PEDvolution

Interoperable solutions to streamline
PED evolution and cross-sectoral integration

Deliverable 10.2

Communication and dissemination activities – Year 1

Co-funded by the European Union

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1 According to Project's Quality Assurance Process

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Glossary of terms and abbreviations used

Table 1: Terminology

ABBREVIATION / TERM	DESCRIPTION
AI	Artificial Intelligence
AIOTI	Alliance for Internet of Things Innovation
BMs	Business Models
C&D&E	Communication, Dissemination and Exploitation
C&D&E Manager	Communication, Dissemination and Exploitation Manager
CIM	Common Impact Model
CINEA	European Climate, Infrastructure and Environment Executive Agency
DR	Demand Response
EB	Executive Board
EG	Elektro Gorenjska *(Slovenian Project Partner – PED Manager)*
ESCOs	Energy Service Companies
ESG	Es-Geht!-Energiesysteme GMBH *(German Project Partner)*
ETIPs	European Technology & Innovation Platforms
EU	European Union
GA	Grant Agreement
GBN	Green Building Neighbourhoods
GDPR	General Data Protection Regulation
GEK	Gorenjske Elektrarne *(Slovenian Affiliated Partner – PED Manager)*
ICOM	Intracom Telecom *(Greek Project Partner)*
INLE	Inlecom Innovation *(Greek Project Partner & Project Coordinator)*
IoT	Internet of Things
KERs	Key Exploitable Results
KPI	Key Performance Indicator
LB	Lead Beneficiary
MPC	Model Predictive Control

ABBREVIATION / TERM	DESCRIPTION
Mx	Month x
NTNU	Norwegian University of Science and Technology
OFFSET	OFFSET Energy *(Slovenia Project Partner)*
PEBs	Positive Energy Buildings
PED	Positive Energy District
PED-RA	PED Readiness Assessment
PEN	Positive Energy Neighbourhood
PU	Public
RA	Readiness Assessment
RD&I	Research, Development & Innovation
SEN	Sensitive
SERI	Swiss State Secretariat for Education, Research and Innovation
SIN	Smart Innovation Norway *(Norwegian Project Partner)*
SWW	Sww Wunsiedel Gmbh *(German Project Partner - PED Manager)*
SXS	Sympraxis Team *(Greek Project Partner & C&D&E Manager)*
TG	Task Group
TUW	TU Wien *(Austrian Project Partner)*
Tx	Task x
TL	Task Leader
TRL	Technology Readiness Level
UN	United Nations
V2G	Vehicle-to-grid
VITO	Flemish Institute for Technological Research
WG	Working Group
WIN	City of Winterthur *(Swiss Associated Partner - PED Manager)*
WP	Work Package
WPL	Work Package Leader
ZHAW	Zurich University of Applied Sciences (*Swiss Associated Partner)*

EXECUTIVE SUMMARY

The deliverable presents an overview of the communication and dissemination efforts undertaken during the 1st year (January – December 2024) of the PEDvolution project. It evaluates progress and impact against the Key Performance Indicators defined in the Grant Agreement and further specified in the project's Exploitation and Dissemination plan (D10.1).

The project established its exploitation and dissemination plan, detailing the specific objectives and structured work plan to achieve them. Within the scope of Work Package 10 «Communication and Dissemination (Year 1)», the initial communication activities included the development of the PEDvolution communication channels. These channels, such as the project website, social media accounts (i.e. LinkedIn, X (Twitter) and YouTube channel), have been launched and regularly updated to ensure continuous engagement. PEDvolution partners also actively participated in a significant number of regional, national and EU-level events, promoting awareness on project objectives, activities and progress. These activities have successfully engaged a diverse range of target groups and stakeholders, setting a strong foundation for the dissemination and exploitation of project results during the upcoming years.

Additionally, early initial liaison activities with thematically relevant EU-initiatives (such as BRIDGE and Annex 83) and projects (such as INTERPED and HARMONISE), facilitated the sharing of knowledge and exchange of ideas, thereby also contributed towards fostering valuable collaborations and synergies.

Coordinated by Sympraxis Team, as the Communication, Dissemination and Exploitation Manager, PEDvolution partners have collaborated effectively as regards Work Package 10 activities. These efforts have already proven fruitful as evidenced from the significant progress and impact made towards achieving the project's KPIs.

A summary report on the first year's communication and liaison activities with other EU initiatives, networks and EU projects, (T10.1 «Communication tools and activities» and T10.2 «Liaison with BRIDGE and other EU initiatives»), is provided in the following chapters.

1 INTRODUCTION

This deliverable provides a detailed summary of the communication and dissemination activities conducted during the project's first year of implementation. More specifically, it presents the undertaken and completed tasks, assesses progress against the Key Performance Indicators (KPIs) as defined in the project's Plan for Exploitation and Dissemination (D10.1) and the Grant Agreement (GA).

The purpose of this document is to provide a clear overview of the status and achievements of Work Package 10 «Communication and Dissemination (Year 1)» (WP10) activities, highlighting accomplishments and challenges encountered, ensuring effective planning of the Communication, Dissemination and Exploitation (C&D&E) activities for the upcoming year.

1.1 Mapping the Project's Outputs

The purpose of this section is to map PEDvolution's Grant Agreement commitments, within the formal Deliverable description and the Task description, against the project's respective outputs and work performed. The formal deliverable and task descriptions are provided in the «GA Component Title» and the «GA Component Outline» columns in Table 2 below. The chapters where these outputs and work are outlined are indicated in the «Respective Document Chapter(s)» column.

Table 2: Adherence to Project's GA Deliverable & Tasks Descriptions

PROJECT GA COMPONENT TITLE	PROJECT GA COMPONENT OUTLINE	RESPECTIVE DOCUMENT CHAPTER(S)	JUSTIFICATION
DELIVERABLE			
D10.2 Communication and dissemination activities – year 1	Report on year 1 communication activities and liaison with Bridge and other EU initiatives. (T10.1 and T10.2).	Chapters 2,3,4,5	This report provides a summary of the communication and dissemination activities and efforts carried out during year 1, as well as the liaison efforts and collaborations established with BRIDGE and other EU initiatives. Chapter 5 presents an overview of progress against the defined KPIs.
TASKS			
T10.1 Communication tools and activities	This task provides the framework for engaging PEDvolution's audience, ensuring consistent and recognisable communication,	Chapters 3,4	Chapter 3 presents the communication and dissemination tools

PROJECT GA COMPONENT TITLE	PROJECT GA COMPONENT OUTLINE	RESPECTIVE DOCUMENT CHAPTER(S)	JUSTIFICATION
	a strong online presence and leveraging outreach opportunities.		developed and utilised, including: - the development of the project's communication & dissemination plan (D10.1) - PEDvolution's visual identity and templates - the printable materials (brochure, poster and roll-up banner) - website, social media channels (LinkedIn, X (Twitter) and Youtube channel) and data hubs - the news alerts (templates and first 2 issues) - the project presentation Chapter 4 (Section 4.1) details participation in thematically relevant events (both national and EU-wide), as participated by project partners.
T10.2 Liaison with BRIDGE and other EU initiatives	This task performs the liaison with other projects and consortia, the BRIDGE initiative, AIOTI, Annex 83, COST Action on PEDS, as well as with interoperability and standardisation initiatives and national/international bodies (InterConnect, FlexCommunity.eu, etc.). Early networking activities will serve to take advantage from running initiatives' results, regarding exploitation and replication potential. Inputs will be used in the co-design	Chapter 4	Chapter 4 (sub-sections 4.2.1 and 4.2.2) provides an overview of the initial liaison activities carried both with EU initiatives (such as BRIDGE, AIOTI, Annex 83) and other EU projects (including sister projects). The chapter outlines the efforts and actions taken to establish a common ground for collaboration and the exchange of experiences, knowledge and good practices. Furthermore, the chapter explains how these initiatives aim contribute to

PROJECT GA COMPONENT TITLE	PROJECT GA COMPONENT OUTLINE	RESPECTIVE DOCUMENT CHAPTER(S)	JUSTIFICATION
	PED-RA as well as the other PEDvolution solutions.		the development of synergies that support smooth development of the project, while laying the foundation for replication and exploitation of project results.

1.2 Deliverable Overview and Report Structure

The objective of this deliverable is to provide a comprehensive overview of the communication and dissemination activities implemented during year 1 of the PEDvolution project. It aims to showcase the achievements and to evaluate the progress made with respect to the defined KPIs and requirements as foreseen by the GA as well as the project's Plan for Exploitation and Dissemination.

Additionally, the deliverable specifies the C&D&E objectives, activities and tasks for year 2, while addressing identified challenges and incorporating respective improvements.

The deliverable is structured as follows:

- **Chapter 1:** (Present Chapter) is an introduction to this report.
- **Chapter 2:** Provides an overview of the C&D&E objectives, and activities performed in year 1.
- **Chapter 3**: Details the communication and dissemination tools and channels, divided into 3 main sections: the project's visual identity and templates, the printable materials, and the online communication channels developed.
- **Chapter 4:** Describes participation in national and EU-level 3rd party events, including liaison efforts with other EU initiatives and projects.
- **Chapter 5:** Reviews progress with respect to the initially defined KPIs and overall project objectives; while identifying the main achievements, challenges and remedial actions.
- **Chapter 6:** Presents the C&D&E objectives for year 2 and the updated work plan, including partners' expected contributions and roles.
- **Chapter 7:** Summarises the main communication and dissemination achievements and goals for the upcoming year.

2 IMPLEMENTATION OVERVIEW

PEDvolution's communication objectives as defined in the project's plan for Exploitation and Dissemination (D10.1), are detailed below:

- Raise public awareness and improve understanding about the potential of PEDs and their significant contribution towards achieving energy-efficient and sustainable buildings and districts.
- Inform and raise public awareness about the project, its expected results, and progress.
- Empower a positive opinion about the project on an EU-level to the wider public.

Dissemination and exploitation efforts aim to:

- Ensure the engagement and participation of stakeholders.
- Promote the adoption of the project's platform, tools, and solutions by the professional and scientific communities, as well as by the competent national authorities and agencies at the EU -level.
- Support the dissemination of the project's development.
- Pave the way for a successful commercial and non-commercial exploitation of the project outcomes.
- Encourage the dissemination and further exploitation of project results beyond its completion.

During the 1st year of implementation, efforts primarily focused on the communication objectives, and on building a committed and established audience for the project. Activities concentrated on raising awareness about project's ambition and vision, thereby generating interest and encouraging target groups to follow its progress.

Overall, the planned activities under Work Package 10 and its subtasks were successfully completed in line with the project's work plan. In M6 (June 2024), Sympraxis Team (SXS) as C&D&E Manager developed and shared the project's Exploitation and Dissemination plan (D10.1) with the consortium partners. The plan included the foreseen materials and key messages for the broader communication and dissemination efforts. Furthermore, the monitoring and tracking procedure was established and agreed upon with all partners, to facilitate the smooth and timely tracking of all related activities.

The project's visual identity and printable materials (i.e. brochure, poster and roll-up banner), have been designed and made available in English and the consortium official languages (i.e. Dutch, French, Greek, German, Norwegian and Slovenian). Feedback was provided to SXS according to the foreseen quality assurance process by project partners. Likewise, PEDvolution's online communication channels - website, social media pages (LinkedIn, X (Twitter) and YouTube channel) and news alerts templates – were set-up and shared with external stakeholders, target groups and the wider PEDvolution community. These efforts have already had a significant impact (with more than 1672 total stakeholders reached), providing a strong basis for project dissemination and exploitation during the upcoming implementation period.

Emphasis has been placed on the planning and participation in regional, national and EU-level 3rd party events. At this early stage, PEDvolution partners have already engaged in 13 events to disseminate the project and its objectives within the relevant target groups. Liaising and fostering collaboration and exchange of knowledge and ideas with EU-initiatives (such as BRIDGE and AIOTI) and thematically relevant EU projects (such as oPEN LAb (Grant Number 101037080) and INTERPED (Grant Number

101138047), and HARMONISE (Grant Number 101138595),) has also been a primary objective and focus during this first year.

Through participation in 3rd party events, online communication, and dissemination activities, PEDvolution has managed to interact and engage with the majority of the stakeholder groups, as identified in the GA and the project's Exploitation and Dissemination Plan. More specifically, these include interactions with representatives from the following fields:

- Target Group 1: Energy service providers (ESCOs) & Mobility service providers
- Target Group 2: Residents/ Energy consumers /End users
- Target Group 3: Energy prosumers
- Target Group 4: PED developers and managers
- Target Group 5: PED Investors
- Target Group 6: Local Authorities and City planners
- Target Group 8: Standardisation bodies
- Target Group 9: Research / Academia
- Target Group 11: General Public

All project partners have contributed substantially towards the implementation of the first year C&D&E activities, fulfilling their expected roles. SXS as C&D&E Manager worked closely with partners for the day-to-day execution of the relevant activities and in particular with Inlecom Innovation (INLE) the project Coordinator (PC) and Leader of the Liaison Activities, the TU Wien (TUW) as the Quality Assurance (QA) Manager and the WP Leaders. Targeted meetings as appropriate, as well as the monthly Executive Board (EB) meetings, contributed to this effort. Establishing more frequent contact between the C&D&E leader and project partners could further streamline and facilitate the implementation of the C&D&E activities.

This year's C&D&E objectives concentrated on establishing a framework to engage the project's target audience, ensuring consistent communication, maintaining a strong online presence and leveraging outreach opportunities. Dissemination and exploitation efforts are planned to be initiated in year 2, when the first project results become available. The KPIs tracking has been successfully initiated with significant progress already achieved.

Most importantly the implementation of year 1 activities has significantly contributed towards cultivating collaboration among PEDvolution partners. Coordinated communication and dissemination efforts, have encouraged partners to collaborate closely, align their goals, and share expertise. Furthermore, joint participation in events and regular use of the standardised PEDvolution tools and templates, have also contributed towards ensuring effective teamwork. These efforts have created the basis for fruitful discussions and exchange of ideas within and beyond the consortium borders; key elements for the successful implementation of the upcoming C&D&E activities and enhancing the project's overall impact.

