



LEAP-RE

Long-Term Joint EU-AU Research
and Innovation Partnership on Renewable Energy

Data Management Plan

Deliverable D1.11

LGI

www.leap-re.eu

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Summary

The main goal of the Data Management Plan is to describe how the research data will be handled during and after the end of the project, what kind of data will be collected, processed and/or generated, which methodology and standards will be applied, whether data will be shared/made open access and how data will be curated and preserved.

The Deliverable is available on FLEXX : <https://app.flexx.camp/leapre-workflow-asset-10297>

Keywords

Data Management Plan, datasets, licences, Data Committee, Mat-DB, open access, Data Protection Officer (DPO)

Purpose of the Data Management Plan

The purpose of this document is to lay out a plan for the management of data generated/collected in LEAP-RE project. It covers the following:

- Identification of data to be collected/processed/generated
- Methodology and standards to be applied
- Data handling during and after the project
- Sharing, curating and preserving data

1 Introduction

1.1 Background of the LEAP-RE project

The LEAP-RE programme aligns with and responds to the AU-EU high-level policies and specific objectives of the CCSE Roadmap. It seeks to create a long-term partnership of African and European stakeholders in a quadruple helix approach: government (programme owners and funding agencies), research and academia, private sector, and civil society. Impact will be sought by creating a framework, methodology, and cooperation model. The aim is to reduce fragmentation by aligning existing bilateral and multilateral frameworks. LEAP-RE establishes and jointly implements research, innovation, and capacity-building activities that respond to the Multi-Annual Roadmaps (MARs) developed in PRE-LEAP-RE. The programme opted for a large-scale, inclusive consortium of 96 partners from 34 countries and 2 international organisations, to ensure a broad thematic, geographical and stakeholder coverage, and to demonstrate the feasibility of the collaboration and build trust in view of a long-term partnership addressing the post-2025 period. LEAP-RE draws on the experience and partnership developed in PRE-LEAP-RE, which conceptualised and developed a framework for long-term, bi-regional cooperation in research, innovation, and capacity building in renewable energies. This partnership is further strengthened by previous collaboration between partners in other projects supporting the EU-Africa HLPD on STI, such as LEAP-Agri, ERAfrica, LEAP4FNSSA, RINEA, and CAAST-Net Plus.

1.2 Data administration

LGI, programme coordinator, will act as Data Administrator. They will be in charge of reviewing the data from LEAP-RE three Pillars and uploading them on the FLEXX repository.

This practice of expert review of data will ensure that the data are of good quality, meaningful and comparable across WPs. Outliers would be easily spotted and avoided early on in the project.

1.3 Preservation

All data will be stored on FLEXX and shared among LEAP-RE project partners. All project partners (from non-EU countries as well) will be able to access the data. Data Administrators will be in charge of regularly uploading the data. This way, the test data of the project will be stored in a traceable manner and with the quality requirements of LEAP-RE.

Once the analysis has been done, the final datasets will be kept on different sharing mediums, out of which the majority is open access with the previously defined license.

2 Final datasets

The Data Management Plan identifies several datasets within Pillar 1 and 8 datasets within Pillar 2 (1 in each WP). This number can change and datasets can evolve with time. The DMP is a living document – if necessary, it will be updated throughout the project's lifetime, and datasets that have the attribution 'closed' might change it to 'open'.

At the time of this writing, LEAP-RE partners have identified 8 datasets (one par Pillar 2 WP), the majority of which will be made openly accessible to the public through repositories on perpetual basis.

2.1 Dataset properties

Following the guidelines of the EC (EC, 2016), this document contains the following properties for each of the identified datasets:

- Name
- Short description
- Standards to be applied, metadata
- Data sharing
- Curation/archiving/preservation

A short description of each of these properties is provided below.

Name and reference code: in order to imbue the names of datasets with easily identifiable meaning that conveys important information, the following naming convention shall apply:

CountryCode.DataOwner.Openness.Title

Country Code: this string identifies the country to which the data pertains using the [ISO 3166 Alpha-2 coding system](#).

