocess • ID Product • Geolocalisation • Amount of product • Amount of FLW category • Time	x	x	x	
Food donated data	FRUS_FoodDonated	Data regarding food donation • ID Pilot • ID Donor • ID Donee • ID Product • Geolocalisation • Amount of product • Time	x	x	x	
Equilibrated Diet Data	FRUS_EquilibratedDiet	Data regarding healthy nutrition of people in need • ID Pilot • ID Donee • ID Product • Amount of product • Time • Health information (as weight)	x	x	x	
PAYT data	FRUS_PAYT_Zamudio	Data needed for PAYT - Waste containers • Id • Container type (paper, plastic, organic, etc.) • Volume • Geolocalization - Users • Id			x	

		• Container type (paper, plastic, organic, etc.) • Openings • Time				
Data for fiscal, legal and economic instruments	FRUS_PolicyInstruments_Pilot	A collection of descriptions of the fiscal, legal, economic instruments • Type of economic instrument • Food waste prevention criteria considered • User	x	x	x	
FLW management	FRUS_FLWManagementData	Data related to FLW valorization and final disposal • ID Pilot • ID Generator • ID Treatment Operator • ID FLW category • Amount of FLW category • ID Type of treatment • Output information	x	x	x	
Waste collection		Data regarding the available garbage trucks as well as their characteristics • ID Pilot • ID FLW Collection Operator • Vehicle type • Vehicle technology • ID FLW generator • ID FLW Treatment (Receptor) • Routes • FLW transactions	x	x	x	
LCA inventory	FRUS_LCIA	Data needed for the LCA assessment of the FVCs	x	x	x	
Exploitation data	FRUS_ExploitationData	Data collected to assess exploitability of the results	x	x	x	x
Partners distribution lists	FRUS_DistributionLists	Distribution lists among consortium partners				x
Communicati	FRUS_Com	Distribution lists for				x

on and dissemination distribution lists	&DissDistrib utionLists	Communication and Dissemination purposes				
Sister project distribution lists and other information	FRUS_Sister Projects	Distribution lists and information sharing for cooperation purposes among sister projects				x
Cooperation and Collaboration Network (CCN) distribution list	FoodRUs_F LW Projects Map	Distribution lists and information sharing for cooperation purposes among members of the CCN				x
Advisory Board distribution list	FRUS_AB	List of the members of the Advisory Board and information sharing for cooperation purposes				x

(*) Data provided by Follower regions will be agreed along the project and added to this list.

This list is by completing and expanding as the project develops.

Additionally Annex III will summarize the list of those datasets that will be open access as well as the scientific publications that use them (if any).

7. Annexes:

7.1. Annex I: Template dataset

Project	**FoodRUs** An innovative collaborative circular food system to reduce food waste and losses in the Agri-Food Chain
Description	It is evident that current food supply chains are notoriously inefficient and show vulnerabilities from initial agriculture production down to the final household consumption and the management of the waste generated. FoodRUs strategy has been built on the basis of the three fundamental pillars of food sovereignty to undertake Food Waste Prevention challenge being Circular Economy a mandatory model from which to generate, implement and replicate solutions, in different value chains. The reasoned application of these basic principles where FoodRUs strategy is applied, will assure resilient and sustainable local and regional Bioecosystems thanks to a multi-actor and multidisciplinary approach. FoodRUs will deployed 23 technological, social, financial, legal, educational, political, labelling and organizational innovative solutions involving the mobilization and active participation of more than 40 actors to overcome the specific challenges of the selected value chains and follower regions consisting on: experts on agro-industry, Life Cycle Assessment , social innovation and social economy, sensitisation , culinary arts, nutrition, labelling, fiscality and ICT tools; municipalities; policy makers; ethical finance organizations, stakeholders of the entire food value chains (producers, farmers, retailers, packaging and logistics services, restoration sector, consumers associations and communities); waste managers; entrepreneurs; ONGs; food banks; social kitchens; educational centres and civil associations. FoodRUs will screen 3 value chains focused on 3 specific types of food in Europe: · Cross-regional Spanish pilot (SPP) focused on vegetables and IV range salads · Danish pilot (DP) that will analyse the value chain for meat and fish · Slovak pilot (SLP) analysing the bread value chain FoodRUs will actively involve 6 European regions as Followers: (Valencia (Spain), Cluj-Napoca (Romania), Budapest (Hungary), Linz (Austria), Plovdiv (Bulgaria) and Halandri (Greece)
Funding	Supported by H2020 Union European. The Grant Agreement number 101000617
Project leader	UNIVERSIDAD DE LA IGLESIA DE DEUSTO ENTIDAD RELIGIOSA (UD)