3 COMMUNICATION AND DISSEMINATION TOOLS & CHANNELS

This chapter presents PEDvolution's communication and dissemination tools and channels developed, providing an overview of their usability and impact during the project's first year of implementation.

3.1 Project Visual Identity and Templates

The development of a cohesive visual identity and standardised templates for the project material and public results, is crucial for maximising project impact and ensuring dissemination efforts are carried out in an organised and effective manner. For this purpose, as already defined in the project's Dissemination and Exploitation plan, SXS as the C&D&E Manager in cooperation with project partners has established PEDvolution's visual identity. This includes the development of the project's logo, colour palette, font, and tag line. Furthermore, the funding authorities' logos and disclaimers have been integrated in all the respective templates and materials, as required by the European Union (EU) commission and Swiss Secretariat for Education, Research, and Innovation (SERI).

These elements have been used to develop the following templates, aiming to support project implementation and maintain a unified structure and for project outputs and results. The templates have been systematically used by all partners throughout the 1st year and will continue to be utilised until project completion. All relevant materials can be found on the PEDvolution common internal Sharepoint and Annex I of the present document.

REPORT/DELIVERABLE TEMPLATE

It is important that all reports and deliverables, particularly those intended for public dissemination (PU), to PEDvolution's target audience, adhere to the template provided in the project's Dissemination & Exploitation Plan (Annex I). This clear and straight forward structure has proven particularly valuable in the presentation of project results for the project's target audience. The same template is also utilised for internal dissemination (SEN).

For year 1 the following deliverables have been developed, conforming to the defined format:

- D1.1: Local community analysis and initial engagement plan (M10) – PU
- D1.2: Functional and operational requirements of the demo sites and Reference use cases (M8) – PU
- D1.3: System architecture and technical specifications (M10) – SEN
- D2.1: PED design and planning tool architecture and process planning (M12) – SEN
- D2.2: Understanding the PED Readiness Assessment framework (M12) – SEN
- D2.3: Solution specification and ideation for the PED energy manager (M12) – SEN
- D2.4: Report on business model, social innovation and engagement tools for PEDs (M12) – SEN
- D7.1: Data exchange platform design (M12) – PU
- D10.1: Plan for Exploitation and Dissemination (M6) – PU
- D10.2: Communication and dissemination activities – year 1 (M12) – PU (Present document)
- D13.1: Project Management Plan (M2) – SEN

- D13.2: Data Management Plan (M6) – SEN

MEETING AGENDA AND MINUTES TEMPLATES

The project's monthly EB and ongoing WP meetings have systematically followed the respective templates provided in Annex I of the project's Dissemination and Exploitation plan. This approach has supported the planning and record-keeping of each meeting.

This procedure has contributed significantly to the project's overall organisation and ensured that the main discussion points and decisions have been officially recorded and agreed upon by all participants. This documentation also acts as a point of reference for past discussions, providing a standardised structure, contributing towards a more solid implementation approach and to the timely implementation of activities. As a result, the project is better positioned to meet its objectives and deliver impactful outcomes.

PRESENTATION TEMPLATE

A PowerPoint template for the project's presentations has also been developed to ensure consistency across all project communications. The template includes a variety of slide formats and layouts, which partners have used as a guide when creating all presentations, including the ones for internal meetings, workshops and events. This has contributed towards ensuring that all presentations are visually aligned and effectively communicate their primary aim to the intended audience.

NEWS ALERT TEMPLATE

The project's news alert template, also developed within the scope of the project's Dissemination and Exploitation plan (D10.1), has served as a framework for the creation of project's bi-annual news alerts, which aim to inform PEDvolution stakeholders on project progress. The template provides a structured approach for the dissemination of project events and results, thereby informing the project's target groups and stakeholders, in a clear and coherent manner. Structure and language use is easily comprehensible, considering the different audiences and target groups being addressed. At this stage, two bi-annual issues have been published; for further details, refer to Section 3.3.3 below.

3.2 Printable Materials

The project's printable materials i.e. brochure, poster, and roll-up banner, have been developed in English and translated in all official consortium languages (i.e. Dutch, French, Greek, German, Norwegian and Slovenian). These materials are now publicly available both on the project's internal Sharepoint from where partners can download the relevant files and on the project's website (see also Annex I). Both access points can be easily accessed by respective users and play a significant role in reaching and informing the project's target audience. Printing of materials is either facilitated by SXS or directly by the interested partners, based on case-by-case agreements as deemed appropriate.

BROCHURE

The PEDvolution brochure is designed to raise awareness about the project, providing key information, and guiding interested parties to more detailed sources for further information. During this first year of project implementation, the C&D&E Manager printed copies of the brochure, which were distributed to project partners for dissemination at suitable opportunities and events. The project's brochure has been widely disseminated to a diverse audience, through several in-house and 3rd party events, as detailed in table 13. This outreach has successfully engaged a broad spectrum of target groups including university students, field experts, industry business partners, innovators EU institutions representatives, regional and national authorities, civil society, researchers and international organisations amongst others.

Figure 1: PEDvolution brochure.

POSTER

The PEDvolution poster also includes some technical information on the project objectives and expected results, and can therefore also be used for the presentation of the project to more targeted expert groups. The project's poster has been showcased in high-level conferences such as the BauSIM conference in Vienna and within the scope of the liaison activities and the Cluster meeting on Positive Energy Districts (PEDs) and Positive Energy Neighbourhoods (PENs), organised by European Climate, Infrastructure and Environment Executive Agency (CINEA) in Brussels in September 2024 (see Section 4.2).

Figure 2: PEDvolution poster.

ROLL-UP BANNER

The roll-up banner's primary purpose is to be used in targeted events, presentations and thematically relevant conferences. Given that PEDvolution partners have been considerably active in engaging in dissemination efforts and opportunities, the roll-up banner has already been displayed in more than 5 targeted events or exhibitions in PEDvolution countries including Greece, Belgium, and Switzerland. For more details, regarding participation in 3rd party events, please refer to Section 4.1.

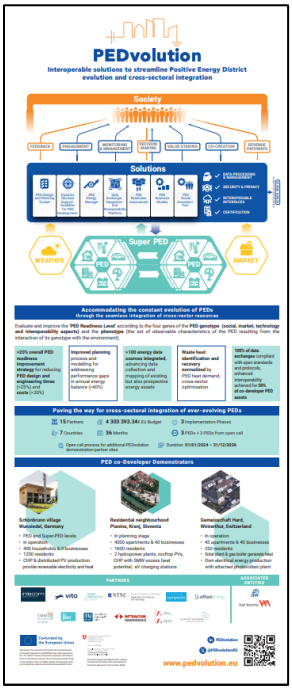

Figure 3: PEDvolution roll-up banner.

3.3 Online Communication Channels & Resources

Online communication channels and resources have proven invaluable as regards the initial communication and dissemination efforts of PEDvolution. They have played a significant role in raising awareness about the project, its objectives, expected results, as well as sharing its initial activities and news among the foreseen target audience and the wider public. By leveraging these channels and resources, PEDvolution has already established a strong online presence and made the first steps for establishing collaboration with other EU projects and encouraged the active involvement of key stakeholders across the EU.

In this light, it is evident that the development and regular updating of the project website, social media, news alerts and generic digital presentation have contributed significantly to the smooth initiation of communication and dissemination efforts, thereby managing to achieve the first year's KPIs.

For each online channel, the following noteworthy points can be highlighted:

3.3.1 Website

The PEDvolution website was developed during the project's 1st semester, with the primary purpose to act as a comprehensive and user-friendly platform via which all interested stakeholders and target audience can be informed about the project's overall scope and progress. It serves as key central communication channel and provides easy access to all communication and dissemination activities and material.

In view of the website's development, SXS collaborated closely with all partners for their relevant contributions. In particular, the PC (INLE) contributed towards the overall structure and content of the website, while PED Managers (SWW, EG, GEK, WIN) provided technical information on the PED sites. Furthermore, Solution Providers (OFFSET, ICOM, VITO, NTNU, ZHAW, TUW, SIN), offered useful information as regards the technical tools and solutions to be developed within the project. All partners provided a short profile of their organisation as well as their project logo.

The website is available in English, as the consortium's official language. Strategically, a simple structure with limited sections (single page «*Home*» with key information, «*News*» section, «*Results*» section) has been created, to facilitate rapid access to key information and updates. Currently, the website includes information related to the following aspects:

- Challenge Addressed
- General Scope
- Specific Needs/Ambition and Expected Results
- Expected Outputs – Project Solutions
- PED Co-Developer Demonstration Sites
    - Schönbrunn village, Wunsiedel, Germany
    - Residential neighbourhood, Planina, Kranj, Slovenia
    - Gemeinschaft Hard, Winterthur, Switzerland
- Target Audience
- Project Consortium
- News and Events (completed and upcoming)
- Results (public deliverables and materials)

- Stay in touch
- Contact information (project email and social media accounts)

The website has been regularly updated throughout the year with dissemination materials (in all consortium languages) and the following finalised public deliverables:

- Local community analysis and initial engagement plan
- Functional and operational requirements of the demo sites and Reference use cases
- Plan for Exploitation and Dissemination

Additionally, the following two deliverables, will be added shortly:

- Data exchange platform design
- Communication and dissemination activities – year 1

To ensure the timely update of project progress, Task Leaders (TLs) and/or Lead Beneficiaries (LBs) are responsible to inform SXS upon the completion of each public project output or results.

Additionally, the *«News»* section has been updated on a monthly basis. All partners have contributed towards this effort by providing information as regards their participation in 3rd party events, progress from other thematically relevant initiatives which would be of interest to the PEDvolution audience. To ensure the engagement of all project partners in this process, thereby allowing information not only on the progress of the project itself, but also from the partnership countries to be shared with the PEDvolution audience, SXS has ensured that the initial time plan for provision of input agreed-upon in the project's initial dissemination and exploitation plan, has been followed.

The «*Networking*» section is soon to be introduced to showcase PEDvolution collaboration with sister projects such as INTERPED and HARMONISE thematically relevant projects and initiatives such as the Scalable Cities Community.

It is important to note that as the project progresses, additional sections such as «*Publications*» may be added, depending on the material available. Additionally, all information will continue to be regularly updated.

Currently the most visited sections are the PEDvolution home page and the sub-page *«News»*. For information on the number of unique website visitors, please refer to Table 13 in Chapter 5.

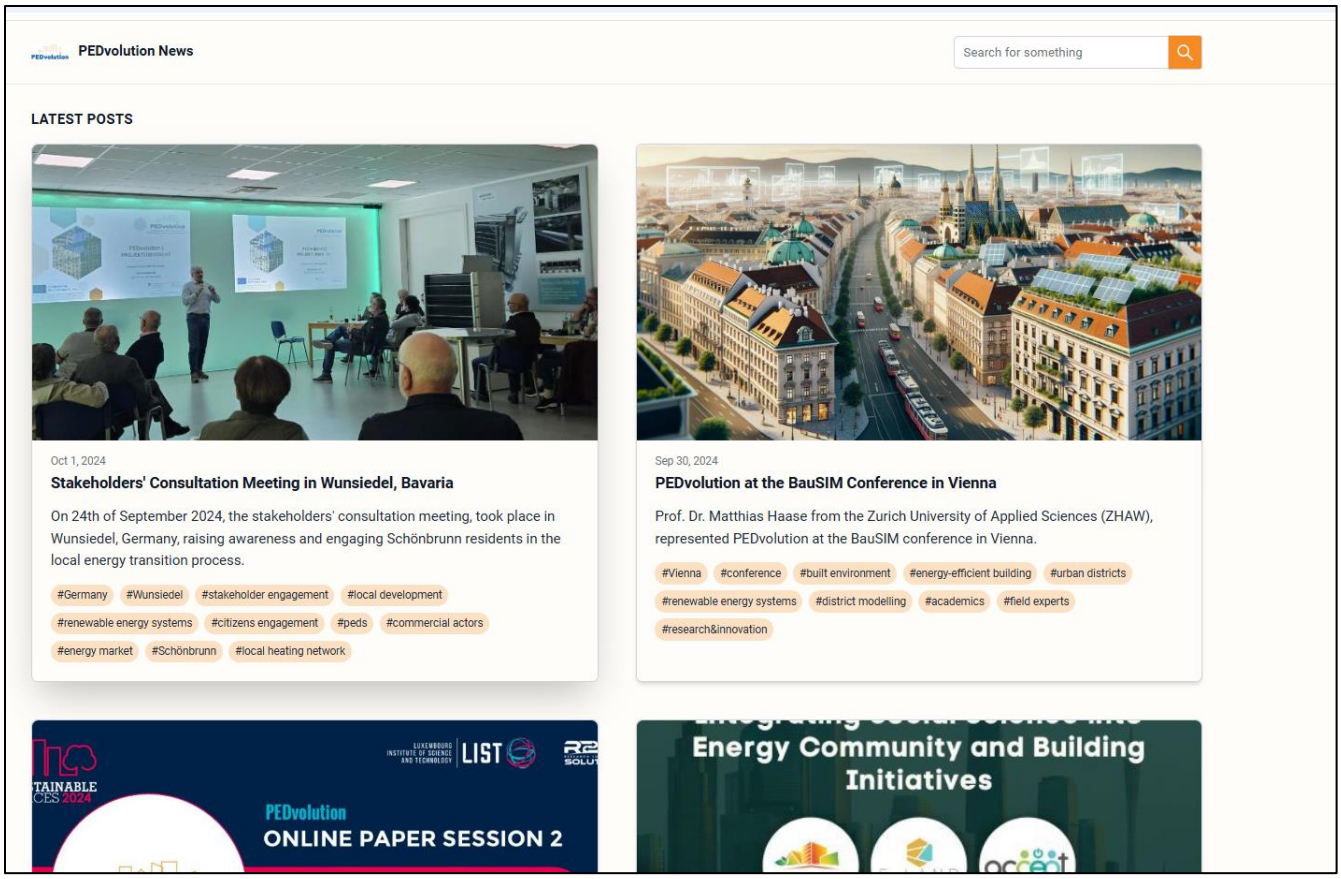

Figure 4: PEDvolution website.

