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Chalmers tekniska högskola AB Organisation number: 556479-5598



# **Ecom4Future Draft Final**



# Horizon Europe Data Management Plan

# NB! PLEASE GO THROUGH THIS DOCUMENT AND CHECK ITS CONTENTS BEFORE SUBMITTING IT!

2024-04-17



Data Management Plan created in Chalmers Data Stewardship Wizard «dsw.chalmers.se» using Chalmers Horizon Europe DSW Knowledge Model v1.2.7 (chalmers:root-he:1.2.7).



# History of changes

There are no named versions.



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# **Project(s)**

We will be working on the following project(s) and for those are the data and work described in this DMP.

**Funding** HORIZON EUROPE European Research Council (granted)

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HORIZON EUROPE European Research Council (granted)

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Action Number CETP22FP-2023-00316

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Action Number grant number not yet given

Action Acronym Ecom4Future

Action Title FIWARE Driven Energy Communities for the Future

**Start date** 2023-11-01

**End date** 2026-10-31

Today, energy systems include prosumers and energy communities, which have novel objectives. They can collect detailed information of their consumption and generation.



ECom4Future is leveraging this information for a more efficient planning and operation. Using a human-centred, multidisciplinary approach we will provide additional insights on how technical, psychological as well as legal frameworks influence the public support and the willingness to participate more actively in future energy systems. Based on the analysis of collectible information at customer level, we will identify and use power profiles from various sources to support the planning operation of energy communities and prosumer, considering also psychological and legal environments. Using market-based optimisation algorithms we will offer tailor-made solutions for creating, structuring, and operating complex prosumer installations and energy communities. Using machine learning based fault detection and diagnostics the data will be leveraged to improve the availability and safety of the technical installation on a prosumer level. The effort will be demonstrated and validated within the five international ECom4Future trial sites and laboratories, which including a large-scale trial site with 140kWh of grid-connected battery storage capacity. With the observing participation of three energy communities, we strive for a continuous exchange of research insight and real-world experiences.



## 1. Data Summary

#### Instrument datasets

The following instrument datasets will be acquired in the project:

• Time series measurements of electric power by smart meters (FH Joanneum)

This dataset will be collected by experts in the project, with our own equipment.

Other researchers working in the same field of research could be interested in using this data.

• Prosumers power profiles, electricity consumption and production (Chalmers, UPB, RWTH, SWW)

This dataset will be collected by experts in the project, with our own equipment.

Other researchers working in the same field of research could be interested in using this data.

#### • Heat consumption and production (Chalmers)

This dataset will be collected by experts in the project, with our own equipment.

Researchers working in other fields of research could be interested in using this data.

#### • Building energy system data (RWTH, Chalmers)

This dataset will be collected by experts in the project, at a specialized infrastructure.

Other researchers working in the same field of research could be interested in using this data.

• Simulated Data for Load Profiles, Mechanical and Non-Mechanical Devices (TU Graz, UPB, RWTH)

This dataset will be collected by experts in the project, at a specialized infrastructure.

Other researchers working in the same field of research could be interested in using this data.

• Physics-Informed Energy Analytics (TU Graz, UPB)

This dataset will be collected by experts in the project, at a specialized infrastructure.



Other researchers working in the same field of research could be interested in using this data.

#### • Load Monitoring for Fault Prevention (RWTH, TU Graz)

This dataset will be collected by experts in the project, at a specialized infrastructure.

Other researchers working in the same field of research could be interested in using this data.

#### Non-equipment datasets

We also collect data from questionnaires and case report forms. The non-equipment datasets are:

- **Energy communities database (FH Joanneum)** List of existed energy communities with the information about them: size, address, contact person, website etc.
- Acceptance and Feedback from Energy Sharing Community Members (Uni Graz) – Responses and opinions from community members regarding their experiences with the energy sharing system. This could include satisfaction levels, preferences, and perceived benefits or disadvantages. Data on how readily community members accept the use of shared energy resources, which might include their willingness to participate in energy sharing schemes. Insights into what members perceive as obstacles to or facilitators of effective energy sharing, which could include technical issues, economic factors, or social dynamics.
- **Socio-Economic and Demographic Data (Uni Graz)** Information on individual and household characteristics, including age, gender, income levels, education, and household size.
- **Psychological and Behavioural Data (Uni Graz, Chalmers)** Data on attitudes, values, and behaviours related to energy use, environmental concerns, and participation in energy communities.
- **Synthetic or modelled users energy profiles data (TU Graz, Uni Graz)** Synthetic datasets mimicking real-time electricity consumption patterns for different user profiles within the community.
- **Evaluation and Decision Data (Uni Graz)** - Responses on the willingness to join or perceptions of the attractiveness of energy communities and services. Feedback on user experience with energy services and community engagement.
- **Community Management Data (FH Joanneum, Uni Graz, Chalmers)** Data on the management and operation of energy-sharing communities, including participation rates, energy trading activities, and community governance structures.
- **Energy Market data (Chalmers)** Insights into market trends, barriers, and opportunities for energy communities, including stakeholder analysis covering energy providers, regulators, and participants.