Consortium members	▪ GEONARDO ENVIRONMENTAL TECHNOLOGIES LTD (GEO) ▪ ENGINEERING - INGEGNERIA INFORMATICA SPA (ENG) ▪ ASSOCIATION DES VILLES ET REGIONS POUR LA GESTION DURABLE DES RESSOURCES (ACR+) ▪ ASOCIACION DE LA INDUSTRIA NAVARRA (AIN) ▪ AARHUS UNIVERSITET (AU) ▪ FEDERATION EUROPEENNE DE FINANCES ET BANQUES ETHIQUES ET ALTERNATIVES (FEBEA) ▪ BASQUE CULINARY CENTER FUNDAZIOA (BCC) ▪ GREENOVATE ! EUROPE (G!E) ▪ FUNDACION HAZI FUNDAZIOA (HAZI) ▪ FLORETTE IBERICA SL (Florette) ▪ EROSKI SCOOP (EROSKI) ▪ SOCIEDAD ESTATAL CORREOS Y TELEGRAFOS SA SME (CORREOS) ▪ AYUNTAMIENTO DE ZAMUDIO (ZAMUDIOKO) ▪ ELIKA NEKAZARITZAKO ELIKAGAIEN SEGURTASUNARAKO EUSKAL FUNDAZIOA (ELIKA) ▪ CONSORCIO PARA LAS ESTRATEGIAS DE DESARROLLO DE LA RIBERA DE NAVARRA (EDER) ▪ JESPERS TORVEKOKKEN APS (Jespers) ▪ FRISKE FISK A/S (FRISKE FISK) ▪ OXNEHOLM A/S (ÖX) ▪ HORKRAM FOODSERVICE A/S (Hørkram) ▪ SLOVENSKA POLNOHOSPODARSKA UNIVERZITA V NITRE (SUA) ▪ NEW EDU NO (NEDU) ▪ TBS AS (TBS) ▪ FREE FOOD JEDLO PRE VSETKYCH (Free Food) ▪ REGIONAL DEVELOPMENT AGENCY OF THE WEST REGION ROMANIA (ADRVEST) ▪ PLOVDIV CHAMBER OF COMMERCE AND INDUSTRY (PCCI) ▪ BUSINESS UPPER AUSTRIA - OO WIRTSCHAFTSAGENTUR GMBH (TMG) ▪ NEMZETI ELELMISZERLANC-BIZTONSAGI HIVATAL (NFCSO) ▪ DIMOS CHALANDRIOU (HALANDRI)
Duration	2020-2024 (42 months)

1. DATA SUMMARY

Reference number	Name of the dataset	Work Package (Task)

Principal type of data contained in the data set	
☐ Quantitative ☐ Qualitative ☐ Numeric ☐ Text ☐ Images ☐ Audio ☐ Video	☐ Databases ☐ Non-structured data ☐ Source code ☐ Computational models ☐ Time series ☐ Other (please specify):
Data description	

Please, describe the data to be collected. Please specify the type and provide a short description of every field contained in the data. Moreover, add information about the size of the data set, format, etc.

What is the source of the data?