In addition to the above, PEDvolution is also showcased on partner's official websites in the form of articles and press releases, with reference to the project's official website and/or social media pages, thereby contributing and enhancing overall dissemination efforts and project's outreach.

3.3.2 Social media

PEDvolution's social media pages (i.e. LinkedIn, X (Twitter), and YouTube channel) have been created and are managed by SXS. Each account contains the project's basic project and contact information and reference to the official website. Updates are made in a consistent manner since project initiation and throughout the project's first year of implementation.

To date PEDvolution's official LinkedIn and X (Twitter) page have more than 40 original posts each, with both accounts attracting a total of 556 followers. Considered as essential communication channels for sharing project progress and results, their dynamic nature has already encouraged interaction with the project's diverse group of stakeholders, while also creating synergies and building bridges with other EU projects and initiatives.

As is the case with the project's website, material, and input for the development of the respective posts has been provided by all project partners. On average, 3-4 posts have been created on each social media account per month, keeping the audience interested and engaged. Analytics (in terms of followers, posts and interactions), suggest that LinkedIn is the most impactful social media platform for the PEDvolution audience. This is perhaps due to the platform's primary target audience being business professionals and academics.

In addition to the above an experimental Bluesky account has been recently created, to complement the existing social media accounts.

PEDVOLUTION LINKEDIN

The PEDvolution LinkedIn page has been highly active during this first year of implementation. The page's performance exceeded the KPIs set for the first year, as detailed in table 13, with notable engagement in terms of posts, impressions, followers, unique visitors, and views.

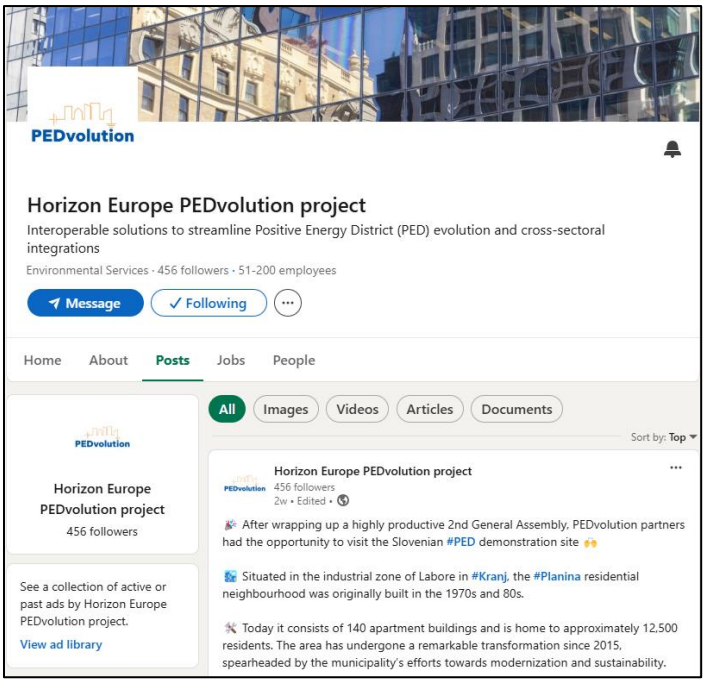

Figure 5: PEDvolution LinkedIn page.

This has been accomplished not only through targeted project posts, but also as a result of the extended research undertaken by SXS to reach additional stakeholders, by following other thematically relevant pages, projects, partners, organisations, and initiatives. Tagging relevant partners, organisations, and company pages has contributed to increasing the overall outreach of the page.

The page's audience profile is diverse in both demographic profile and geographical location. Among the main groups interacting with the PEDvolution official page, stakeholders from a wide variety of disciplines are represented, covering the majority of project target groups. These include representatives from the research community (such as universities and research centers), education, business development managers, as well as field experts such as engineers and operations management representatives. The visitors identified by their job function and industry are presented in Figure 6 and Table 3 below.

Regarding the visitor's geographical location, PEDvolution's partner countries (i.e. Greece, Austria, Switzerland, Norway, Belgium, and Germany) rank among the top geographical contributors. Moreover, the project's audience extends beyond the partnership's geographical scope, reaching countries such as Turkey, Israel, France, and Italy. Additionally, it is noteworthy that each original post receives an average of over 1000 impressions and an engagement rate of approximately 20%.

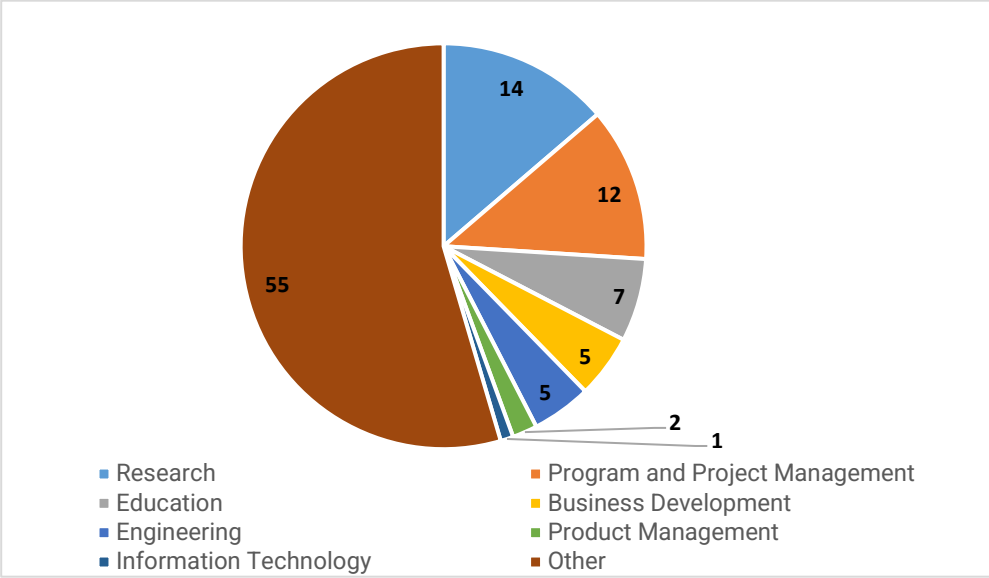

Figure 6: PEDvolution LinkedIn visitors by job function (%).

Table 3: PEDvolution LinkedIn visitors by industry.

	NO. OF VISITORS	PERCENTAGE (%)
Research services	998	46
IT services and IT consulting	115	6
Higher education	107	5
Non-profit organisations	101	5
Renewable energy semiconductor manufacturing	98	4
Environmental services	72	4
Software development	64	3
Architecture and planning	57	3
Renewable energy equipment manufacturing	54	3
Business consulting and services	54	3
Other	382	19
Total	**2102**	**100**

PEDVOLUTION X (TWITTER)

PEDvolution's X (Twitter) account has adopted a similar approach for its launch and outreach efforts, aiming to connect with its target audience. As of December 2024 (M12), the number of active followers can be seen in table 13. Significant efforts from the C&D&E Manager, in collaboration with all project partners, were needed to enhance this reach and impact. Targeted original posts and material is regularly being posted, with approximately 100 views on average per post. Figure 7 below, presents an example of a tweet.

Figure 7: PEDvolution X (Twitter) account.

PEDVOLUTION BLUESKY

In recent months, a notable migration from X(Twitter) to Bluesky has been observed, particularly amongst experts in environmental fields. Within this context, and in response to this trend, PEDvolution has recently created a Bluesky account, which will run experimentally and in parallel with the X(Twitter) account in the upcoming months. Currently, the page has 11 followers, as also indicated in table 13.

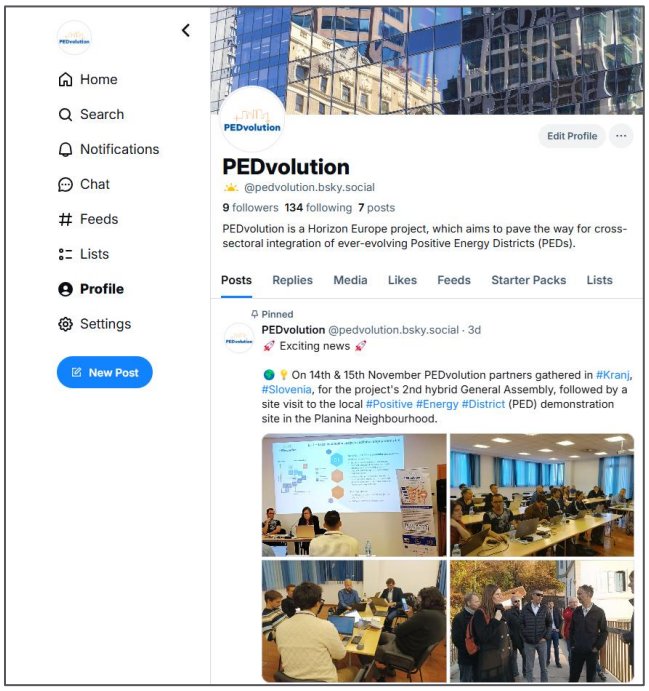

Figure 8: PEDvolution BlueSky account.

PEDVOLUTION YOUTUBE CHANNEL

The project's YouTube channel has been created as planned. Currently it contains one promotional video, since the videos foreseen to be shared (such as the project advertorial video, participation in 3rd party events, final conference materials) are expected to be made available during the 2nd and 3rd years of the project.

Still, it is worth noting that project's promotional video developed by the PC, has already been published and disseminated via the YouTube channel. At this early stage, the channel has gained a small initial audience, with its published content starting to attract views. As the project progresses and more results and outputs are made available, it is expected that both the number of subscribers and views will increase exponentially, since the YouTube channel will play a vital role in the dissemination and exploitation of the project's outreach.

Furthermore, all partners have actively followed/subscribed to the pages, engaging with the content by sharing and re-posting from their respective organisation's official accounts. In addition, PEDvolution has re-shared relevant material from other EU projects that could be of interest to the PEDvolution target groups. This approach has significantly contributed to expanding the project's outreach, target audience and broadening PEDvolution's visibility.

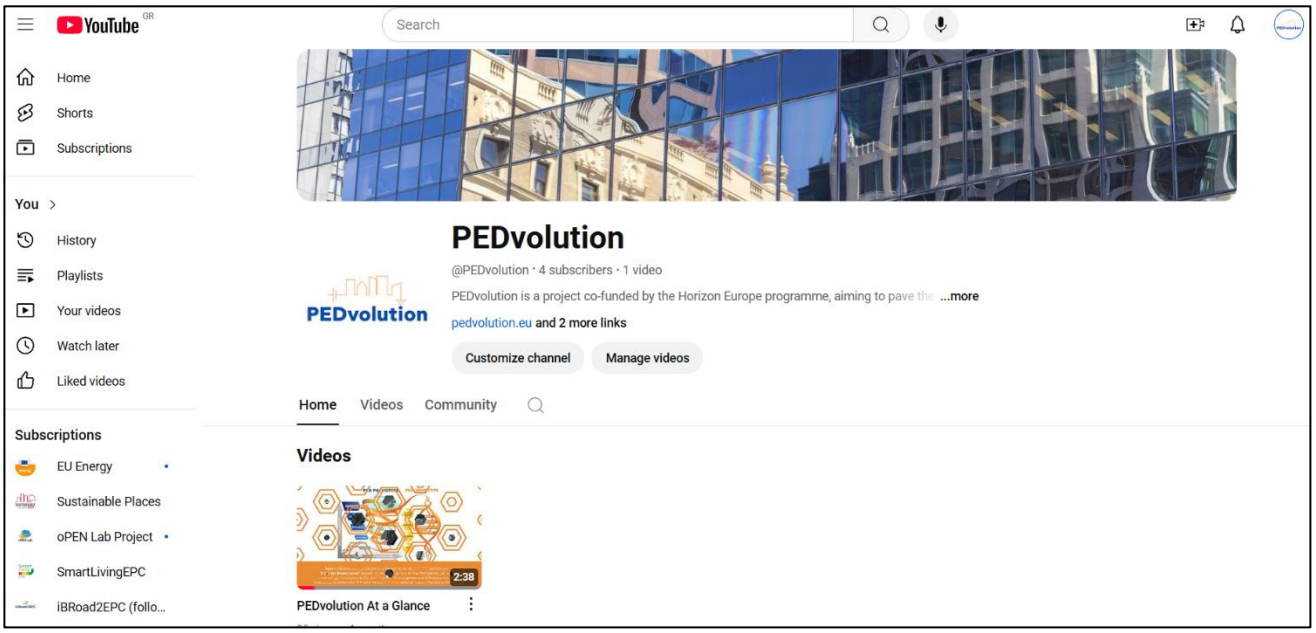

Figure 9: PEDvolution YouTube channel.

3.3.3 News Alerts

The primary purpose of the bi-annual news alerts is to provide concise updates to PEDvolution's target groups as regards the project progress from the past six months, while also engaging the target audience and encouraging them to learn more about the project's developments.

As planned, 2 news alerts have been released within the 1st year of implementation, in July 2024 (M7) and December 2024 (M12) respectively. The first issue introduced the project and its objectives, and initial activities, including the 1st General Assembly and participation in the annual BRIDGE General Assembly meeting. Its purpose was to capture the interest of the readers, encouraging them to find out more about the project, follow its progress, and visit the project website and the social media pages.