• **Regulatory and Policy Data (Uni Graz)** – Information on existing and emerging regulations, policies, and incentives impacting energy communities at local, national, and international levels.

## **Re-used datasets**

We have found the following reference datasets that we have considered for re-use:

#### • **PV solar generation data** Through the Ferroamp portal 2

Owner of this dataset: David Skarin, david.skarin@hsb.se.

We will keep a copy of the dataset and make it available with our results for the reproducibility.

We will use the dataset as follows: Local energy system generation analysis.

#### • Electricity consumption of the HSB Living Lab Through HSB and Chalmers 2

Owner of this dataset: HSB, Kalle Sjöstrand, kalle.sjostrand@hsb.se Chalmers, Taz Lodder, taz@chalmers.se.

We will keep a copy of the dataset and make it available with our results for the reproducibility.

We will use the dataset as follows: User energy profiles.

## • Heat pump and heat consumption

Through HSB 🛛

Owner of this dataset: HSB, Kalle Sjöstrand, kalle.sjostrand@hsb.se.

We will keep a copy of the dataset and make it available with our results for the reproducibility.

We will use the dataset as follows: Task 4.4: Potential evaluation of heat pump system for grid services.

# • Load profiles from existing energy communities as FH intern dataset 2

Owner of this dataset: each energy community and FHJ is allowed to use this data in research projects.

We will keep a copy of the dataset and make it available with our results for the reproducibility.



We will use the dataset as follows: modelling and simulation in Task 4.1 and Task 4.4.

#### • Load profile for Student campus building

Private servers but also are open-access (https://dx.doi.org/10.21227/ywtf-x329)

Owner of this dataset: Radu Plamanescu radu.plamanescu@upb.ro.

The provider keeps old versions around so the same reference data will be available to reproduce our results.

We will use the dataset as follows: Historical data, algorithm training, statistical assessments.

#### • Power profiles for prosumer

At this moment, this data is stored in Fiware on private servers.  $\ensuremath{\mathbbm Z}$ 

Owner of this dataset: UPB, MicroDERLab, prosumer - Radu Plamanescu radu.plamanescu@upb.ro.

The provider keeps old versions around so the same reference data will be available to reproduce our results.

We will use the dataset as follows: Historical data, algorithm training, statistical assessments.

## Data from EC2

Not available yet, but will be made public after end of the project in May 2024. 🗙

We decided not use this reference dataset because of: Data are not openly available yet.

#### • RWTH EBC I-GReta

We will use version "Latest" of this dataset. If a new version becomes available during the project, new analyses will be done with the new version.

The provider keeps old versions around so the same reference data will be available to reproduce our results.

We will use the dataset as follows: Since the data set reflects the older state of the building energy system, it would be interesting to run comparison analyses with data after the control in the energy system was optimized.

## • RWTH ACS TargetX

We will keep a copy of the dataset and make it available with our results for the reproducibility.



We will use the dataset as follows: Generating synthetic data.

 Single Duct Air Handling Unit (SD-AHU) (https://figshare.com/collections/LBNL\_FDD\_Data\_Sets/6486349/1) X

We decided not use this reference dataset because of: It is currently utilized to experiment with existing AI techniuqes on Fault Detection and Diagnosis in Energy Building.

## Data formats and types

We will be using the following data formats and types:

• CSV

It is a standardized format. This is a suitable format for long-term archiving. We will have only a small amount of data stored in this format.

• TXT

It is a standardized format. This is a suitable format for long-term archiving. We will have only a small amount of data stored in this format.

• PDF

It is a standardized format. This is a suitable format for long-term archiving. We will have only a small amount of data stored in this format.