☐ Field work
☐ Direct measurements
☐ Surveys
☐ Simulations

☐ Expert Knowledge,
☐ Model Output
☐ Other (please specify):

Methodology used to collect this data

Please briefly describe the processes or methods which have been used to get the data.

Relation to the data with the objectives of the project

☐ SO1: Reduce the FL and the generation of FW.
☐ SO2: Provide precise reliable and long-term quantification and monitoring of generated FW.
☐ SO3: Combine quantitative information with different qualitative citizen-science based approaches to learn about the root causes of FW.
☐ SO4: Promote efficiency in the use of resources.
☐ SO5: Promote and foster long term behavioural changes.
☐ SO6: Apply a multi-criteria assessment methodology to evaluate the impact of circular food strategies.
☐ SO7: Build up a solid multi-actor alliance towards food sovereignty.
☐ SO8: Implement living labs.
☐ SO9: Promote the replicability of the prevention demonstrated strategies.
☐ SO10: Facilitate the transferability to the market of the solutions.
☐ SO11: Disseminate the project results.
☐ SO12: Other (please specify):

Relation to the data with the results of the project

☐ R1: Process optimization tool
☐ R2: Food losses and wastes toolkit
☐ R3: Audit toolkit
☐ R4: Sustainable market toolkit
☐ R5: Stocks optimization tool
☐ R6: Citizen science based living labs methodology
☐ R7: Equilibrated diet tool

☐ R8: Good food toolkit
☐ R9: Food waste management toolkit
☐ R10: Prevention of FW by legal instruments Briefing
☐ R11: Building capacity strategies for circular food Briefing
☐ R12FOODRUS Knowledge Hub

Why is this data collected?

Please, contextualize the information collected.

Please, provide a brief description of any external dataset used

For every external data set used please explain its origin, relevance and license.

2. FAIR DATA (DATA FINDABLE, ACCESSIBLE, INTEROPERABLE AND REUSE)

2.1. DATA FINDABLE

Tim's 5-star classification of the dataset
☐ Data is available under an open license ☐ Use a structured data (e.g., Excel instead of image scan of a table) ☐ Is available in a non-proprietary open format (e.g., CSV as well as of Excel) ☐ Use URIs to denote things ☐ The data is linked to other data to provide context

Metadata standards
Please cite the standard and format use for the date. If any this data set does not follow any standardized format, please provide a formal specification. For example, the Dublin Core Metadata Initiative, Inspire Initiative, ISO, etc. Link regarding to metadata standard: http://rd-alliance.github.io/metadata-directory/

Documentation stored in the data	
☐ Information of the origin of the data ☐ Codebook ☐ List of abbreviations	☐ Description of variables ☐ Technical information about files ☐ Other (please specify):

Ontologies	
☐ FIWARE Link regarding to fiware https://www.fiware.org/data-models	☐ Other external ontology Link regarding to ontologies https://www.w3.org/wiki/Lists_of_ontologies ☐ Our defined ontology (please specify):

Whom might it be useful?	
☐ Public Administrations ☐ Research groups ☐ Citizens	☐ Private sector ☐ Other (please specify):

Channels to reach potential users	
☐ Personal/research group web page ☐ Well-known specialist database ☐ Search Administration database ☐ Email of corresponding author	☐ Data access statement in published articles ☐ Personal networking ☐ Citation of data sets ☐ Other (please specify):

2.2. DATA ACCESSIBLE

Accessibility	
☐ Public data	☐ Confidential data

Obligation or intention to publish/share data	
☐ Yes	☐ No

When will the data be published?	
☐ Immediately on collection ☐ Within sometime after the ends of the project (please specify): ☐ Within sometime after its collection (please specify):	☐ To coincide with publication of main results ☐ Other (please specify):

Expected difficulties file sharing	
☐ Confidentiality ☐ Large file size ☐ Ownership/licensing	☐ Intended commercialisation ☐ Other (please specify):