The second issue highlighted the project's overall progress during the 1st year, including updates on the first WPs, deliverables, and key outputs. It also presented the organisation of the 2nd General Assembly in Kranj, Slovenia and site-visit to the Slovenian PED site, as well as partners' strong contribution to dissemination efforts via participation in several 3rd party events.

Both issues were sent electronically, to all subscribers of the PEDvolution *«Stay in Touch»* section, on the project website. In December (M12), the subscriber count stands at 72, with the open rate reaching 36%. The next news alert is expected in June 2025 (M18).

3.3.4 GDPR-compliant contacts Database

An initial contacts database has been set-up, consisting of representatives from diverse target groups including researchers, university professors, entrepreneurs, regional and national public authorities, ESCOs, energy prosumers and policymakers. The purpose of this database is to streamline and facilitate effective contact management in view of the project's dissemination activities and support stakeholder engagement in upcoming activities.

This engagement will be particularly crucial during the co-development and testing phases of the project, where active collaboration with these groups will play a key role in project progress. The database is General Data Protection Regulation (GDPR)-compliant as all listed individuals have expressed their interest in the project activities either via the project's website or from a one-to-one basis at 3rd party events and confirmed that they wish to receive relevant updates and information.

During the next months, this list is expected to expand significantly and will be shared as required with TLs particularly in view of the relevant activities (e.g. WP9 «PEDvolution demonstrators and performance assessment»).

3.3.5 Digital Presentation

The project's digital presentation has been designed as a core resource that provides a comprehensive overview of the project's scope, objectives, activities, expected results, and progress. The presentation serves as a tool for PEDvolution partners, enabling them to communicate the project's vision and milestones to 3rd parties and stakeholders at conferences, workshops, and other relevant events. For this purpose, the presentation has been shared with all partners in editable format, so that it can be used as a basis, modified, and enriched with additional information as required.

The initial version was shared in May 2024. Since the completion of the 1st public deliverables in October 2024, the presentation has already been updated to include the latest progress and useful information on the completed tasks. It is planned to be further updated at the beginning of year 2025. This approach helps partners in presenting accurate and up-to-date information as regards PEDvolution's ongoing activities and achievements.

3.3.6 Digital Gateways – Data Hubs

BUILD UP is the largest portal dedicated to fostering knowledge sharing about energy efficiency and renewable energy related to the building and construction sector in Europe. It aims at exchanging information and bringing together the interests of practitioners and professional associations working in the sector. The portal also features relevant news, developments and events of potential interest to its audience. Since the project's initiation an introductory post highlighting PEDvolution's objectives and results has been made.

Likewise, Construction21 is the international information and meetings network for sustainable construction professionals and an efficient tool which enables the sharing of news, best practices, and events between actors active in the building and city sectors, who are interested in sustainability. Construction21 is an international platform, therefore PEDvolution's contribution is of important significance, since it facilitates the dissemination of project results beyond the EU territory. While Construction21 will be more actively utilised in the later stages of the project.

Below are some indicative topics for which short articles can be published in the upcoming period during the 2nd year of implementation, in line with PEDvolution's progress and initial results:

- Local community analysis and the potential of citizen's engagement in PEDs
- PED readiness assessment: A policy strategy roadmap
- Planina residential neighbourhood: a developing PED within an industrial community
- The PEDvolution decision support guideline application
- The Schönbrunn village and the super-PED concept
- Stakeholder engagement within the Gemeinschaft Hard community in Winterthur

Throughout the project's duration, at least 10 posts are expected to be made on the respective digital gateways.

3.3.7 Publications

Over the course of the project, PEDvolution aims to publish 5 scientific papers, actively contributing towards the advancement of knowledge and dissemination of project outcomes.

In year 1, PEDvolution consortium members have already made progress towards this direction, by contributing to the following thematically relevant publications:

[1] P. Civiero, G. Turci, B. Alpagut, M. Kuzmic, S. Soutullo, M. N. Sánchez, O. Seco, S. Bossi, M. Haase, G. Massa, and C. Gollner, *"Operational insights and future potential of the database for Positive Energy Districts,"* Feb. 2024.

[2] M. Haase, U. Eicker, C. Hachem-Vermette, G. Kayo, and H. ur Rehman, *"Lessons learned from analysing PED case studies,"* Mar. 2024.

[3] A. Kozlowska, F. Guarino, R. Volpe, A. Bisello, A. Gabaldòn, A. Rezaei, V. Albert-Seifried, B. Alpagut, H. Vandevyvere, F. Reda, G. Tumminia, S. Ranjbar, R. Rincione, S. Cellura, U. Eicker, S. Zamini, S. Diaz de Garayo Balsategui, M. Haase, and L. Di Pilla, *"Positive energy districts: Fundamentals, assessment methodologies, modeling and research gaps,"* Sep. 2024.

3.3.8 Advertorial Video

The project's advertorial video is foreseen to be produced by December 2025 (M24) and aims to present the project's ambitions and preliminary results in an easy-to-understand manner, within the context of the EU's climate and energy goals.

During the project's 1st General Assembly in Athens which took place in February 2024 (M2), SXS coordinated efforts to record, some initial video content. This included short interviews/statements by the following PEDvolution partners:

- Vicente Carabias on behalf of City of Winterthur - Associated Partner (WIN)
- Sašo Brus on behalf of OFFSET Energy (OFFSET)
- Minna Kuivalainen on behalf of Smart Innovation Norway (SIN)

Additionally, during the 2nd General Assembly meeting and site visit, which took place in Kranj, Slovenia in November 2024 (M11), short videos of the demonstration site were recorded. Short online interviews with key stakeholders were also conducted, providing insights on the project's context. The material collected at both events, will be incorporated into the final advertorial video.

3.3.9 Additional tools

In addition to the above, INLE produced a short 2,5 minutes promotional video already available on the PEDvolution YouTube channel. The purpose of the video is to engage the PEDvolution audience and raise aware about the project at this early stage, prior to the release of the advertorial video.

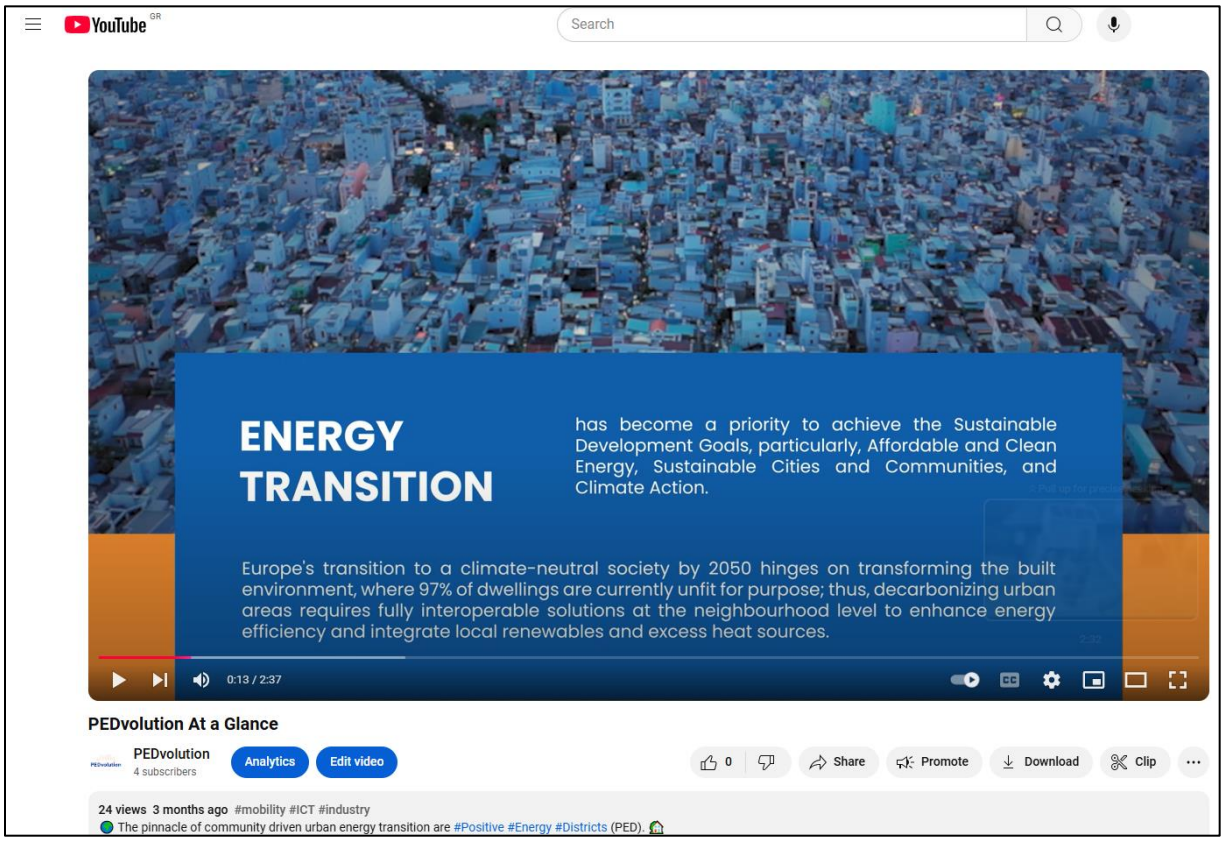

Figure 10: PEDvolution promotional video.

4 EXPERT COMMUNICATION & DISSEMINATION ACTIVITIES

4.1 3rd Party Events

PEDvolution partners have actively participated in a total of 13 3rd party events during the first year of implementation, successfully reaching and engaging diverse target groups. This effort has significantly contributed to the establishment of the project's audience. Table 4 below presents a list of these events, as recorded on the C&D&E activities' Tracking and Monitoring tool (see Chapter 5):

Table 4: PEDvolution 3rd party events participation (Year 1).

NO.	EVENT	DATE(S)	CITY/AREA	COUNTRY	NATIONAL/ EU-LEVEL	PARTICIPATING PARTNER	ATTENDEES
1	IEECB&SC'24 and ESCO Europe 2024 Conference	6-7/3/2024	Frankfurt	Germany	EU-Level	Zurich University of Applied Sciences	100
2	GREEN BUILD workshop / Climate-neutral cities	20/3/2024	Cluj-Napoca	Romania	EU-Level	Smart Innovation Norway	14
3	Energy Efficiency in Buildings Conference	5/4/2024	Athens	Greece	National	Sympraxis Team	142
4	University of Plzn Workshop on citizen participation	19/4/2024	Pilsen	Czech Republic	National	Sww Wunsiedel Gmbh/Es-Geht!-Energiesysteme GMBH	20
5	Workshop at SUAS on citizen participation	30/4/2024	Sokolov	Czech Republic	National	Sww Wunsiedel Gmbh /Es-Geht!-Energiesysteme GMBH	22
6	PED summer school	8-13/7/2024	Graz	Austria	EU-Level	Zurich University of Applied Sciences	25
7	Swiss Green Economy Symposium	27-29/8/2024	Winterthur	Switzerland	National	Zurich University of Applied Sciences	250
8	PED Training School	2-13/9/2024	Borlänge	Sweden	EU-Level	Zurich University of Applied Sciences	32
9	BauSIM conference	23 - 27/9/2024	Vienna	Austria	EU-Level	Zurich University of Applied Sciences	100
10	Sustainable Places 2024	24/9/2024	Online	Luxembourg (Hybrid)	EU-Level	Sympraxis Team	15
11	DigiDecarbon workshop	3/10/2024	Helsinki	Finland	National	Smart Innovation Norway	50

NO.	EVENT	DATE(S)	CITY/AREA	COUNTRY	NATIONAL/ EU-LEVEL	PARTICIPATING PARTNER	ATTENDEES
12	European Week of Regions and Cities	10/10/2024	Brussels	Belgium	EU-Level	Smart Innovation Norway	30
13	Citizen-led sustainability : integrating social sciences into energy community initiatives	10/10/2024	Online	-	EU-Level	Smart Innovation Norway	30

The total number of individuals reached through these activities is detailed in table 13.

The following section provides an overview of the scope and participation objectives in some of the previously mentioned EU-level events.

4.1.1 IEECB & SC'24 and ESCO Europe 2024 Conference

The IEECB & SC and the European ESCO conference brings together key players in commercial buildings and district planning, including investors, property managers, academics, industry experts, equipment manufacturers, service providers (ESCOs), utilities, facilities management companies, telecom and data centre operators, urban planners, and policymakers, with a view to exchange information and to network.

The conference aims to attract property owners, investors, architects, local authorities, and urban planners to present and discuss synergies and cooperation in removing existing barriers to energy efficiency, renewable energy and smart and net-zero energy buildings and districts, on the role of ESCOs and on the impact of digitalisation and Artificial Intelligence (AI).

Representatives from Zurich University of Applied Sciences (ZHAW), participated to present their work entitled *«Lessons learned from analysing PED case studies»* and had the opportunity to discuss and network with field experts on PEDvolution's initial steps and upcoming activities.

4.1.2 GREEN BUILD workshop

The workshop «Climate-neutral cities» was organised by SIN in the framework of the Green Build initiative implemented by the Cluj IT cluster and financed by Innovation Norway. The objective of the project is to create capacity building between Norway and Romania on digital twinning and sustainability, thereby aiming to contribute to the transition of the Romanian economy and society, towards a more sustainable, green and resilient future.

Within this context, SIN presented PEDvolution as a best practice of systemic collaboration in a community or neighbourhood. The workshop attracted high-value participants for the PEDvolution consortium, including industry representatives, business partners, researchers and innovators.

Figure 11: Green Build workshop in Cluj-Napoca, Romania.

4.1.3 BauSIM Conference

The BauSIM conference has been held under the auspices of the International Building Simulation Association since 2006 and takes place every two years. The focus of the conference is on simulation methods for buildings, neighbourhoods and cities for a successful transformation of the building stock to climate neutrality with high resident satisfaction, security of supply and resilience in a world of climate change. This year the conference was organised by TUW – also a partner in the PEDvolution consortium – and focused on energy-efficient building and district modelling (including i. District, building and facility simulation ii. Renewable and decentralised energy systems, iii. Communication of building technology and iv. Energy supply infrastructure), as well as Monitoring of Buildings and Neighbourhoods.