## • XLS/XLSX

It is a standardized format. This is not a suitable format for long-term archiving; however, we plan to convert it to a suitable format before the end of the project. We will have only a small amount of data stored in this format.

## • DOC/DOCX

It is a standardized format. This is not a suitable format for long-term archiving; however, we plan to convert it to a suitable format before the end of the project. We will have only a small amount of data stored in this format.

• JSON

It is a standardized format. This is a suitable format for long-term archiving. We will have only a small amount of data stored in this format.

#### • SAV

It is a standardized format. This is not a suitable format for long-term archiving; however, we plan to convert it to a suitable format before the end of the project. We will have only a small amount of data stored in this format.



#### • HDF5

It is a standardized format. This is a suitable format for long-term archiving. We will have only a small amount of data stored in this format.

#### • Databases

It is a standardized format. This is not a suitable format for long-term archiving; however, we plan to convert it to a suitable format before the end of the project. We will have only a small amount of data stored in this format.

#### • Programming languages

It is a standardized format. This is not a suitable format for long-term archiving; however, we plan to convert it to a suitable format before the end of the project. We will have only a small amount of data stored in this format.



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## 2. FAIR Data

## 2.1. Making data findable, including provisions for metadata

• **Time series measurements of electric power by smart meters (FH Joanneum)** (published)

We will distribute the dataset using:

- Domain-specific repository: IEEE and similar. We don't need to contact the repository because it is a routine for us.

There won't be different versions of this data over time.

• **Prosumers power profiles, electricity consumption and production (Chalmers, UPB, RWTH, SWW)** (published)

We will distribute the dataset using:

 Domain-specific repository: IEEE, Zenodo or similar. We don't need to contact the repository because it is a routine for us.
 A persistent identifier will be assigned by the repository.

There won't be different versions of this data over time.

- Heat consumption and production (Chalmers) (published) We will distribute the dataset using:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
    A persistent identifier will be assigned by the repository.

There won't be different versions of this data over time. Building energy system data (RWTH, Chalmers) (published)

We will distribute the dataset using:

Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.

A persistent identifier will be assigned by the repository.

There won't be different versions of this data over time.

• Simulated Data for Load Profiles, Mechanical and Non-Mechanical Devices (TU Graz) (published)

We will distribute the dataset using:

Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
 A persistent identifier will be assigned by the repository.

There won't be different versions of this data over time.

• **Physics-Informed Energy Analytics (TU Graz, UPB)** (published) We will distribute the dataset using:



- Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
  - A persistent identifier will be assigned by the repository.
- Load Monitoring for Fault Prevention (RWTH, TU Graz) (published) We will distribute the dataset using:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
    - A persistent identifier will be assigned by the repository.
- Energy communities database (FH Joanneum) (not published)
- Acceptance and Feedback from Energy Sharing Community Members (Uni Graz) (published)

We will distribute the dataset using:

- Domain-specific repository: Zenado. We are going to contact the repository. A persistent identifier will be assigned by the repository.

There won't be different versions of this data over time.

- Socio-Economic and Demographic Data (Uni Graz) (not published)
- Psychological and Behavioural Data (Uni Graz, Chalmers) (not published)
- Synthetic or modelled users energy profiles data (TU Graz, Uni Graz) (published)

We will distribute the dataset using:

- Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
  - A persistent identifier will be assigned by the repository.
- Evaluation and Decision Data (Uni Graz) (published)

We will distribute the dataset using:

- Domain-specific repository: Zenodo. We have already contacted the repository.
  - A persistent identifier will be assigned by the repository.
- **Community Management Data (FH Joanneum, Uni Graz, Chalmers)** (published) We will distribute the dataset using:
  - Domain-specific repository: Zenodo. We have already contacted the repository.
    - A persistent identifier will be assigned by the repository.
- Energy Market data (Chalmers) (published) We will distribute the dataset using:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
    - A persistent identifier will be assigned by the repository.
- **Regulatory and Policy Data (Uni Graz)** (published) We will distribute the dataset using:



Domain-specific repository: Zenodo. We have already contacted the repository.
 A persistent identifier will be assigned by the repository.

## **2.2.** Making data accessible

We will be working with the philosophy *as open as possible* for our data.

The data cannot become completely open because of:

- legal reasons
- we have other than paper-publishing reasons: FH Joanneum cannot publish the energy data from the participating energy communities

Concerning the legal reasons, a data sharing agreement will be required.

