

OPEN RESEARCH DATA PILOTS (ORDP)



Table of Contents

TABLE OF CONTENTS	II
1. INTRODUCTION	3
2. DATA MANAGEMENT PLAN	5
2.1. Introduction	5
2.1.1. PURPOSE OF DATA COLLECTION/GENERATION	5
2.1.2. TYPES, FORMATS OF DATA GENERATED/COLLECTED AND ORIGIN OF DATA.....	6
2.1.3. DATA UTILITY: TO WHOM WILL IT BE USEFUL.....	6
2.1.4. DATA AVAILABILITY	7
2.1.5. ETHICAL ASPECTS	11
2.1.6. DATA ACCESSIBILITY	12
3. OPEN RESEARCH DATA PILOT	13
3.1.1. DATA REPOSITORY AND OPEN ACCESS	14
4. REFERENCES	17



1. INTRODUCTION

PadovaFIT EXPANDED aims to guide the implementation of OSS initiatives in three European countries, namely Italy (Padova), Romania (Timisoara), and Bulgaria (Vidin and Smolyan), characterized by different socio-economic, environmental and market conditions.

The Open Research Data Pilots (ORDP) of the European Commission promote open access of the research data and publications generated by Horizon 2020 projects. This enable data to be reused by other researchers and all kind of stakeholders, since the goal is to ensure that third parties can freely access, mine, exploit, reproduce and disseminate data and publications. The strategy of ORDPs is usually described as “as open as possible, as closed as necessary”, since it is acknowledged that not all data can be open. The ORDPs can be considered as experiments towards the development of Open Science, a movement that aims at making scientific and its dissemination transparent and accessible to all stakeholders. This approach works mainly by sharing all knowledge developed through collaborative networks: publications, notebooks, data, processes, software and so on.

There are two main pillars to the Pilot: developing a Data Management Plan (DMP) and providing open access to research data, if possible.

The conditions to adhere to, are:

- *Develop a Data Management Plan (DMP).*
- *Deposit data in a research data repository.*
- *Ensure third parties can freely access, mine, exploit, reproduce and disseminate data.*
- *Provide related information and identify (or provide) the tools needed to use the raw data to validate the research.*

The Pilot applies to:

- *The data (and metadata) needed to validate results in scientific publications.*
- *Other curated and/or raw data (and metadata) specified in the DMP.*

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)

This deliverable presents the strategy for the management of data within the PadovaFIT EXPANDED project, its Data Management Plan (DMP), and all related information regarding open data accessibility and reusability.

2. DATA MANAGEMENT PLAN

2.1. Introduction

In line with H2020 literature, a data management plan is a document outlining how research data collected or generated will be handled during a research project and after it is completed. It describes what data will be collected/generated, whether and how this data will be shared and/or made open, and how it will be curated and preserved. It specifies which data will be open access and which will be confidential within the consortium.

Open access (OA) is intended as the free, online provision of re-useable scientific information to other users. In the context of research and innovation, scientific information can refer to (i) peer-reviewed scientific research articles (published in scholarly journals) or (ii) research data (data underlying publications, curated data and/or raw data). The access includes not only basic elements such as the right to read, download and print, but also the right to copy, distribute, search, link, crawl, and mine. There are many good reasons to make the data and findings from publicly funded research openly available to the research community, the commercial sector and civil society. As the “Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020” outlines, more open access to scientific publications and data serves several purposes such as:

- *improve the quality of research by building on a stronger body of existing work,*
- *increase the efficiency of research by reducing duplication of effort,*
- *bring innovations to market quicker by reducing barriers to information flow,*
- *enhance the transparency of scientific progress.*

2.1.1. PURPOSE OF DATA COLLECTION/GENERATION

Within PadovaFIT EXPANDED project data is intended to understand the pilot cases' needs to improve and boost home renovation. The purpose is to:

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)

- *Collect data on building status and building refurbishment rates in pilot cases*
- *Gather info on regulatory frameworks in pilot cases*
- *Collect data on financing mechanisms available in pilot cases*
- *Collect data on market players (building renovation chain) in pilot cases (interests, market maturity, market players' influence on OSS implementation)*
- *Collect data on OSS international experiences (repository of OSS experiences)*
- *Collect data on OSS functioning and business models*
- *Collect data on OSS services people's satisfaction*

Data are collected to design better OSS services and answer citizens' and market needs. The aim is to design tailor-made solutions to boost home renovation in the pilot cases. Data are reported through project deliverables to support the implementation and launch of OSS initiatives in the three pilot cases.