The primary goal was to disseminate the project itself, discuss its progress and activities with highly experienced experts, as well as to further cultivate relationships with field experts and researchers who may be interested in becoming involved and contributing towards the project's overall development. Additionally, participation aimed to connect with experts who could potentially benefit from the project results in the future.

4.1.4 European Week of Regions and Cities

The European Week of Regions and Cities is an annual four-day event during which cities and regions showcase their capacity to create growth and jobs, implement EU cohesion policy, and prove the importance of the local and regional level for good European governance. Its main purpose is to discuss common challenges for Europe's regions and cities and examine possible solutions by bringing together politicians, decision-makers, experts and practitioners of cohesion policy, as well as stakeholders from business, banking, civil society organisations, academia, the EU institutions and the media. Furthermore, it aims to facilitate cooperation and networking between regions and cities.

Within this scope, PEDvolution was presented by SIN in a collection of good practices in the workshop entitled «Fostering the uptake and social impact of the energy transition through citizen engagement», organised by the BRIDGE Working Group (WG) for citizen and consumer engagement.

The following sections describe the scope and participation objectives in national events.

4.1.5 Energy Efficiency in Buildings Conference

The Energy Efficiency in Buildings Conference brings together keynote speakers to discuss challenges of energy in the building sector in panels with Greek professionals and engineers in the building sector. The conference is addressed to professionals of the building sector such as architects, civil engineers, environmental engineers and energy inspectors, as well as companies involved in construction, heating and cooling systems, and firms specialising in the field of energy and environmental certification of buildings and companies of building materials.

SXS participated in the event with a stand, a roll-up banner, and project brochures to promote the PEDvolution, showcasing its objectives and anticipated results. The event encouraged networking opportunities with stakeholders from the national, EU and global networks, providing a noteworthy opportunity for dissemination.

Figure 12: Sympraxis Team at the Energy Efficiency in Buildings Conference, Athens.

4.1.6 Swiss Green Economy Symposium

The Swiss Green Economy Symposium (SGES) is the most comprehensive conference on business and sustainability in Switzerland. Since 2013, it aims to provide participants with a platform to develop effective strategies for a sustainable future, bringing together professionals from various sectors to discuss and promote sustainable economic solutions.

As shown in Figure 13, ZHAW hosted a stand in the exhibition area at the SGES conference. The team engaged with participants, providing information and discussing about PEDvolution, PEDs, and broader decarbonisation challenges.

Figure 13: ZHAW stand at the SGES conference.

4.1.7 DigiDecarbon workshop

The workshop on digitalisation of energy communities: new modes of organising, business models (BM) and transition governance, was organised under the scope of the Academy of Finland funded project «Digidecarbon» of Aalto University, the Finnish Environment Institute (SYKE) and the University of Vaasa. The three-year project recognises that citizens as consumers and producers to low carbon energy, now play an increasingly important role in the decarbonisation of the energy and the built environment. It explores citizens' energy communities and aims to investigate how new business is created to serve energy communities, what kind of policies, steering measures and public sector support are targeted at them. The specific workshop focused on the key aspects in community energy development.

PEDvolution represented by SIN, was introduced as an example of a type of social sciences and humanities work done in the context of energy transition and local energy systems. During the presentation, SIN presented the Common Impact Model (CIM) developed under the E-LAND project, a tool designed to enhance stakeholder engagement in the context of energy transition and local energy systems. SIN also demonstrated the utilisation of the tool and then showcased how it has been introduced and updated for other contexts, including positive energy districts.

4.1.8 Citizen-led sustainability: integrating social sciences into energy community initiatives

PEDvolution was also presented as a use case example at the Citizen-Led Sustainability: Integrating Social Science into Energy Community and Building Initiatives webinar, organised by SIN. The webinar addressed a number of relevant aspects including the presentation of the CIM, human-centric stakeholder engagement, sustainable energy positive and zero carbon communities, citizen-led renovation initiatives.

4.2 Cooperation with BRIDGE and other EU initiatives

The BRIDGE initiative is a collaborative platform involving 183 research and innovation projects funded by Horizon 2020 and Horizon Europe, with 105 active and 78 completed between 2016 and 2024. It engages 2237 organisations across 38 countries, receiving €1.6 billion in EU funding. Focused on smart grids, energy storage, and digitalisation, BRIDGE has seen an 18% growth in active projects from 2023 to 2024. Its goal is to promote knowledge sharing and best practices among projects while drafting policy recommendations. Organised into specialised WPs, the initiative addresses data management, regulation, consumer engagement, and business models. BRIDGE aligns with the PEDvolution project by promoting PED solutions and encouraging their replication and upscaling among stakeholders.

Task 10.2 «Liaison with BRIDGE and other EU initiatives» plays a crucial role in establishing connections, fostering collaboration, and exchanging knowledge with relevant stakeholders. The primary objectives of this task include identifying and liaising with related projects, engaging in knowledge exchange, linking with existing initiatives, and creating synergies. Towards this direction, within this task, the research initiatives and projects that have been funded under the HORIZON-CL5-2023-D4-01-03 - Interoperable solutions for PEDs, including better integration of local renewables and local excess heat sources, such as INTERPED and HARMONISE, as well as with the BRIDGE initiative and other wider networks, associations and initiatives on Energy Efficiency, Renewables, Smart Grids, Storage and similar topics addressed within the frame of PEDvolution have been identified and several initial connections have been established. This clustering effort aims to create synergies and promote collaboration among projects with similar topics or with shared interests. By collaborating closely, the projects can leverage each other's expertise and outcomes, leading to more significant advancements in the field.

The facilitation and transfer of knowledge exchange is also a key aspect of this task. It envisages sharing information, best practices, and lessons learned with other projects, initiatives, and stakeholders. This exchange can be realised through various means such as workshops, conferences, events, and special sessions to be organised by PEDvolution in collaboration with BRIDGE, consortium members, and other relevant facilitators, during the lifespan of the project. These knowledge-sharing activities allow for a cross-pollination of ideas and insights, fostering innovation and advancing the project's objectives.

Building connections with existing initiatives, organisations, and networks can be vital for the success of PEDvolution, thus special attention was paid to exploiting existing memberships and collaboration and subsequently actively engaging with the BRIDGE initiative and other relevant initiatives to establish collaborative relationships. By linking with these entities, the project gained access to valuable

resources, expertise, and networks. These collaborations will help to align PEDvolution with the broader goals and strategies of the data and AI community, ensuring its relevance and impact.

The insights gained from clustering, knowledge exchange, and collaboration with other initiatives and projects informed the design of the project's Readiness Assessment (RA) and facilitated the uptake of Data Spaces. This early integration of input ensures that the RA aligns with the latest developments, best practices, and requirements in the field. By effectively managing the liaison with Big Data Value Association and other initiatives, PEDvolution leverages the expertise and resources of a larger community, increases visibility, and contributes to the advancement of the field of interoperability between PEDs and integration of existing and newly deployed renewable energy resources.

To ensure continued collaboration and validation of outcomes, a structured and organised approach to follow-up activities has been set, to foster cross-fertilisation of ideas, enable validation of results, and facilitate ongoing cooperation among PEDvolution and the clustered projects throughout the project's lifecycle. These activities will span from joint workshops, working groups, and collaborative research efforts, to maximise the impact of the project's outcomes and ensure their wider adoption within the research and industrial communities. They will build upon the initial clustering and knowledge exchange efforts to further facilitate the cross-fertilisation of ideas and cooperation.

Therefore, it is foreseen that within the project duration, joint workshops or working groups with the clustered projects and the relevant stakeholders will be organised to provide a platform for continued collaboration. The workshops will focus on specific topics or challenges of mutual interest, allowing the project teams to share their progress, findings, and methodologies, while the working groups will delve deeper into specific areas of research or development, fostering joint exploration and knowledge-sharing among participants. Establishing and maintaining a collaboration platform, such as an online community or a forum, may facilitate ongoing communication and exchange of ideas between PEDvolution and the clustered projects since these platforms will provide a space for project teams to ask questions, seek advice, and share resources or insights.

Collaborative research efforts between PEDvolution and clustered projects will be also initiated to tackle common research questions or address specific challenges. By combining expertise, resources, and data, these collaborative research endeavours can lead to innovative solutions and advancements in the field. Joint research activities may involve joint publications, shared datasets, and joint experimentation or evaluation. Moreover, joint validation exercises and evaluation of the project’s outcomes will be implemented, to acquire feedback, input, and validation from external experts, stakeholders and end-users and thus gather valuable insights and refine the outcomes to ensure their relevance, quality, and usability.

The activities conducted between M1 and M12 of the project, spanning from January 2024 to December 2024 are presented in this section. During this period, PEDvolution liaised with the following initiatives and EU projects:

Table 5: WP List of Liaised EU initiatives

INITIATIVE	CONTACT	BRIEF DESCRIPTION	RESPONSIBLE PEDVOLUTION PARTNER
BRIDGE	Mirella Levato	A collaborative platform for 183 research and innovation projects focused on smart grids and energy solutions, facilitating knowledge sharing and policy recommendations across 2,237 organisations in 38 countries.	INLE, ICOM, SIN
ETIP-SNET	Mirella Levato	Unites stakeholders to guide Research, Development & Innovation (RD&I) for Europe's energy transition, focusing on setting a vision for smart networks and addressing technical challenges, innovation barriers, and knowledge-sharing to inform energy policy.	INLE
ANNEX 83	Pekka Tuominen	Aims to define PEDs as urban areas that generate more energy than they consume, focusing on energy efficiency, local energy surpluses, and low-carbon sources while leveraging demonstration cases for planning and decision-making.	ZHAW
AIOTI	Valentina Peniche	Initiative promoting collaboration among stakeholders in the IoT ecosystem, focusing on integrating IoT technologies across sectors like smart cities and energy. By engaging industry, academia, and public authorities, AIOTI supports research and deployment of IoT solutions to enhance competitiveness and drive digital transformation in Europe.	INLE
Smart Cities Marketplace	Eelco Kruizinga	Initiative led by the EC, promoting sustainable urban development by helping cities explore innovative solutions and providing resources such as technical assistance and financing. It enhances stakeholder collaboration to improve citizens' quality of life while advancing European energy and climate targets across various urban sectors, including transport and energy infrastructure.	INLE, SXS
Scalable Cities	Thomas Fouchault	EC-driven initiative aiming to develop sustainable districts by identifying integrated solutions and business models across 124 cities involved in various projects.	INLE, SXS
FLEXCOMMUNITY	Oliver Genest	Aims to improve resource efficiency by transforming consumers from passive to active participants in	OFFSET

INITIATIVE	CONTACT	BRIEF DESCRIPTION	RESPONSIBLE PEDVOLUTION PARTNER
		energy markets, helping them adjust usage based on renewable availability.	
COST Action on PEDS	Matthias Haase	Aims to mobilise researchers and other relevant stakeholders across different domains and sectors to drive the deployment of PEDs in Europe through open sharing of knowledge, exchange of ideas, pooling of resources, experimentation of new methods and co-creation of novel solutions.	ZHAW

Table 6: List of Liaised EU Projects

EU PROJECT	COORDINATOR	BRIEF DESCRIPTION	RESPONSIBLE PEDVOLUTION PARTNER
oPEN LAB	VITO Maarten De Groote	Project funded by the EU's Horizon 2020, leading the transition to PENs in Tartu (Estonia), Pamplona (Spain) and Genk (Belgium).	VITO
ARV	NTNU Inger Andresen	Project funded by the EU's Horizon 2020 program, focuses on creating climate-positive circular communities and accelerating energy renovations in Europe.	NTNU
FEVER	ICOM Kokos Isidoros	Horizon 2020 project focused on optimising power grids by leveraging flexibility in energy generation, consumption, and storage. It tests solutions through pilots in Spain, Cyprus, and Germany, promoting resilience and secure grid management.	ICOM, ESG
GLocalFLex	VTT Klaus KÄNSÄLÄ	Aims to create flexible local energy systems by implementing demand-response solutions and promoting interoperability across the energy grid. The project focuses on automated trading and renewable technology integration in six European pilot sites, enhancing consumer participation and grid stability.	SWW
POCITYF	EDP Labelec	EU-funded project aimed at integrating heritage cities into Europe's renewable energy transition by	SXS

EU PROJECT	COORDINATOR	BRIEF DESCRIPTION	RESPONSIBLE PEDVOLUTION PARTNER
	Nuno Mateus	demonstrating innovative energy solutions in Alkmaar (Netherlands) and Evora (Portugal) and replicating them in six Fellow Cities.	
MAKING-CITY	CARTIF Technology Centre Cecilia Sanz-Montalvillo	Aims to implement the Positive Energy District concept over 72 months, focusing on achieving net zero energy import and carbon emissions while increasing renewable energy production. Emphasises a long-term City Vision 2050 for transforming urban energy systems towards low-carbon cities and enhancing energy efficiency and management.	SXS
ATELIER	City of Amsterdam Frans Verspeek	EU-funded project focused on developing citizen-driven PEDs in Amsterdam and Bilbao, with plans to replicate solutions in six Fellow Cities.	SXS
InterPED	R2M Spain Raymond Sterling	Aims to facilitate PEDs through sector coupling, demand flexibility, and consumer engagement while optimising local renewable energy sources and waste heat.	INLE, SXS
HARMONISE	CERTH Christos Korkas	Focuses on delivering an interoperable solution to transform traditional districts into PEDs, enhancing energy efficiency and community involvement.	SIN
PROBONO	ACCIONA Rozanska Magdalena	The PROBONO project envisions to establish a people-focused European construction industry, by working in harmony with the broader community of stakeholders, to deliver scalable, sustainable, and viable energy-positive and zero-carbon Green Building Neighbourhoods (GBN).	INLE
OMEGA-X	ATOS IT SOLUTIONS AND SERVICES IBERIA SL N/A	OMEGA-X aims to create a Data Space following European standards, featuring a federated infrastructure, data marketplace, and service marketplace. It will facilitate data sharing among stakeholders and showcase its benefits for energy use cases, ensuring scalability and interoperability across sectors beyond just energy.	ICOM
INTEREST	SINTEF AS Balram Panjwani	The primary objective of INTEREST is to develop and demonstrate a real-time distributed multigrid Model Predictive Control (MPC) framework for monitoring and managing renewable energy systems.	SWW

EU PROJECT	COORDINATOR	BRIEF DESCRIPTION	RESPONSIBLE PEDVOLUTION PARTNER
GridCloud	AIT Austrian Institute of Technology GmbH Bharath Varsh Rao	The GridCloud project, aimed at European Distribution System Operators, seeks to advance decarbonisation through innovative digital solutions. Positioned against Europe's energy transition challenges, GridCloud integrates AI and data analytics to optimise grid management.	SWW

4.2.1 Liaison with EU Initiatives

4.2.1.1 BRIDGE

PEDvolution actively participated in the BRIDGE 2024 General Assembly, held in Brussels on April 9th and 10th, providing valuable opportunities to connect with other projects and build fruitful collaborations by leveraging shared resources, best practices, and expert knowledge. The event included workshops, networking sessions, and knowledge-sharing activities aimed at fostering innovation in sustainable energy and PED development. PEDvolution showcased its solutions, received expert feedback, and explored partnership opportunities during these sessions. Networking events, such as the BRIDGE Networking Coffee session, offered further opportunities for exchange. Key takeaways from this collaboration included gaining insights into advanced methodologies for the co-design of the PED Readiness Assessment (PED-RA) and learning best practices for enhancing the PED Design & Planning Toolset and the Data Exchange Platform. PEDvolution contributed its expertise in developing innovative energy solutions, providing replicable models that added value to BRIDGE's efforts in creating scalable solutions for sustainable energy and PED development.