Data that is not legally restrained will be released after a fixed time period (This depends on the data and agreement among the project partners and will be decided and proposed later; Data will made open after publishing or after the end of the project), unconditionally.

Metadata will be openly available including instructions how to get access to the data. Metadata will available in a form that can be harvested and indexed (managed by the used repository / repositories).

We have made the following arrangements regarding the data ownership: TU Graz is owner of the IPR generated by its employees and TU Graz has the right to choose how the data are published and shared RWTH: The data is owned by the RWTH Aachen. SWW Wunsiedel GmbH: We have an agreement that arranges ownership University Graz: Data belong to the University Graz. Data collected within theses of students will be transferred from the student to the univesity based on contracts. UNST Politehnica Bucharest: The data are owned by MicroDERLab Research group and by the Politehnica of Bucharest Chalmers: data will be owned by ACE and EE department. FH Joanneum: All data will be owned by the institution.

For the reference and non-reference data sets that we reuse, conditions are as follows:

- **PV solar generation data** available under specific restrictions, which we will follow in our project: Access needs to be requested and granted.
- **Electricity consumption of the HSB Living Lab** available under specific restrictions, which we will follow in our project: Access needs to be requested and granted. Data usage agreements need to be signed.
- **Heat pump and heat consumption** available under specific restrictions, which we will follow in our project: Access needs to be requested and granted. Data usage agreements need to be signed.
- **Load profiles from existing energy communities** available under specific restrictions, which we will follow in our project: Free use within research projects.
- **Load profile for Student campus building** freely available with obligation to quote the source (e.g. CC-BY).



• **Power profiles for prosumer** – available under specific restrictions, which we will follow in our project: The data will become open-access as soon as all the requirements for formatting will be completed.

For our produced data, conditions are as follows:

• **Time series measurements of electric power by smart meters (FH Joanneum)** (published)

The distributions will be accessible through:

- Domain-specific repository: IEEE and similar. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
  - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data can use it without any specific software. The dataset will published after all our processing has finished.

• **Prosumers power profiles, electricity consumption and production (Chalmers, UPB, RWTH, SWW)** (published)

The distributions will be accessible through:

- Domain-specific repository: IEEE, Zenodo or similar. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
  - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data can use it without any specific software. The dataset will published after all our processing has finished.

• **Heat consumption and production (Chalmers)** (published) The distributions will be accessible through:

- Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
  - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data can use it without any specific software. The dataset will published after all our processing has finished.

- **Building energy system data (RWTH, Chalmers)** (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
    - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data can use it without any specific software. The dataset will published after all our processing has finished.



# • Simulated Data for Load Profiles, Mechanical and Non-Mechanical Devices (TU Graz) (published)

The distributions will be accessible through:

- Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
  - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data can use it without any specific software. The dataset will published after all our processing has finished.

- **Physics-Informed Energy Analytics (TU Graz, UPB)** (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
    - Freely available with obligation to quote the source (e.g. CC-BY).
- Load Monitoring for Fault Prevention (RWTH, TU Graz) (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
    - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data can use it without any specific software. The dataset will published after all our processing has finished.

- Energy communities database (FH Joanneum) (not published)
- Acceptance and Feedback from Energy Sharing Community Members (Uni Graz) (published)

The distributions will be accessible through:

- Domain-specific repository: Zenado. We are going to contact the repository.
  The distribution will be available under the following license:
  - Freely available with obligation to quote the source (e.g. CC-BY).

A user of this data need specific software to be able to use it:

Limesurvey (https://www.limesurvey.org)

The dataset will published after all our processing has finished.

- Socio-Economic and Demographic Data (Uni Graz) (not published)
- Psychological and Behavioural Data (Uni Graz, Chalmers) (not published)
- Synthetic or modelled users energy profiles data (TU Graz, Uni Graz) (published)

The distributions will be accessible through:



- Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us. The distribution will be available under the following license:
  - Freely available with obligation to quote the source (e.g. CC-BY).
- **Evaluation and Decision Data (Uni Graz)** (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We have already contacted the repository. The distribution will be available under the following license:
    - Freely available with obligation to quote the source (e.g. CC-BY).
- **Community Management Data (FH Joanneum, Uni Graz, Chalmers)** (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We have already contacted the repository. The distribution will be available under the following license:
    - Freely available with obligation to quote the source (e.g. CC-BY).
- **Energy Market data (Chalmers)** (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We don't need to contact the repository because it is a routine for us.
- **Regulatory and Policy Data (Uni Graz)** (published) The distributions will be accessible through:
  - Domain-specific repository: Zenodo. We have already contacted the repository. The distribution will be available under the following license:
    - Freely available with obligation to quote the source (e.g. CC-BY).