2.1.2. TYPES, FORMATS OF DATA GENERATED/COLLECTED AND ORIGIN OF DATA

Type of formats:

- *Text, Documentation, Scripts: XML, PDF/A, HTML, Plain Text.*
- *Still Image: TIFF, JPEG 2000, PNG, JPEG/JFIF*
- *Audio: WAVE, AIFF, MP3, MXF, FLAC.*
- *Video: MOV, MPEG-4, AVI, MXF.*
- *Database: XML, CSV, TAB.*

Data comes from surveys, analysis of national policies and recommendations (energy-related policies, recovery plans, home renovation strategies, grants and incentives available etc.), interviews with OSS initiatives promoters, focus groups with market players at the local level, conferences and workshops attended by experts in energy efficiency initiatives and public authorities, literature review about business modelling for home renovation services.

2.1.3. DATA UTILITY: TO WHOM WILL IT BE USEFUL

Data collection addresses project partners to support them in developing successful OSS initiatives which meet local needs. Data also addresses peers (researchers and local authorities) interested in understanding the benefits of OSS initiatives and launching other experiences.

The main aims are:

- *design and develop OSS initiatives in the three pilot cases,*
- *improve the knowledge regarding OSS setup and value generation,*
- *disseminate the results of the project,*
- *support peers to implement further OSS initiatives.*

2.1.4. DATA AVAILABILITY

Data availability is therefore categorised into three categories:

- *Open Data that is shared for re-use or that underpins a scientific publication.*
- *Consortium Confidential data that is accessible to all partners, but retained within the consortium.*
- *Private Data is maintained by an individual partner for their own purposes.*

The majority of data will remain only at a consortium level as they may contain personal and sensitive information; however, summarised versions of these datasets will be made public in a user-friendly and accessible format. Indeed, the project will seek to openly disseminate its research findings, except in cases where there are (i) defined exploitable outcomes, (ii) privacy concerns, in particular with regard to studies at pilot sites or where there are high confidential issues that are of limited worth to other users.

The following table describes data collected and generated by the project considering data availability, data format and reusability, and where data is reported and stored. For consortium confidential data and private data, we explain the reason behind a limitation in the data open access.

Data type	Data availability (categories)	Reason behind the limited open access	Data format	Archiving and preservation (storage/backup)	Data reusability
Project partners data (institution data and contacts)	Open data	/	Text file	Project web site and Cordis web page	Reading only
Minutes from workshops	Consortium Confidential data	Privacy concerns	Text file	Padova Repository (SharePoint)	Results are summarized and presented in public reports
Minutes from focus groups	Consortium Confidential data	Privacy concerns	Text file	Padova Repository (SharePoint)	Results are summarized and presented in public reports

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)

Minutes from project meetings	Consortium Confidential data	Privacy concerns	Text file	Padova Repository (SharePoint)	Results are summarized and presented in public reports
Pilot cases buildings status	Open data	/	Still images and CSV	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Pilot cases retrofitting profile and trend	Open data	/	CSV and graphics	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Building renovation solutions (type of solutions and technology used)	Consortium Confidential data	Private know-how concerns	Text file	SOGESCA repository	Solutions are summarized and presented in public reports
Building renovation solutions costs	Consortium Confidential data	Market competition concerns	Text file	SOGESCA repository	Solutions costs are used to design cost-effective OSS service. Summarized in public reports.
Pilot cases population data	Open data	/	CSV and graphics	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)

Pilot cases economic data	Open data	/	CSV and graphics	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Pilot cases policy frameworks	Open data	/	Text file	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Pilot cases incentive mechanisms	Open data	/	Text file	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Survey data for the strategic assessment (Task 2.2)	Consortium Confidential data	Privacy concerns	CSV	Bocconi repository	Survey results are summarized and presented in public reports
Pilot cases market players list	Open data	/	Text file	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Pilot cases financial institutions list	Open data	/	Text file	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
OSS Padova end-users' data	Private Data	Privacy concerns	CSV	Comune di Padova	Results are summarized and presented