PEDvolution has contributed, through Intracom Telecom (ICOM), to the update of the BRIDGE Reference Framework by refining the existing GBPs, extending the Framework to include new GBPs and improving the Settlement. SIN contributed to the Business Models & Regulation WGs by developing PED-specific business models, addressing economic and regulatory factors, and proposing framework adjustments. Additionally, SIN participated in the Consumer and Citizen Engagement WG, sharing strategies to improve engagement in PEDvolution and planning outreach to vulnerable and hard-to-reach groups.

Table 7: BRIDGE - Key interactions and knowledge shared.

DATE	INTERACTIONS/EVENTS	SHARED KNOWLEDGE	PARTNERS
October 2024	As members of the "Data management working group action #3", contributed to the Reference Framework survey.	Provided input concerning the Reference Framework, identifying the project relevant Generic Business Process, GBP1: Flexibility for System Operator through open market, and the high level of alignment of the project's Use Cases with it.	ICOM

DATE	INTERACTIONS/EVENTS	SHARED KNOWLEDGE	PARTNERS
October 2024	Action 2 kick-off telco of the Data Management Working group	A survey prepared and shared on the use of the Reference Architecture.	ICOM, INLE
Septem-ber 2024	Data Management Working group, Action 3 telcos	Provided suggestion to align the Generic actor list of smart metering with recent regulation about smart meter data procedures, since missing roles such as "Identity Provider" and "Permission Administrator" were identified.	ICOM
June 2024	DMWG kick-off	The plan for this year's actions was presented. New action (action 6) on AI was introduced this year.	ICOM, INLE
April 2024	General Assembly	Gained insights into advanced methodologies for the co-design of the PED-RA and learning best practices for enhancing the PED Design & Planning Toolset and the Data Exchange Platform.	INLE
April 2024	Participated in Business Models & Regulation WG meetings, surveys, and discussions	Developed PED-specific BMs, focusing on economic and regulatory factors for sustainability and Identified barriers and proposed framework adjustments to policymakers.	SIN
May 2024	Stakeholder Engagement in the Consumer and Citizen Engagement WG	Shared strategies and lessons from other projects to improve engagement in PEDvolution and plans to enhance engagement with vulnerable and hard-to-reach groups.	SIN

4.2.1.2 ETIP SNET

The European Technology & Innovation Platforms (ETIPs), established by the European Commission within the Integrated Roadmap Strategic Energy Technology Plan (SET-Plan), unite diverse stakeholders and experts from the energy sector. The ETIP Smart Networks for Energy Transition (SNET) specifically aims to guide RD&I efforts to support Europe's energy transition. Its mission includes setting a vision for RD&I in smart networks, engaging stakeholders, preparing and updating the Strategic Research and Innovation Roadmap, and reporting on the implementation of RD&I activities across various levels. Additionally, ETIP SNET addresses technical challenges related to energy system transformation, identifies innovation barriers, enhances knowledge-sharing mechanisms for deploying RD&I results, and consolidates stakeholder views to inform European energy policy initiatives. By leveraging insights from ETIP-SNET, PEDvolution can enhance its capacity-building efforts and stakeholder engagement activities, ultimately contributing to a more integrated and sustainable energy system across Europe.

PEDvolution's alignment with ETIP SNET demonstrates its commitment to Europe's energy transition by actively engaging in ETIP SNET meetings and contributing to initiatives like the "Upskilling Needs for Grid Support" survey. This collaboration focuses on supporting RD&I efforts for smart network

development and the integration of innovative energy solutions for PEDs. By participating in ETIP SNET activities, PEDvolution gained valuable insights into RD&I priorities, skill development, and training needs, which are essential for smart grid management and energy system transformation. These insights inform the co-design of the PED-RA and the development of other PEDvolution solutions, enhancing their scalability and effectiveness. Additionally, PEDvolution contributed its expertise on integrated energy systems and PED implementation, aligning with ETIP SNET's goals and supporting the creation of pathways for the replication and exploitation of its solutions across Europe.

Table 8: ETIP SNET - Key interactions and knowledge shared.

DATE	INTERACTIONS/EVENTS	SHARED KNOWLEDGE	PARTNERS
January 2024	Engagement with key ETIP SNET stakeholders and participation in WG2	Admission to the ETIP SNET WG2 | Storage technologies and system flexibilities, a short presentation to the group, access to the ETIP SNET Working Group 2 shared folder with the group-related documentation.	INLE
2-Oct-2024	ETIP SNET - Upskilling TF survey	The survey on upskilling needs for grid support, conducted for the Energy Transition Task Force, has provided invaluable insights to the ETIP SNET initiative. By evaluating current skill levels within the energy sector, particularly concerning smart grids, the survey identified key areas for training and development. This work is essential in ensuring that the workforce is well-prepared to tackle the challenges and seize the opportunities presented by the evolving energy landscape.	INLE
9-Oct-2024	ETIP SNET WG 2 Meeting	Examined aspects such as the main functionalities, quality and efficiency of the electricity system and the benefits of its integration with electromobility, along with the technological and market developments related to energy storage solutions to ensure the required storage options, including their direct interface and interaction with the transportation sector.	INLE
21-Oct-2024	19th ETIP SNET Regional Workshop - Integrating Renewable Energy Capacity While Ensuring Grid Flexibility	Addressed key aspects of improving grid flexibility through the integration of renewable energies into transmission and distribution networks, with a focus on Southern and Eastern Europe, through a variety of sessions, including presentations and panel discussions (agenda).	INLE

4.2.1.3 Annex 83 Meetings

Annex 83 focuses on developing a comprehensive definition of PEDs to create urban areas that generate more energy than they consume while remaining flexible to energy market variations. Launched in November 2019, it aims to improve energy efficiency, utilise local energy surpluses, and incorporate low-carbon sources by leveraging demonstration cases to inform planning tools and decision-making processes. The initiative acknowledges the multi-sectoral nature of the urban energy infrastructure transition, aiming to co-create citizen-centric carbon-free energy solutions in alignment with international efforts like the Paris Agreement and the UN Sustainable Development Goals. Its alignment with PEDvolution is evident in their shared goal of promoting PEDs as part of the transition to low-carbon cities, emphasizing stakeholder engagement and innovative technologies for optimising energy management. By providing a structured framework and detailed guidance for implementing PEDs, Annex 83 supports PEDvolution's objectives of scaling and replicating energy-efficient districts, ultimately contributing to more sustainable urban environments.

Table 9: Annex 83 - Key interactions and knowledge shared.

ACTIVITIES & FIELDS OF INTEREST FOR COOPERATION	KEY INSIGHTS AND PEDVOLUTION'S CONTRIBUTION
IEA EBC Annex83: Expert meeting, 26-28/02/2024, Pamplona, Spain	
This was the fourth face-to-face along with online (hybrid) event arranged for the working meeting.	Annex 83 featured compelling presentations from PhD candidates, showcasing innovative research. One highlight was PEDvolution's introduction of the PED-RA framework, which demonstrates significant potential for innovation by emphasizing the replication and scalability of PED solutions. PEDvolution's expertise garnered strong interest from other EU initiatives, including DUT and CETP, reflecting its growing influence in the field.
IEA EBC Annex83: Expert meeting, Date: 23-25/09/2024, Montreal, Canada	
The meeting marks the approaching conclusion of the working phase and the start of the reporting stage with several outputs, deliverables and a book being finalised to maximise the impact of the Annex results.	Shared lessons learned and innovations from PEDvolution to enhance the comprehensiveness of the Annex results.
IEA Annex 83 & EXCESS school: Economics and replication of PEDs, 08-13/07/2024, Graz, Austria	
• Modeling and Simulation of PEDs • Energy Resilience Modeling • Certification Framework for PEDs • Energy Communities • Life Cycle Costing (LCC) in Sustainable Buildings • Austria's PED Certification Tool • Replication of Positive Energy Buildings (PEBs)	• Shift from Anthropocentric Thinking: The need to move away from reductionist, human-centred approaches was emphasised. This aligns with the push towards systemic, holistic urban energy planning. • Necessity for Systemic Change: Discussions emphasised that decarbonising cities demands

ACTIVITIES & FIELDS OF INTEREST FOR COOPERATION	KEY INSIGHTS AND PEDVOLUTION'S CONTRIBUTION
Experts from all the above areas shared their expertise, leading to collaborative problem-solving sessions. Participants collectively explored how these tools and frameworks could be adapted or replicated in different regional contexts. The discussions consistently emphasised the importance of scientific collaboration and interdisciplinary approaches to achieve the ambitious goal of creating energy-positive urban environments.	large-scale systemic changes that go beyond incremental improvements. • Urgency of Policy Action: It was concluded that immediate and decisive policy interventions are essential to drive technological advancements, and behaviour shifts in energy use. • Collaboration for Decarbonisation: The event underlined the importance of scientific collaboration across sectors to address the challenge of decarbonising cities. • Replication of PED Concepts: The replication of Positive Energy Districts and buildings in diverse environments was seen as a key strategy for scaling up sustainable urban solutions globally.

For the upcoming period the plan is to contribute to the finalisation of the PED book (will be published on Springer), which summarises the outcome and findings of the Annex 83 research work. Further goals include joint publications, build upon this year's progress.

4.2.1.4 COST Action PED- EU-NET

COST is a European funding program that supports researchers in establishing interdisciplinary research networks across Europe and beyond. It provides funding for conferences, meetings, training schools, scientific exchanges, and other collaborative activities across a wide range of scientific fields. By fostering open spaces for collaboration, COST helps unlock the full potential of science. PED-EU-NET: The Positive Energy Districts European Network (PED-EU-NET), a COST Action, brings together researchers and stakeholders from various domains and sectors to advance the deployment of PEDs in Europe. Through open knowledge sharing, resource pooling, idea exchange, and co-creation of innovative solutions, PED-EU-NET drives collective progress towards energy-positive urban transformation.

Table 10: COST Action PED-EU-NET - Key interactions and knowledge shared.

ACTIVITIES & FIELDS OF INTEREST FOR COOPERATION	KEY INSIGHTS AND PEDVOLUTION'S CONTRIBUTION
Final conference Cost Action PED-EU-NET, 2-3/09/2024, Linz, Austria	
The event aimed at mobilizing researchers, practitioners and other relevant stakeholders to drive the deployment of PEDs in Europe through open sharing of knowledge, exchange of ideas, pooling of resources, experimentation of new methods and co-	Key insights included examples of PED implementation and discussions on evaluation frameworks, including the introduction of a PED readiness assessment tool.

ACTIVITIES & FIELDS OF INTEREST FOR COOPERATION	KEY INSIGHTS AND PEDVOLUTION'S CONTRIBUTION
creation of novel solutions. Initiated in September 2020, the network has now around 250 members from over 40 countries. The closing conference is jointly organised by the COST Action PED-EU-NET and the City of Linz. The Final Event showcases the Action results from the past four years of collaboration.	

For COST Action PED-EU-NET, the plan is to formalise its final reports including a Roadmap for PED implementation, exploitation of PED database and consolidation of PED Lab evaluation framework, while also incorporating all PEDvolution PEDs in the relevant PED-EU-NET database.

4.2.1.5 AIOTI

The Alliance for Internet of Things Innovation (AIOTI) is an initiative aimed at fostering collaboration among stakeholders on the Internet of Things (IoT) ecosystem. It focuses on promoting IoT innovation and facilitating the integration of IoT technologies into various sectors, including smart cities, energy, and healthcare. AIOTI supports research, development, and deployment of IoT solutions by engaging industry, academia, and public authorities to enhance competitiveness and drive digital transformation across Europe. PEDvolution is currently interaction with two WGs, a vertical dealing with "Energy" and a horizontal looking into «Testing and Experimentation Environments».
AIOTI's Vertical Group, contributed via one of each key deliverables «Edge driven Digital Twins in distributed energy systems, Role and opportunities for hybrid data driven solutions». This output supports T3.1, by providing a theoretical framework and practical examples for the development of a Digital Twin (DT) planning tool for PEDs. The paper discusses the use of DTs and Edge Computing in smart grids, which are relevant to the development of PEDs. It also highlights the importance of data quality and quantity for accurate representations, predictions, learning, and decision-making, which are crucial for the development of a robust and effective planning tool.