Data Owner: this string identifies the project partner in LEAP-RE that is associated with the dataset (data collector/custodian) using the official abbreviated partner names (i.e. as they appear in the Grant Agreement)

Openness: this string determines whether a given dataset is intended to be shared with the public as Open Data. It may take the following values:

1. Open: can be accessed, used and shared by anyone without limitations, accessible on the internet in a machine-readable format, free of restrictions on use in its licensing
2. Shared: available to use, but not under an open data license. Restrictions on its use or reproduction may apply (limited to a given group of people or organisations, may not be reproduced without authorisation, etc.)
3. Closed: can only be accessed by its subject, owner or holder

Title: a short and descriptive string to identify the contents of the data

Using these strings, the name of a dataset would look like this:

FR.LGI.Open.Specsplatform

A dataset with this name would describe a survey on the platform’ specifications developed by LGI.

2.2 Data licensing

Without a license to set out the terms of use, data is not truly open. Data without a license may be publicly accessible, but users do not have the certainty that they can use and share the data, leaving them in a legal grey area. Data licensing standards are used to lay out the openness of datasets in concrete terms, and an open data license gives explicit permission to use the data both for commercial and non-commercial purpose. There are many types of licenses to choose from, and this document will not cover them in depth. The table below provides a summary of common data licenses that will be considered for use in the project (based on definitions from [opendefinition.org](#)):

Table 1: Common Data Licences

Name	Domain	Attribution*	Share-alike**	Notes
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Creative Commons CCZero (CC0)	Content, data	N	N	All rights (including those of attribution) waived
Open Data Commons Public Domain Dedication and Licence (PDDL)	Data	N	N	All rights (including those of attribution) waived
Creative Commons Attribution 4.0 (CC-BY-4.0)	Content, data	Y	N	Credit must be given, a link to the license must be provided, changes made must be indicated. If these terms are not followed, license may be revoked
Open Data Commons Open Database License (ODbL)	Data	Y	Y	Credit must be given, share-alike must be assured, data may be redistributed using DRM as long as a DRM-free version is also released

*Attribution is the requirement to give credit to the data creator upon reuse

**Share-alike is the requirement that any materials created using the given dataset must be redistributed under the same license

2.3 Description of the dataset

The following detailed information sheet will be produced for every dataset to be produced/collected/curated in the project:

Table 2 Dataset example

Name of the dataset	A name to identify the data
Description of the dataset	<ul style="list-style-type: none"> • A brief, easy to understand description of what the dataset contains and what it will be used for in the project • A list of institutions to whom the data set could be useful outside the project • Whether the dataset has been/will be used for a scientific publication (if yes, brief details about the content and journal) • If the dataset is collected, a brief description of its origin and how it was collected will be provided • Openness of the dataset • Whether the dataset is anonymised or not
Format/license	The format in which the data will be available (e.g. .xls, .csv, .txt) will be provided. The license to be used will also be provided.
Archiving/preservation	Efforts and means to keep the data available after the end of the project will be described here, including where/how the data will be preserved, the duration of preservation, the associated costs and the plans of the consortium to cover these costs.

2.4 Pillar 2 Questionnaires

Privacy declaration

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The collected data will be processed in accordance to ARTICLE 13 of GDPR (General Data Protection Regulation) EU regulation N. 679/2016 of 27 April 2016. Please find at the following link the complete information and declaration of consent for personal data.

The interested party, by selecting the appropriate box, clearly states their free and full consent to data processing according to the purposes indicated in the information and within the limits by which their consent could be requested for the purposes of the law, as well as their communication to the subjects indicated in this document: “We inform you that, as interested party, you have the right to withdraw your consent at any time. The withdrawal of consent does not affect the legality of treatment, based on the consent before the withdrawal; Before giving their consent, the interested party is informed about this matter. The consent can be withdrawn with the same ease with which it has been granted. If you do not give your consent to personal data processing and transfer to non-EU countries, it will not be possible to submit the questionnaire.