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)

					in public reports
OSS BMs data	Consortium Confidential data	Private know-how concerns	CSV	Bocconi repository	Results are summarized and presented in public reports
Padova OSS customers data	Private Data	Privacy concerns	CSV	Comune di Padova	Results are used to design better OSS services
Pilot cases market sizes	Consortium Confidential data	Privacy concerns	CSV	Bocconi repository	Results are summarized and presented in public reports
International OSS experiences	Open data	/	Text file	Padova Repository (SharePoint) and project web site (Deliverables)	Open re-use
Padova OSS customers data – Survey by FFS	Consortium Confidential data	Privacy concerns	CSV	FFS repository Padova repository	Results are used to design better OSS services. Summarized and presented in public reports.
Workshops records	Consortium Confidential data	Privacy concerns	Audio: MP3, MXF Video: MOV, AVI.	Padova Repository (SharePoint)	Results are used to design better OSS services

Focus groups records	Consortium Confidential data	Privacy concerns	Audio: MP3, MXF Video: MOV, AVI.	Padova Repository (SharePoint)	Results are used to design better OSS services

2.1.5. ETHICAL ASPECTS

The PadovaFIT EXPANDED project foresees both interactions with citizens as well as handling of personal data of citizens (in WP2, WP3, WP6 and WP7) which generate potential ethics and personal data protection issues. All ethics-related issues that arise in the course of the project will be approached in accordance with good research practice and national, EU and international law. Therefore, a Ethics and personal data protection communication has been issued at the beginning of the project and it has been presented in all interaction with citizens and private actors along the projects. Project coordinator (CPD) is responsible for data protection over time.

Informed consent procedures are adopted in all instances where human participants are involved. Potential participants are informed beforehand about the project, its aim and expected outcomes, and the nature of their participation, including what kind of data will be collected, how this data will be managed during the project, and what will happen after the end of the project. Information sheets with this information are made available in languages fully understood by potential participants, who will also have an opportunity to ask questions from the researchers either in person at information events or over the phone. Potential participants have been informed about the Project and their participation before the start of their participation in the project, i.e. before any data is collected. Potential participants received informed consent forms in a language fully understood by them. Participants are always able to withhold their consent at any time, in which case all efforts will be made to erase any information volunteered by the particular participants from further analysis.

Personal data collected may include names, professions, and addresses as well as sensitive information such as sex or age, specific economic and financial needs, potential cultural and/or social barriers to energy refurbishment. Informed consent procedures as described above will be adopted throughout the project and no unnecessary personal data will be collected. Data are always anonymized at the point of data analysis, unless human participants have given their express permission to use their personal data (name, address) in order to receive personalised integrated energy service information and offer. No sensitive personal data are shared either within or without the consortium before it has been anonymized.

The consortium guarantees that the project does not disseminate any information that allows for the identification of individual persons. In all its activities, the consortium ensures the full and rigorous compliance with any applicable national privacy laws (related, inter alia, to the data protection issues) including the General Data Protection Regulation No 2016/679 that entered into effect in May 2018.

2.1.6. DATA ACCESSIBILITY

Data collected is used by the consortium to implement public deliverables, publications, advertisement materials, etc., which are disseminated and communicated to stakeholder groups or to a wider public. All deliverables and publications follow the project's DMP and are available through the SharePoint and via project web site.

According to the category of data collected and generated, data are stored in the official project SharePoint which is created and managed by CDP. The SharePoint is a repository presenting different type of data and materials. It is organised in folders representing project WPs. Project partners are allowed to modify, upload and download data regarding the project. Third parties can access data by asking an access permit to padovafit@comune.padova.it. Data qualified as Consortium Confidential Data and Private Data are kept hidden from third parties' access.

All project results are public. Project scientific publications, reports and deliverable can be freely download in the project web site at this link: <https://www.padovafit.eu/tn/publications.html>

All information collected and stored in the web site is open and can be reused by all peers, citizens and stakeholders.