Furthermore, PEDvolution through AIOTI's Guidance-for-the-Integration-of-Digital-Twins-in-Data-Spaces-Final formalised a solid foundation with useful definitions and an overview of DTs at the beginning, setting the stage for understanding DT applications in smart city contexts. It also offers valuable information from other projects, showcasing best practices and practical implementations. In the context of the project, the document elaborated how digital twins can act as valuable tools for stakeholder engagement and tailored use cases. It also discussed how digital twins can simulate various urban scenarios, allowing stakeholders — including city planners, energy managers, and policy makers — to visualise and assess the impact of different energy strategies within a PED. By facilitating collaboration and informed decision-making, the digital twin aligns stakeholder goals with energy and sustainability targets, supporting PEDvolution focus on planning robust, sustainable energy solutions.

4.2.1.6 Smart Cities Marketplace and Sustainable Cities Forum

The Smart Cities Marketplace initiative, led by the European Commission, fosters sustainable urban environments by engaging cities and towns to explore innovative solutions for urban development. It provides resources like technical assistance, consultancy, and financing opportunities to support sustainable urban projects. By enhancing collaboration between various stakeholders, it aims to improve citizens' quality of life while meeting European energy and climate targets across multiple urban sectors, including transport, energy infrastructure, and citizen engagement.

The collaboration between the Smart Cities Marketplace and Sustainable Cities Forum has facilitated the effective transfer of knowledge and technologies from EU projects. Notably, the PED Tool was identified from the Making City Project and shared with the PEDvolution consortium due to its similarities with the PED Readiness Assessment Tool. Both tools are aligned in promoting PEDs. By integrating insights from the PED Tool into our assessment, we will enhance clarity and user-friendliness will be enhanced, empowering project decision-makers with actionable criteria to foster sustainable urban development. The PEDvolution project has also been included in the Smart Cities Marketplace Platform, thus increasing visibility and opportunities for project scalability.

4.2.1.7 Sustainable Places 2024

Sustainable Places is a premier European conference dedicated to sustainable built environments. It brings together researchers, innovators, and industry professionals to showcase and discuss cutting-edge projects, foster collaboration, and explore market opportunities. This annual event, known for its focus on sustainability, provides a valuable platform for networking, knowledge sharing, and driving innovation in the field of sustainable building and urban development. PEDvolution, via the Norwegian University of Science and Technology (NTNU), participated in «Sustainable Places 2024» workshop organised by R2M Solutions and LIST in Luxembourg. SXS also presented the PEDvolution project on an online paper session during the Annual Sustainable Places conference.

Table 11: Sustainable Places 2024 – Key Insights.

EMPOWERING CITIES THROUGH POSITIVE ENERGY DISTRICTS: STRATEGIES AND IMPLEMENTATION WORKSHOP, 24-25/09/2024, LUXEMBOURG	
Focus Areas	**Key Insights**
The workshop emphasised the need for stronger collaboration across cities, sectors, and stakeholders to implement PEDs. Key areas for cooperation included enhancing regulatory frameworks, boosting local community involvement, and improving data sharing, financial mechanisms, and policy integration. Lively discussions underscored the importance of regulatory support and community buy-in for PED success, with participants from energy firms.	Key takeaways included the necessity of adaptable regulations and innovative financial models, along with multi-level engagement. Looking ahead to following years, the focus will be on scaling successful strategies, enhancing financial mechanisms, and increasing citizen participation through education and planning. The event reinforced the need for a holistic, collaborative approach to sustainable urban energy systems across Europe.

Figure 14: Dissemination image of participation in the Sustainable Places online paper session.

4.2.1.8 Workshop on Energy Sharing and PEDs at SWW in Wunsiedel, Germany

Table 12: Energy sharing workshop in Wunsiedel - Key Insights.

WORKSHOP ON ENERGY SHARING AND PEDS AT SWW IN WUNSIEDEL, 09-24/07/2024, WUNSIEDEL, GERMANY	
Focus Areas	**Key Insights**
The topics during the workshop revolved around the following key areas of interest: **Balancing Positive Energy Districts:** • Collaboration is most effective at the municipal or regional coalition level; larger structures are less effective. • Integration of all energy types (electricity, heat, mobility) is essential, with sector coupling to maximize efficiency. • Local and regional investments retain community value and support long-term benefits for future generations. • Electric vehicles (EVs) are vital as mobile storage units, and direct investments in local projects like CHP plants boost regional participation. **Energy Costs in PEDs:** • Shared cooperative-managed energy storage improves efficiency and provides local economic benefits.	The workshop provided a dynamic and collaborative environment, bringing together participants from various fields to exchange insights on energy sharing, local energy communities, and sustainable technologies. Experts in renewable energy, smart grids, and cooperative models guided discussions that focused on practical solutions for establishing PEDs. Key topics included the role of shared energy storage, variable electricity tariffs, and the integration of electric vehicles (EVs) as mobile energy storage units through Vehicle-to-Grid (V2G) solutions. Participants also explored the potential of smart home technologies to optimise energy consumption and discussed strategies for promoting local investments and energy independence. The workshop emphasised the importance of cooperative energy sharing models, highlighting how such initiatives can reduce costs, strengthen community ties, and enhance climate

WORKSHOP ON ENERGY SHARING AND PEDS AT SWW IN WUNSIEDEL, 09-24/07/2024, WUNSIEDEL, GERMANY	
Focus Areas	**Key Insights**
• Variable electricity tariffs encourage off-peak energy use, reducing costs. • Smart home technologies (e.g. thermostats, meters, Vehicle to Grig-enabled EVs) optimise consumption and enable sustainable energy management. **Energy Sharing Communities for PEDs:** • Collaborative investments in renewable energy (e.g. solar, wind) allow sharing excess energy within communities or feeding it into the public grid. • These initiatives reduce costs and promote democratic decision-making in energy management. **Social Impact of Energy Sharing in PEDs:** • Cooperatives and shared investments (e.g. solar panels, energy storage) reduce grid dependence and stabilize energy costs. • Strengthens community ties, fosters climate-friendly practices, and leaves a positive CO_2 legacy for future generations.	resilience. The discussions underscored the value of collaborative approaches to energy transition, aiming to create sustainable, energy-positive communities that generate long-term benefits for future generations.

4.2.1.9 Scalable Cities

The Scalable Cities initiative, launched by the European Commission, aims to identify and promote integrated solutions for developing sustainable districts across Europe. Involving 124 cities engaged in over 20 Horizon 2020 and Horizon Europe projects, it focuses on implementing smart solutions in mobility, buildings, and urban governance. The initiative fosters collaboration through various support services, leading to significant achievements in energy savings, CO2 reductions, and citizen engagement, ultimately working towards climate-neutral urban environments.

INLE has played an active role in the Board of Coordinators meetings, representing the latest generation of PED projects and driving collaboration among Smart Cities and Communities initiatives.

As PEDvolution Coordinator, INLE presented the project's objectives, key activities, and expected outcomes, fostering synergies with other EU projects. Additionally, INLE identified key Task Groups (TGs) where PEDvolution partners can contribute based on their expertise. Following internal discussions, the following partners were recommended and included in the below dedicated TGs:

- **Communication and Dissemination TG**: SXS
- **Energy Communities TG**: PED demonstrators (Wunsiedel, Kranj, Hard Community Winterthur)
- **Data Management TG**: ICOM
- **Business Models & Financing TG**: SIN

4.2.1.10 FLEXCOMMUNITY

The FlexCommunity was initiated to address growing energy consumption and enhance resource efficiency amid increasing renewable power production. By shifting consumers from passive to active participants in energy markets—such as adjusting energy use based on availability—this initiative aims to reduce energy bills and carbon footprints. It promotes collaboration among stakeholders to develop flexibility solutions, enabling small consumers to unite and contribute to environmental goals through standardised communication and technology integration in the future energy system.

FlexCommunity is a two-level informal association of organisations (research and companies) that are engaged in projects using the flexibility trading in energy supply systems and it is now organised into several working groups (FlexGroups) focusing on two main areas:

- Flexibility exchange protocol called **FlexOffer** (FlexOffer user group, FG4), with the following objectives:
  - Establish a technical community around FlexOffer technology gathering promoters, implementers and adopters
  - Collect feedback from users towards enhancement of FlexOffer technology
  - Clarify and enhance the FlexOffer specifications
  - Further improve the maturity of the FlexOffer to enable its rollout by the industry
- Harmonised structure of the electricity (energy) supply system, which enables coherent structuring of market.

PEDvolution, via OFFSET is active in the FlexOffer User group, part of its core steering group, as it is planning to utilise FlexOffer protocol. It is expected that the innovative multi-dimensional trading within the PED Energy Manager will significantly contribute to further the growth of its applicability and usage. Finally, PEDvolution is examining the prospect of becoming a formal member in FlexCommunity's FlexOffer User Group via OFFSET representation. Moreover, PEDvolution has been strongly connected with the FlexOffer protocol as adopted from the FEVER project's approach to model transactions between electricity market stakeholders.

4.2.2 Liaison with other EU projects

4.2.2.1 oPEN LAB

oPEN Lab, a Horizon 2020-funded project, brings together 32 partners from 7 countries to promote PENs in Europe. Over 4.5 years, the project aims to create replicable and commercially viable solutions for PEBs and PENs. It operates through three Living Labs in Tartu (Estonia), Pamplona (Spain), and Genk (Belgium), with a focus on urban revitalisation. The project launched in October 2021.

The collaboration between oPEN Lab and PEDvolution focuses on leveraging shared insights and experiences to enhance outcomes. KPIs identified in oPEN Lab will support PEDvolution's research and framework analysis for the PED readiness assessment in WP4. Additionally, oPEN Lab's demonstration of replicable and commercially viable solutions will inform PEDvolution's strategies, while its experience with the Digital Energy Twin model and renovation advisories will contribute to WP3 by enabling robust planning tools to minimise risks and support informed decision-making. In April 2024, PEDvolution was also "featured" in OPEN LABs newsletter.

4.2.2.2 ARV

The ARV project, funded by the EU's Horizon 2020 program, focuses on creating climate-positive circular communities and accelerating energy renovations in Europe. Having started in January 2022, it aims to implement net-zero emission buildings and neighbourhoods, while providing guidelines for energy-efficient, circular, and digital solutions in the construction industry across four different climatic zones. ARV also seeks to influence future policy frameworks for sustainable construction and energy industries. ARV will be linked with PEDvolution through the alignment of shared concepts, enabling the development of cohesive guidelines grounded in the work already established in ARV for the creation of the Dynamic Decision Support Guideline. To support this further, the ARV project's KPIs will serve as a basis for an assessment framework within PEDvolution. This framework will enable the measurement of performance, impact, and progress toward achieving PEDvolution's goals.

4.2.2.3 FEVER

FEVER is a Horizon 2020 project aimed at optimising power grid management by leveraging flexibility in energy generation, consumption, and storage. It deploys AI and blockchain technologies for peer-to-peer energy trading and advanced monitoring. With 17 partners across 8 European countries, FEVER tests its solutions through pilots in Spain, Cyprus, and Germany, addressing challenges from variable renewable energy and rising electricity demand to enhance grid resilience and security. The project was implemented between February 2020 and January 2024.

PEDvolution's WP1 work leveraged the requirements analysis and design methodology, and the Use Cases developed in FEVER project. There is also a strong linkage with the project's flexibility market integration aspect, since FEVER's paradigm was also followed by utilising the FlexOffer protocol in modelling the transactions between electricity market stakeholders (consumers, prosumers, aggregators, and grid operators). PEDvolution further extended the protocol by introducing cross-sectorial aspect (i.e. heat and electricity flexibility).

4.2.2.4 GLocalFLex

GLocalFlex project aims to develop an energy flexibility marketplace integrated with several local energy systems, PEDs, cross-sectoral energy management systems, microgrids, electric transport, industries, individual consumers, and appliances. The project aims to build on and upgrade existing energy systems to expose their flexibility potential to the flexibility and/ demand response (DR) marketplace.

Key synergies areas with PEDvolution:

- **Energy Flexibility and Sector Integration**: Both projects emphasise the importance of energy flexibility. The PEDvolution project explores smart technologies, shared energy storage, and V2G solutions, which align with GLocalFlex's focus on flexibility marketplaces and cross-sector energy management. This synergy highlights the potential to optimise energy flows across various sectors and grid levels.
- **Local Energy Systems and Community Participation**: Both initiatives promote local energy systems and community involvement. The PEDvolution project focuses on cooperative energy sharing, while GLocalFlex encourages consumer participation at all grid levels without the need for aggregators. Together, they demonstrate how local involvement can enhance both grid flexibility and economic efficiency.
- **Scalable and Replicable Solutions**: Both projects prioritise scalability and replication. The PEDvolution project aims to expand community-driven energy models, while GLocalFlex

demonstrates how flexibility markets and business models can be replicated across different regions. This synergy ensures that their solutions can adapt to diverse contexts while maintaining efficiency and impact.

- **Innovative Business Models and Market Integration**: The business model development in GLocalFlex complements the PEDvolution project's efforts to foster local investments and cooperative ownership. Both initiatives explore sustainable economic models that integrate market mechanisms like spot pricing and flexibility services, ensuring long-term financial and environmental benefits.
- **Decentralised Energy Management**: Both projects aim to enhance decentralised energy systems through automation and smart technologies. GLocalFlex's focus on automated marketplaces aligns with the PEDvolution project's use of smart homes and energy optimisation tools, demonstrating how automation can streamline local energy management while boosting participation and efficiency.