- o Having read the privacy declaration, I consent to the processing of my personal data as referred in point 1 mentioned in the declaration.
- o I consent to free, specific and express transfer of my data to non-EU countries. Please, note that this includes countries that do not have appropriate measures for protection of personal data”



INFORMATION AND DECLARATION OF CONSENT FOR PERSONAL DATA TREATMENT

**IN ACCORDANCE TO ARTICLE 13 OF GDPR (General Data Protection Regulation)
EU REGULATION N. 679/2016 OF 27 APRIL 2016**

This document is issued pursuant to Article 13 of EU Regulation 2016/679 of 27 April 2016 on protection of natural persons with regard to personal data processing and in compliance with the legislation on personal data processing, as well as on the free movement of such data.

Data Controller

Politecnico di Milano - General Manager upon authorization of the pro-tempore Rector – contact: dirgen@polimi.it.

Internal data processor

Luca Belloni - Piazza Pompeo Castelli, 3 Milan (MI) - phone 3294961411- mail luca5.belloni@mail.polimi.it

Maddalena Curioni - Viale Lombardia, 23 Milan (MI) - phone 3450502703- mail maddalena.curioni@mail.polimi.it

Data will be processed by other authorized parties and, for this purpose, in compliance with current legislation. ¹

Responsible for data protection and contact points

Dr. Vincenzo Del Core - privacy@polimi.it phone: +39 0223999378

Purposes of data processing, legal basis, data categories and storage period.

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For the purposes of the application of European and national legislation on this matter (EU Reg. 679/2016, hereinafter Regulation), we inform you that your personal data will be used for the following purposes²:

Purposes of the processing for which personal data are intended	Legal basis of data processing	Categories of personal data to be processed	Storage period of personal data
Mapping legacy to prepare dissemination strategy in the context of LEAP-RE WP3	To fulfil with the LEAP-RE projects duties of results dissemination	<ul style="list-style-type: none">• Identification data• Personal data	For the duration of the LEAP-RE project and then, for the time of which Politecnico di Milano is subject to storage obligations for tax or other purposes, provided by law or Regulation.

Nature of data

The provision of data is optional. If you refuse to provide data, it will diminish the chances of proper dissemination of the outcomes of the LEAP-RE project.

Processing methods

The data treatment carried out for the purposes mentioned above “Mapping legacy to prepare dissemination strategy in the context of LEAP-RE WP3” can be carried out on paper or digital means, manually and/or with electronic tools, including *MS excel, Python and Matlab*. They are also stored in paper archives for the duration of the project LEAP-RE and in digital format for an indefinite period of time due to the transparency and good operation of the public administration.

Recipient categories

In relation to the mentioned purposes, data may be disclosed to the following public and/or private subjects: European Commission and other partners of the LEAP-RE project, for allowing the process of project dissemination and maximizing the outcomes of the project. In particular, your personal data may be communicated also to other public administrations, anonymised too, if these institutions must process them for procedures related to their institutional work, as well as to all those public entities to whom,

with the same prerequisites, the communication is compulsorily provided in accordance to EU provisions, laws or regulations, as well as insurance companies for possible accident insurances.

Storage period of personal data and their return.

For the purposes of storage and collection, the data necessary for a good operation of the Public Administration will be stored, in compliance with the principle of transparency and lawfulness, proportionality and minimization, for an indefinite period of time.

Transfer to Extra EU country

Politecnico di Milano can transfer personal data to non-EU territory for complying with the project multi-lateral partnership on the basis of express and specific consent of the interested party, issued according to Article 49 of the U.E Regulations on the basis of specific exceptions.

Rights of the interested parties

As interested party, you can ask the Data Controller, at any time:

- confirmation of the existence or not of your personal data;
- access to your personal data and related information; the correction of incorrect data or the addition of incomplete data; the cancellation of your personal data (if any condition indicated in Article 17, paragraph 1 of the Regulations can be applied and it is in compliance with the exceptions provided in paragraph 3 of the same article); the limitation of processing of your personal data (when one of the conditions indicated in Article 18, paragraph 1 of the Regulations can be applied), the anonymization or blocking of data processed unlawfully, including data whose storage is not required in relation to the purposes for which the data were collected or subsequently processed;

As interested party, furthermore, you have the right to wholly or partly oppose:

- for legitimate reasons regarding the processing of his/her personal data, related to collection purposes;
- to the processing of his/her personal data for the purpose of sending promotion of educational initiatives and cultural events of Politecnico di Milano.