2.3. DATA INTEROPERABLE

File format			
Spreadsheet: ☐ ODS ☐ XLS ☐ CSV Documentation ☐ DOC ☐ PDF ☐ TXT ☐ HTML	Structured data ☐ XML ☐ JSON Geographical data ☐ DXF ☐ SHP ☐ GEOJSON	Image: ☐ JPG ☐ TIFF ☐ PNG Video: ☐ WEBM ☐ MP4 ☐ MKZ	Other (please specify):

Methods or software tools needed to access the data
Please detail any necessary software to manipulate the information (if it is not standard.)

2.4. DATA REUSE

License conditions and restrictions	
☐ Copyright ☐ Creative Commons (please specify)	☐ Open License ☐ Other (please specify):

Please, list the owners of the copyright and intellectual property involved
Access permissions and restrictions
List roles/individuals (internal & external) with any limitations to access (e.g. scope, actions permitted), including who has authority to grant additional access.

3. DATA MANAGEMENT AND ALLOCATION OF RESOURCES

Partners	Collection	Curation	Preservation
Deusto University	☐	☐	☐
Geonardo Environmental Technologies LTD	☐	☐	☐
Association of Cities and Regions for sustainable Resource management	☐	☐	☐
Association of Navarra Industry Green Technologies	☐	☐	☐
Aarhus University	☐	☐	☐
Engineering - Ingegneria Informatica SPA	☐	☐	☐
European Federation of Ethical and Alternative Banks	☐	☐	☐
FEBEA	☐	☐	☐
Basque Culinary Center	☐	☐	☐
Greenovate ! Europe	☐	☐	☐
HAZI	☐	☐	☐
Florette Iberica SL	☐	☐	☐
Eroski SCOOP	☐	☐	☐
Correos	☐	☐	☐
Town hall of Zamudio	☐	☐	☐
ELIKA	☐	☐	☐

EDER Consortium	☐	☐	☐
Jesper TorveKokken APS	☐	☐	☐
Friske Fisk A/S	☐	☐	☐
Oxneholm A/S	☐	☐	☐
Horkram Foodservice A/S	☐	☐	☐
Slovak University of Agriculture in Nitra	☐	☐	☐
New Edu NO	☐	☐	☐
TBS AS	☐	☐	☐
Free Food - Jedlo pre všetkých	☐	☐	☐
Regional Development Agency of the West Region Romania	☐	☐	☐
Plovdic Chamber of Commerce and Industry	☐	☐	☐
Business Upper Austria	☐	☐	☐
Nemzeti Élelmiszerlánc-biztonsági Hivatal	☐	☐	☐
Dimus Chalandriou	☐	☐	☐
Other (please specify):	☐	☐	☐

What are the costs for making data FAIR in your project?

How will these be covered?

Primary storage medium and location

☐ University shared or research storage
☐ Secure facility from a data provider
☐ Physical storage
☐ Cloud platforms
☐ Last resort platforms (e.g. Zenodo)

☐ Academic research network platforms (e.g. ResearchGate).
☐ Institutional open data repositories (e.g. CKAN based)
☐ Other (please specify):

link regarding to data repositories: http://www.re3data.org/

Data curation processes
Please briefly describe the management of data throughout its life cycle.

How will long-term preservation and access be assured?
Please briefly describe how the data will be preserver after the end of the project.

Regularity of backups and data performed. Replicas in other different places (if any)

File management versioning	
☐ Unnecessary (i.e. overwrite original file) ☐ Control version software (e.g. Git please specify):	☐ Date/version number in filename/folder ☐ Other (please specify):

4. ETHICAL AND LEGAL ASPECTS

Ethical aspect (If know)
☐ No ☐ Yes (briefly describe):
Aspects regarding informed consent in data collection and information protection in data storage and access.
(Fulfilment of Ethical requirements are detailed in D9.1 – D9.7).
Legal aspect (If know)
☐ No ☐ Yes (briefly describe):

5. OTHER ASPECTS

FOODRUS

7.2. Annex II: Summary of open access datasets and scientific publications

A summary of the datasets opened is presented in Table DMP together with the list of scientific publications associated with each one.