## **2.3.** Making data interoperable

We will be using the following standards (encodings, terminologies, vocabularies, ontologies):

- Ontology to map from regulatory landscape to technical solution
- **UTF-8** (UTF-8)
- **BUDO** (https://github.com/RWTH-EBC/BUDO)
- Schema.org (https://schema.org/)
- **FIWARE NGSI** (https://fiware.github.io/specifications/ngsiv2/stable/)
- **Brick** (https://brickschema.org/)
- Semantic vocabulary for energy communities
- EMIX (Energy Market Information Exchange)

Although we will be using new types of data, suitable public controlled vocabularies or ontologies exist for those.

## 2.4. Increase data re-use

The metadata for our produced data will be kept as follows:



- **Time series measurements of electric power by smart meters (FH Joanneum)** (published)
- **Prosumers power profiles, electricity consumption and production (Chalmers, UPB, RWTH, SWW)** (published)
- Heat consumption and production (Chalmers) (published)
- Building energy system data (RWTH, Chalmers) (published)
- Simulated Data for Load Profiles, Mechanical and Non-Mechanical Devices (TU Graz) (published)
- Physics-Informed Energy Analytics (TU Graz, UPB) (published)
- Load Monitoring for Fault Prevention (RWTH, TU Graz) (published)
- Energy communities database (FH Joanneum) (not published)
- Acceptance and Feedback from Energy Sharing Community Members (Uni Graz) (published)
- Socio-Economic and Demographic Data (Uni Graz) (not published)
- **Psychological and Behavioural Data (Uni Graz, Chalmers)** (not published)
- Synthetic or modelled users energy profiles data (TU Graz, Uni Graz) (published)
- Evaluation and Decision Data (Uni Graz) (published)
- Community Management Data (FH Joanneum, Uni Graz, Chalmers) (published)
- Energy Market data (Chalmers) (published)
- Regulatory and Policy Data (Uni Graz) (published)

The following instrument datasets acquired in the project will use the following quality processes:

- Heat consumption and production (Chalmers)
  - Data Entry validation
  - Use of controlled vocabularies
  - Other quality processes: Data quality assurance compare data with reference data
- Building energy system data (RWTH, Chalmers)
  - Calibrating measurements
  - Standardized data capture / recording
  - Data Entry validation
  - Use of controlled vocabularies
- Simulated Data for Load Profiles, Mechanical and Non-Mechanical Devices (TU Graz, UPB, RWTH)
  - Calibrating measurements
  - Repeat samples / measurements
  - Standardized data capture / recording
  - Data Entry validation
  - Data peer review



- Use of controlled vocabularies

As explained in Section 2.2, our data cannot become completely open.

Due to privacy reasons, the data must stay in the EU. We can use pseudonymization, anonymization, and data aggregation to make the data more openly available. For pseudonymization, we can make use of an existing 'trusted third party'.

There are IP reasons why our data can not be open. It is clear who owns data and documents.

Someone will be given the decision power to move documents or data to a new place after the project has finished.



## **3.** Other research outputs

We use Data Stewardship Wizard for planning our data management and creating this DMP. The management and planning of other research outputs is done separately and is included as appendix to this DMP. Still, we benefit from data stewardship guidance (e.g. FAIR principles, openness, or security) and it is reflected in our plans with respect to other research outputs.



## 4. Allocation of resources

FAIR is a central part of our data management; it is considered at every decision in our data management plan. We use the FAIR data process ourselves to make our use of the data as efficient as possible. Making our data FAIR is therefore not a cost that can be separated from the rest of the project.

We will be archiving data (using so-called 'cold storage') for long term preservation after the project. The minimum lifetime of the archive is 5 years.

None of the used repositories charge for their services.

We have a reserved budget for the time and effort it will take to prepare the data for publication. For making data or other research outputs FAIR, we budgeted: 10% of time allocated to writing paper.