These rights can be exercised by contacting privacy@polimi.it.

If you deem that your rights have been violated by the data controller and/or by a third party, you have the right to submit a complaint to the Data Protection Authority and/or to another competent supervisory authority pursuant to the Regulation.

Updated to 26.05.2021

2.5 Field and modelling data

All 8 Pillar 2 Work Packages adhere to the Roundtable Initiative on Strategic Energy Planning, that during COP26 has officially launched the “Key principles for improving the support to strategic energy planning in developing and emerging economies”.

Such Principles are:

- Support transparency and repeatability;
- Allow successive analyses and planning projects to build on each other in a coherent manner;
- Enable subsystems and sector analyses to coalesce;
- Improve donor efficacy and quality;
- Remove aspects that ‘lock-in’ or limit service providers;
- Have the potential to sustain long-term national planning capacity.

2.6 Pillar 3

Under Pillar 3, the data collected is related to i) the coordination of the programme and in particular the administrative and financial management (WP1), ii) the management of the LEAP-RE community through the different digital tools developed in the framework of the programme and thus the management of the LEAP-RE contact databases (WP4), iii) the availability and promotion of the project results.

2.7 Archiving/preservation

Archiving/preservation will be done in a two-step process. First, all data collected in LEAP-RE project will be kept on FLEXX repository for internal use and sharing. Once the analysis have been done, the final datasets will be kept on different sharing mediums, out of which the majority is open access.

3 Data Protection Officer

The appointment of the Data Protection Officer has been made in the D17.3 POPD – Requirement No. 4. LEAP-RE Programme Management Board has appointed the Data Protection Officer, with the details provided below:

BIHEL Nicolas, LGI Sustainable Innovation

Tel .: +33 (0)6 7968 2007

E-mail: nicolas.bihel@lgi-consulting.com

Website: <https://lgi-consulting.com/>

The primary role of the institutional DPO is to ensure that the institution processes the personal data of its staff, consumers, providers, or any other individuals (also referred to as data subjects) in compliance with the General Data Protection Regulation. The DPO provides advice, recommendations and draws attention to any failure to comply with the GDPR. The contact details of the DPO are made available to all personnel and data subjects involved in the research.

4 Ethical aspects

This Data Management Plan (DMP) was drafted taking into account the General Data Protection Rules (GDPR) for the collection, storage and re-use of the data, in line with the following general principles.

Personal data shall be:

1. Processed lawfully, fairly and in a transparent manner in relation to the data subject (‘lawfulness, fairness and transparency’);

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2. Collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall, in accordance with Article 89(1), however not be considered to be incompatible with the initial purposes ('purpose limitation');
3. Adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation');
4. Accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay ('accuracy');
5. Kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; personal data may be stored for longer periods insofar as the personal data will be processed solely for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes, in accordance with Article 89(1) subject to implementation of the appropriate technical and organisational measures required by this Regulation in order to safeguard the rights and freedoms of the data subject ('storage limitation');
6. Processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organisational measures ('integrity and confidentiality');

LEAP-RE DMP is in accordance with POPD Requirementn°4 (D17.3).

5 Restrictions for re-use

Data generated through interviews and surveys will not be re-used directly due to privacy concerns. Two different techniques could be used to enable re-use and prevent loss of research data. These techniques comply with the regulation on privacy and are detailed in the two following sub-sections.

5.1 Anonymization of data

"Anonymization" of data means processing it with the aim of irreversibly preventing the identification of the individual to whom it relates. Data can be considered anonymized when it does not allow identification of the individuals it is related to, and no individuals can be identified from the data by any further processing of that data or by processing it together with other information which is available or likely to be available.