3. OPEN RESEARCH DATA PILOT

The strategy of ORDPs is usually described as "*as open as possible, as closed as necessary*", since it is acknowledged that not all data can be open. Typical reasons for this can be:

- *results can reasonably be expected to be commercially or industrially exploited;*
- *need for confidentiality in connection with security issues;*
- *rules on protecting personal data;*
- *challenges to reaching the main aim of the project;*
- *lack of research data generated in the project;*
- *other legitimate reasons.*

Open Research Data Pilot describes the way of providing on-line access to scientific information. Open access typically focuses on access to '*scientific information*' or '*research results*', which refers to two main categories:

- *Peer-reviewed scientific research articles (primarily published in academic journals)*
- *Research data*

Open Access to Publications:

According to the European Research Council Open Access Guidelines:

“The mission of the European Research Council (ERC) is to support excellent research in all fields of science and scholarship. The main outputs of this research are new knowledge, ideas and understanding, which the ERC expects its researchers to publish in peer-reviewed articles and monographs. The ERC considers that providing free online access to these materials is the most effective way of ensuring that the fruits of the research it funds can be accessed, read, and used as the basis for further research”.

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)

Open Access to Research data:

Research data is information (particularly facts or numbers) collected to be examined and considered, and to serve as a basis for reasoning, discussion or calculation. In a research context, examples of data include statistics, results of experiments, measurements, observations resulting from fieldwork, survey results, interview recordings and images. The focus is on research data that is available in digital form.

Concerning research data, the ERC Scientific Council's Open Access Guidelines further explain:

“The European Research Council supports the basic principle of Open Access to research data. It therefore recommends to all its funded researchers that they follow best practice by retaining files of all the research data they have produced and used during the course of their work, and that they be prepared to share these data with other researchers whenever they are not bound by copyright restrictions, confidentiality requirements, or contractual clauses.”

3.1.1. DATA REPOSITORY AND OPEN ACCESS

In order to ensure access to data in the long term, the PadovaFIT EXPANDED project created a SharePoint named Parepository.comune.padova.it hosted at the following link:

<https://parepository.comune.padova.it/index.php/apps/files/?dir=/&fileid=68105>

This data repository is freely accessible to project partners and third parties upon access permit request to padovafit@comune.padova.it.

According to the DMP data can have different accessibility rights: Open Data can be download and reused any time without restrictions for any users, Consortium Confidential data can be accessed only by project partners that can download and reuse them without any restrictions, Private Data is maintained by an individual partner, so these are not available and stored in the SharePoint.

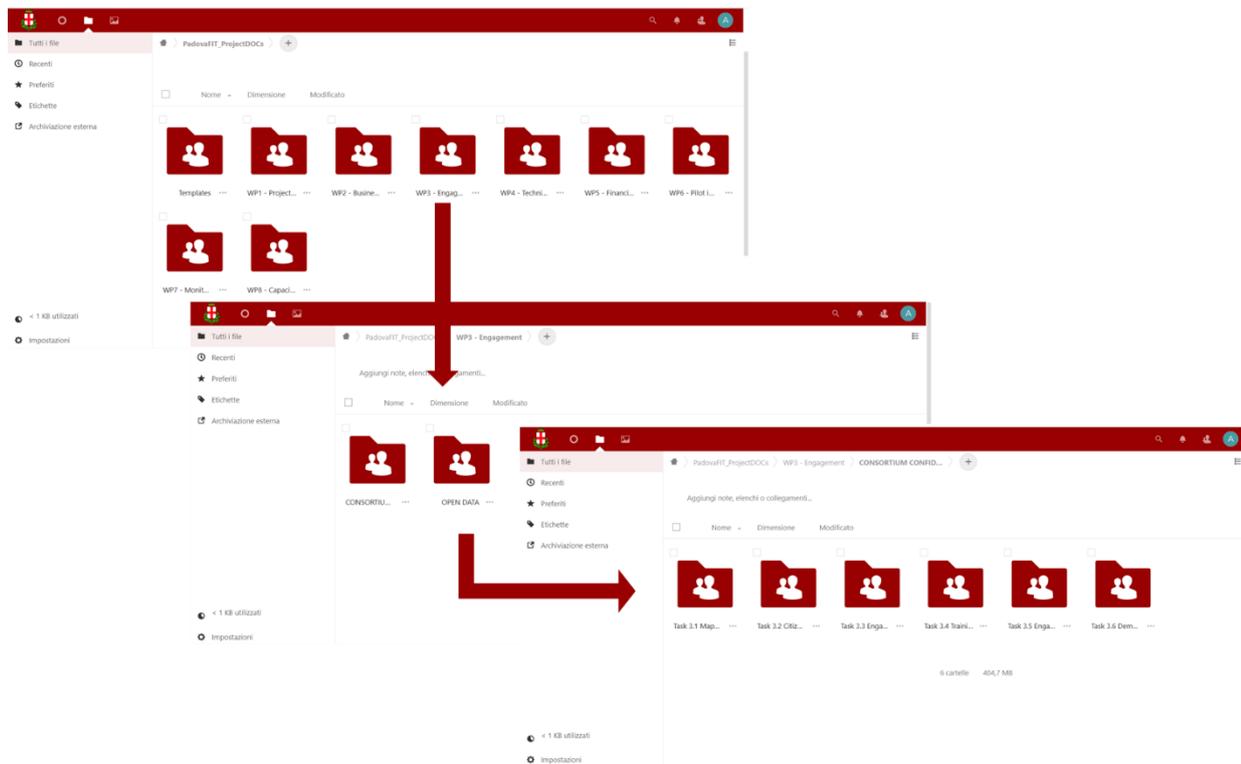
The repository holds:

- *All deliverables, scientific reports generated during the projects*
- *All project presentations*
- *All project newsletters*
- *Open research data*
- *All related materials concerning the projects.*

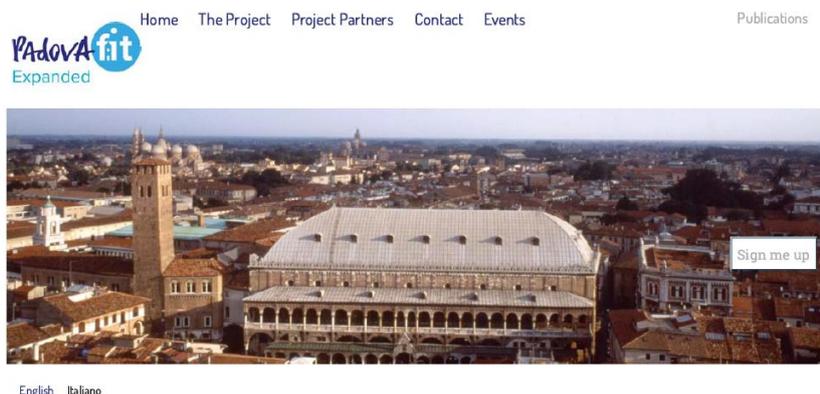
Scientific products and project materials are organised in folders according to WPs. All those research products are available any time for all users upon access permit request.

All scientific reports provide a reference section, which collects verified references and links to allow open access to data and information used to produce them.

D2.7 OPEN RESEARCH DATA PILOTS (ORDP)



In addition, the project web site allows the freely access to all scientific products (reports, deliverables, contents, newsletters, informative news) generated during the project. Those materials can be downloaded for free to all users at the following link: <https://www.padovafit.eu/tn/publications.html>



English Italiano

Publications

List of PadovaFIT publications

Analysis of existing one-stop-shop initiatives in EU and beyond, including good and bad practices (D2.1)

The mapping report analyses the OSS initiatives in Europe and beyond, through literature review, desk research on 26 OSS initiatives, and in-depth analysis on 12 selected case studies. An OSS classification has been developed, based on the recurring OSS business models.

Download

A scientific peer-reviewed paper has been published by Bocconi University in the Journal of Cleaner Production, Elsevier. The paper titled “Boosting energy home renovation through innovative business models: ONE-STOP-SHOP solutions assessment” is available at the following link

<https://www.sciencedirect.com/science/article/pii/S0959652621041585>

The paper is freely available for all types of peers according to the journal rules. The project grant number is declared in the acknowledgement section. References are verified and provided via links.



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Outline

[Highlights](#)[Abstract](#)[Keywords](#)[1. Introduction](#)[2. The ones-stop-shop concept](#)[3. Methodology](#)[4. Results: OSS business model archetypes](#)[5. Discussion](#)[6. Conclusions](#)[Funding](#)[CRediT authorship contribution statement](#)[Declaration of competing interest](#)[Acknowledgements](#)

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Boosting energy home renovation through innovative business models: ONE-STOP-SHOP solutions assessment

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