Taz Lodder, Radu Plamanescu, Mihaela Albu, Johanna Held, Blazhe Zafirov, Marwa Maghnie, and Alexander Pastor are responsible for reviewing, enhancing, cleaning, or standardizing metadata and the associated data submitted for storage, use and maintenance within a data centre or repository.

Radu Plamanescu, Mihaela Albu, Johanna Held, Maria Bertel, and Marwa Maghnie are responsible for finding, gathering, and collecting data.

Taz Lodder, Radu Plamanescu, Mihaela Albu, Johanna Held, Blazhe Zafirov, and Maria Bertel are responsible for maintaining the finished resource.

To execute the DMP, additional specialist expertise is required and we have such trained support staff available.



# 5. Data security

Project members can carry data with them on encrypted data carriers and passwordprotected laptops. All data centers where project data is stored carry sufficient certifications. All project web services are addressed via secure HTTP (https://...). Project members have been instructed about both generic and specific risks to the project.

We will mitigate information loss risk for the project or organization. We will mitigate information leak risk for the project or organization. We will mitigate information vandalism risk for the project or organization.

All personal information will be processed in pseudonymized form only. We pseudonymize inside the project, only limited people can access the keys.

We are running the project in a collaboration between different groups and institutes. A collaboration agreement that describes who can have access to what data in the project is set.



# 6. Ethics

## Data we produce

For the data we produce, the ethical aspects are as follows:

- **Time series measurements of electric power by smart meters (FH Joanneum)** *no information on personal nor sensitive data.*
- **Prosumers power profiles, electricity consumption and production (Chalmers, UPB, RWTH, SWW)** no information on personal nor sensitive data.
- **Heat consumption and production (Chalmers)** *no information on personal nor sensitive data.*
- **Building energy system data (RWTH, Chalmers)** no information on personal nor sensitive data.
- Simulated Data for Load Profiles, Mechanical and Non-Mechanical Devices (TU Graz) no information on personal nor sensitive data.
- **Physics-Informed Energy Analytics (TU Graz, UPB)** no information on personal nor sensitive data.
- Load Monitoring for Fault Prevention (RWTH, TU Graz) no information on personal nor sensitive data.
- **Energy communities database (FH Joanneum)** *no information on personal nor sensitive data.*
- Acceptance and Feedback from Energy Sharing Community Members (Uni Graz) no information on personal nor sensitive data.
- Socio-Economic and Demographic Data (Uni Graz) no information on personal nor sensitive data.
- **Psychological and Behavioural Data (Uni Graz, Chalmers)** no information on personal nor sensitive data.
- Synthetic or modelled users energy profiles data (TU Graz, Uni Graz) no information on personal nor sensitive data.
- **Evaluation and Decision Data (Uni Graz)** *no information on personal nor sensitive data.*
- **Community Management Data (FH Joanneum, Uni Graz, Chalmers)** no information on personal nor sensitive data.
- Energy Market data (Chalmers) no information on personal nor sensitive data.
- **Regulatory and Policy Data (Uni Graz)** no information on personal nor sensitive data.



# 7. Other issues

We use the Data Stewardship Wizard with its *Chalmers Horizon Europe DSW Knowledge Model* (ID: chalmers:root-he:1.2.7) knowledge model to make our DMP. More specifically, we use the https://dsw.chalmers.se DSW instance where the project has direct URL: https://dsw.chalmers.se/projects/56d77959-c05a-4186-823b-fbe4637beefb.

We will be using the following policies and procedures for data management:

- Romania National policy on DMP n/a National regulations
   Policy for research data management and the second se
- Policy for research data management at the University of Graz (Forschungsdatenmanagement-Policy der Universität Graz) https://static.uni-graz.at/fileadmin/strategische-entwicklung/Dateien/FDM-Policy\_DE\_FINAL\_Layout.pdf As employees of the university, we should adhere to its policy.
- "Datenschutz-Grundverordnung" DSGVO German national law https://dsgvo-gesetz.de Our actions will comply with the DSGVO
- Chalmers Guiding principles for good research practice Registration number C 2023-0615 3 sections: Good management of research data, open access to scientific publications, responsible internationalisation 3 rules: Rule 1: All research activities at Chalmers shall establish and maintain a data management plan. Rule 2: The right to decide on the use of research data shall be retained within Chalmers and data shall as far as possible be stored under Chalmers control Rule 3: All research data that is considered important for long term documentation of the research should be as FAIR as possible