There are different anonymization techniques. Here are the two most relevant:

- Generalisation : generalising data means removing its specificity. For example, in the case of a table containing household income levels, with 4 figures mentioned: €135,000, €60,367, €89,556, and €365,784. One way of generalising this numbers would be to write that the values are "more than €150,000, less than €80,000, between €90,000 and €120,000, and more than €300,000" respectively. Essentially it means taking exact figures, establishing a baseline category, and then obfuscating the data by assigning it to one of the categories in order to remove any sense of specificity from it.
- K-anonymity; A release of data is said to have the k-anonymity property if the information for each person contained in the release cannot be distinguished from the other individuals whose information also appear in the release. For instance, in a table composed of six attributes (Name, Age, Gender, State of Domicile, Religion and Disease), removing the name and the religion column while generalising the age is a way to effectively k-anonymise the data.

Other techniques, such as "masking" or "pseudonymization", which are aimed solely at removing certain identifiers, may also play a role in reducing the risk of identification. In many cases, these techniques work best when used together.

5.2 Pseudonymization of data

"Pseudonymization" of data means replacing any identifying characteristics of data with a pseudonym, or, in other words, a value which does not allow the data subject to be directly identified.

Although pseudonymization has many uses, it should be distinguished from anonymization, as it only provides a limited protection for the identity of data subjects in many cases as it still allows identification using indirect means. Where a pseudonym is used, it is possible to identify the data subject by analyzing the underlying or related data.

Task leaders will be responsible for the anonymization of data in LEAP-RE for all datasets where this is deemed necessary.

6 Personal data transfer and processing

In case personal data will be transferred from the EU to a non-EU country, such transfers will be made in accordance with Chapter V of the General Data Protection Regulation 2016/679, and such transfers will comply with the laws of the country in which the data was collected.

In case of further processing of previously collected personal data, LEPA-RE will ensure that the beneficiary has legal grounds for the data processing and that the appropriate technical and organizational measures are in place to safeguard the rights of the data subjects.

7 References

EC, 2016: European Commission (2016), Guidelines on Data Management in Horizon 2020. Available [here](#) (accessed 05 March 2021).

EC, 2017: European Commission (2017), Guidelines on the Implementation of Open Access to Scientific Publications & Research Data in projects supported by the European Research Council under Horizon 2020. Available [here](#) (accessed 05 March 2021).

8 Conclusion

This deliverable provides the guidelines for the procedures and criteria for recruitment for which is conducted for scientific research in context of the LEAP-RE Project. It furthermore outlines the ethics requirement and give the project partners a framework within which to conduct their research activities.

9 Annex I: Detailed information sheets for identified datasets

All detailed information sheets filled in by the partnership for the datasets identified are provided below.

Dataset 1

Name of the dataset	<i>FR.LGI.Open.Specsplatform</i>
Description of the dataset	Results of the questionnaire on the needs of LEAP-RE beneficiaries regarding the development of a digital service and community management platform
Format/license	The data will be available in the following format(s): xls, docx The license used for this dataset: <input type="checkbox"/> CC0 <input type="checkbox"/> PDDL <input type="checkbox"/> CC-BY-4.0 <input type="checkbox"/> ODbL

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	<input checked="" type="checkbox"/> Other, please specify: Datasets will be shared only with LEAP-RE participants. After closing the project the data may change its attribution to 'open'.
Archiving/preservation	The data will be made available through the following platform(s) and/or repositories: FLEXX The duration of the preservation will be: 5 years Foreseen costs of the preservation: NA Means to cover preservation costs: NA If the dataset contains personal data, will it be anonymized ? NA

Dataset 2

Name of the dataset	xxxxxxx
Description of the dataset	
Format/license	The data will be available in the following format(s): xls, jpg The license used for this dataset: <input type="checkbox"/> CC0 <input type="checkbox"/> PDDL <input type="checkbox"/> CC-BY-4.0 <input type="checkbox"/> ODbL <input type="checkbox"/> Other, please specify:
Archiving/preservation	The data will be made available through the following platform(s) and/or repositories: FLEXX The duration of the preservation will be: 5 years Foreseen costs of the preservation: NA Means to cover preservation costs: NA If the dataset contains personal data, will it be anonymized ? NA