Table CONF summarizes the datasets or part of datasets that are solicited to be kept confidential in the project.

Table DMP: Datasets already opened in the project and related scientific papers

ID	Dataset name	Dataset DOI	Scientific papers DOI

Table CONF: Datasets or part of datasets solicited to be kept confidential in the project

ID	Dataset	Reason to be confidential	Will it be opened?	When will it be opened?

8. Glossary

B

Backups

It is the total or partial copy of important information for being restored in case of eventualities. The backup should be stored on a storage medium other than the original one. The aim is to ensure a rapid and reliable retrieval of the data if necessary. The process of recovering data files from backup is known as file restoration

C

Copyright

Exclusive right of an author, publisher or licensee to exploit a literary, scientific or artistic work for a certain period of time

Creative Commons

These licenses allow creators to communicate which rights they reserve, and which rights they waive for the benefit of recipients or other creators. An easy-to-understand one-page explanation of rights, with associated visual symbols, explains the specifics of each Creative Commons license. Creative Commons licenses do not replace copyright, but are based upon it.

Curation

Understood as the conservation of data to add value to the data, maximize access and ensure long-term preservation. The healing of data is similar to the work done by an art curator or museum. Through the healing process, the data are organized, described, cleaned, improved and preserved for public use

D

Data Accessibility

Regarding the nature of public or private data

Data Findable

Refers to the viability of the information to be located by other users.

Data Interoperability

Interoperability is the ability of two (or more) systems or components to exchange information and use the information exchanged.

Data Management Plan (DMP)

Is a written document that describes the data you expect to acquire or generate during the course of a research project, how you will manage, describe, analyze, and store those data, and what mechanisms you will use at the end of your project to share and preserve your data.

Data Reuse

Reuse the data for the same or different purpose

F

FAIR DATA

Findable, Accessible, Interoperable and Reuse data

FIWARE

Is a middleware platform, driven by the European Union, for the development and global deployment of applications for Future Internet. The API specification of FIWARE is open and royalty-free, where the involvement of users and developers is critical for this platform to become a standard and reusable solution. The objective of FIWARE is to facilitate a cost-effective creation and delivery of Future Internet applications and services in a variety of areas, including smart cities, sustainable transport, logistics, renewable energy, and environmental sustainability**.**

I

Intellectual property

Is the set of rights that correspond to the authors and other owners (artists, producers, broadcasters ...) with respect to the works and benefits resulting from their creation. Legislation protects the IP, for example, through patents, law and trademarks, which allow to obtain recognition or profits for inventions or creations

M

Metadata

Is "data [information] that provides information about other data". They serve to provide information on the data produced. Metadata consists of information that characterizes data, describes the content, quality, conditions, history, availability, and other characteristics of the data

O

Ontologies

Is a formal naming and definition of the types, properties, and interrelationships of the entities. Practically, an ontological commitment is an agreement to use a vocabulary

Open Access

Is the immediate access, with no registration, subscription or payment requirements - that is, without restrictions - to digital educational, academic, scientific or other material, mainly articles of scientific research in specialized journals and refereed through the peer review system or peer review.

R

Replicas

Exact copy

V

Versions

A variation of a digital asset or its metadata. In other words, it means an update, edit or change from an earlier version and its metadata

Z

Zenodo

It is a repository of research data. It was created by OpenAire and CERN to provide a place for researchers to deposit datasets. It was launched in 2013, allowing researchers in any area subject to upload files up to 50 GB. https://zenodo.org/

9. REFERENCES

1.   European Commission. Guidelines on FAIR Data Management in Horizon 2020. Version 3.0. 26 July 2016.