4.2.2.5 POCITYF

POCITYF is an EU-funded smart city project focused on involving heritage cities in Europe's renewable energy transition. The project was initiated in October 2019 and is due to end in September 2026. It aims to demonstrate innovative solutions for energy self-consumption and grid flexibility in Lighthouse Cities Alkmaar (Netherlands) and Evora (Portugal), while replicating these solutions in six Fellow Cities. By combining positive energy blocks with citizen engagement strategies, POCITYF seeks to enhance sustainability and resilience in urban areas, respecting cultural heritage and addressing regulatory barriers for long-term impact. The project involves 46 partners across 13 countries.

Initial liaison has already been established via the Smart cities and communities - Communication and Dissemination TG, thereby sharing results and progress within the coming period will bring value in the implementation of both projects. POCITYF's primary objectives is to demonstrate solutions at building and district level that enable the increase of energy self-consumption, energy savings and high share of locally produced renewable energy, leading to the deployment of PEDs with a focus on cities with heritage sites. Common aspects with PEDvolution include the integration of innovative ICT technologies and citizen engagement strategies.

PEDvolution's potential participation in the project's final conference, will showcase PEDvolution solutions and to further disseminate results in view of their further exploitation. Further liaison actions will be defined in the next period.

4.2.2.6 MAKING-CITY

The project aims to demonstrate the PED concept in Groningen (Netherlands) and Oulu (Finland), develop validated procedures for its implementation, and replicate the concept in six follower cities. It will support the City Vision 2050 and integrate methodologies for PED deployment while fostering social innovation and business opportunities. The initiative includes a rigorous monitoring program, business model development, and a strong communication strategy to raise awareness about the PED concept, alongside promoting cooperation with related projects and clusters.

MAKING-CITY ended in November 2024. PEDvolution has liaised with the project via the Smart cities and communities - Communication and Dissemination TG. Since the project primarily focuses on demonstrating the potential of the PED approach as the basis for efficient and sustainable planning and development of cities, PEDvolution will further contribute towards this objective. Sharing results and

outputs provides a useful insight for the development of the PEDvolution solutions, such as the MAKING-CITY PEDTool (for the development of the PED-RA) and the Stakeholders' Map (for the social innovation tool).

4.2.2.7 ATELIER

ATELIER is a citizen-driven smart cities project funded by the European Commission, focusing on developing PEDs in Amsterdam (Netherlands) and Bilbao (Spain). Coordinated by Amsterdam, it involves 30 partners from 11 countries and aims to replicate successful implementations in six fellow cities. The project emphasises citizen engagement in decision-making and the development of solutions through PED Innovation Ateliers, which will foster local innovation and overcome barriers to smart solutions. Each city will also create a City Vision 2050 to guide long-term transformation and scaling of initiatives.

Initially the project was foreseen to end in October 2024, however the project has received an extension creating ground for collaboration. PEDvolution has already liaised with ATELIER via the Smart cities and communities - Communication and Dissemination TG.

Multiple overlaps with PEDvolution's objectives solutions exist, creating space for common dissemination and exploitation efforts. For example, since the project emphasises citizen engagement in decision-making, valuable opportunities are created for the dissemination of PEDvolution's business models and social innovation tools. Further liaison actions and common participation in events, will be defined in the next period.

4.2.2.8 PROBONO

The PROBONO project aims at developing sustainable GBNs integrating green energy, mobility, and digital technologies. The project promotes social and economic benefits, focusing on climate resilience and public well-being. It will demonstrate solutions for zero-emission and positive-energy buildings in six EU living labs, including Madrid (Spain) and Dublin (Ireland). The initiative involves 47 partners collaborating to transform these districts into energy-positive, carbon-neutral areas, emphasizing co-design and stakeholder engagement to achieve a sustainable, people-centred vision.

PEDvolution’s tools “PED Design and Planning Toolset”, “Dynamic Decision Support Guideline for PED Development” and “PED Energy Manager”, are expected to acquire knowledge from PROBONO’s GBN Digital Twin acting as a virtual representation of associated GBN including operational assets that implicate environmental and efficiency KPI. Furthermore, PROBONO’s evidence-based policy recommendations and standardisation actions, are two more areas that could benefit the respective PEDvolution work streams.

4.2.2.9 OMEGA-X

OMEGA-X aims to develop a European-standard Data Space for energy, featuring a federated infrastructure, data marketplace, and service marketplace. Its objectives include ensuring interoperability, creating a data marketplace for energy value chains, offering innovative tools, and demonstrating value through use cases. It also focuses on data governance, multi-vector approaches, and user-centricity. The project emphasises replicability, cross-sector collaboration, and integrating social sciences to enhance user experience and collaboration throughout its lifecycle.

The project concludes in April 2025. Being one of the leading projects in supporting the cross-project interoperability from Horizon cluster of Energy Data Space project (i.e. HORIZON-CL5-2021-D3-01-01 - Establish the grounds for a common European energy data space topic), PEDvolution plans to follow the relevant specifications to support cross project interoperability. This translates to being able to expose and discover data offerings as well as contract and share data across data spaces. Another link with OMEGA-x is the utilisation of the Common Semantic Data Model of OMEGA-x project. Based on WP7's domain analysis OMEGA-x's ontology is considered one of the root ontologies that could be utilised for the modelling of data in the energy and e-mobility domains, achieving in this manner cross-project interoperability on semantic level.

4.2.2.10 INTEREST

The primary objective of INTEREST is to develop and demonstrate a real-time distributed multigrid Model Predictive Control (MPC) framework for monitoring and managing renewable energy systems. The framework aims to enhance sustainability, security, stability, reliability, replicability, and predictability. The project integrates advanced technologies such as digital twins for energy prediction and load forecasting, predictive maintenance, fault detection, reconfigurable MPC, and blockchain-based economic management to create a robust, scalable solution for energy management.

INTEREST was launched after PEDvolution, but its simulative approach to MPC places high demands on the available data. Accordingly, data structures created here, or experience gained from them, can also be used for the PEDvolution project. Due to the need for a digital twin in MPC, the approach chosen here can be partially adopted where possible or serve as inspiration, especially when it comes to controllable energy systems.

The PEDvolution project aligns closely with the goals of the INTEREST project through several key synergies:

- **Shared Energy Management and Digital Solutions**: Both initiatives emphasise the importance of managing energy efficiently through shared energy systems. While the PEDvolution project focuses on local cooperatives, smart home technologies, and V2G systems, INTEREST centres on distributed multi-grid control and predictive maintenance. These complementary approaches enable real-time energy optimisation at both local and international levels.
- **Predictability and Stability of Energy Systems:** The integration of digital twins and predictive algorithms in INTEREST enhances energy forecasting and fault detection, aligning with the PEDvolution project's emphasis on smart technologies and variable tariffs. Both initiatives promote stable, predictable energy systems through adaptive energy flows and optimisation strategies.
- **Scalable and Replicable Energy Models**: INTEREST's focus on developing a replicable multigrid management framework connects with the PEDvolution project's exploration of scalable energy-sharing communities. Both initiatives aim to create adaptable energy solutions that can be applied in diverse regional contexts to maximise sustainability.
- **Blockchain and Cooperative Economic Models**: The blockchain-based economic management in INTEREST complements the PEDvolution project's emphasis on local investments and cooperative ownership models. Both initiatives promote participatory economic structures that foster regional value creation and financial sustainability.
- **Global and Local Collaboration for Sustainability**: Both the INTEREST project and the PEDvolution project highlight the importance of collaborative approaches—one on a global scale

through international partnerships, and the other on a local level through community-driven energy projects. Together, they demonstrate how multi-scale cooperation is essential for advancing renewable energy systems and building a sustainable energy future.

4.2.2.11 GridCloud

The GridCloud project, aimed at European Distribution System Operators, seeks to advance decarbonisation through innovative digital solutions. Positioned against Europe's energy transition challenges, GridCloud integrates AI and data analytics to optimise grid management. The multi-faceted strategy encompasses fostering stakeholder collaboration for a seamless green energy transition, developing "Digital Process Twins" for system information digitalisation and real-time decision-making, and automating digital twin creation while ensuring IoT compatibility for superior system performance. GridCloud's focus on digital twins of electricity grids in real time means that data structures created for large generation plants or controllable consumers can be used for the PEDvolution project. Grid plans and similar documents can also be used if required.

Key synergies with PEDvolution:

- **Smart Technologies and Digital Twins**: Both projects leverage digital tools for energy optimisation. While GridCloud focuses on Digital Process Twins for real-time grid management and decision-making, the PED project integrates smart home technologies, energy storage, and V2G systems to enhance energy efficiency at the local level. These synergies illustrate the value of digitalisation for optimised energy systems.
- **Decentralised Energy Management**: Both initiatives emphasise decentralised energy systems. The PEDvolution project promotes local energy communities and shared energy generation, while GridCloud enhances grid operations through AI and IoT-compatible digital solutions. Together, they demonstrate how decentralised models and real-time data analytics can improve grid performance and local energy management.
- **Stakeholder Collaboration and Participation**: Collaboration is central to both projects. GridCloud fosters stakeholder engagement to support the energy transition, while the PEDvolution project encourages community participation through cooperatives and shared investments. These complementary efforts highlight the importance of multi-stakeholder cooperation for successful energy transitions.
- **Energy Flexibility and Real-Time Optimisation**: Both projects seek to increase flexibility in energy systems. GridCloud uses AI and analytics for anomaly detection and operational optimisation, aligning with the PEDvolution project's focus on flexibility through variable tariffs, smart homes, and shared energy storage. These efforts ensure efficient energy distribution and grid stability.
- **Scalable and Regional Solutions**: The PEDvolution project's focus on scalable community-based energy models aligns with GridCloud's country-specific goals to address the unique challenges of Austria, Germany, and Turkey. Both projects aim to develop adaptable solutions that can be replicated across different regions to enhance the sustainability and reliability of energy systems.

4.2.2.12 Positive Energy Neigbourhoods and Districts Cluster

PEDvolution became a member of the "Positive Energy Neighbourhoods and Districts (PEN-PED) Cluster" organised by CINEA. The PEN-PED Cluster also includes INTERPED and HARMONISE and Neutralpath projects, and the first cluster event took place in Brussels on September 24-25, with

PEDvolution represented by ICOM and VITO. The three projects presented a common presentation on «Interoperability - energy systems integration».

This cluster allows PEDvolution to better understand the future research needs for PEDs and innovative solutions being developed across Europe (especially on interoperability, sector coupling, social engagement tools, regulation and business models) along with the financial challenges related to renovation and the difficulties of social engagement (convincing people to be interested in PEDs/PENs), get insights and ideas from other projects, as well as relevant initiatives such as DUT and Mission Cities. Cross-project collaboration also acknowledged common challenges such as energy transition and decarbonisation and opportunities to leverage synergies that could accelerate our progress and co-learn from each other.

Figure 15: Presentation of PEDvolution, INTERPED, Harmonise

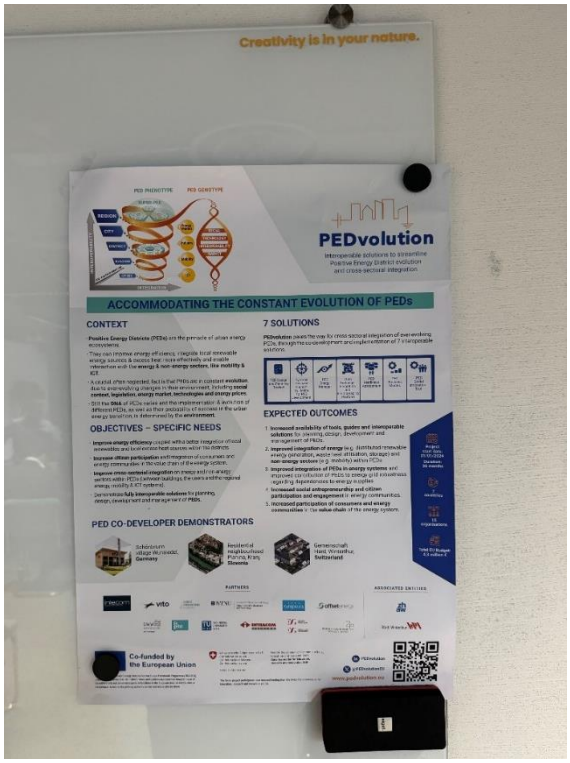

Figure 16: PEDvolution poster on display at the PEN-PED cluster meeting

INTERPED, which started in January 2024, is a sister project of PEDvolution, as both were funded under the same call. INTERPED is a project that focuses on enabling PEDs through sector coupling, demand flexibility, and consumer engagement, optimising the use of local renewable energy sources and excess heat. It aims to create a cloud-based platform for planning and managing integrated PEDs, enhancing grid operation and consumer involvement in DR strategies. By engaging consumers in solution design and testing its concepts in large-scale pilots, INTERPED seeks to verify the technical and commercial feasibility of its approach, promoting adaptability and reducing costs for scalability.

As for **HARMONISE,** the project aims at creating an end-to-end, interoperable solution to facilitate the transformation of traditional districts into PEDs. By optimising design, management, and integration, HARMONISE supports energy efficiency and community engagement, promoting the transition towards a European Super Grid. With the collaboration with HARMONISE, PEDvolution is expected to benefit from learnings and experiences from various PEDs' business-related and regulatory barriers in different regions. This will allow the project to acquire an EU-level overview and enable it to derive a comprehensive recommendation that will help policy makers make knowledge-based decisions.

As regards the Cluster event organised by CINEA, during its two breakout sessions on «Implementation Challenges», generated the following knowledge exchanges:

- "*Technological and regulatory challenges, including energy system integration*" session: PEDvolution (via ICOM) communicated the need for mapping the well-defined electricity market role model and

the newly defined PED roles in order to facilitate the integration of energy markets in PEDs. In addition, preliminary «Functional and Operational Requirements of the Demo Sites and Reference Use Cases» generated as part of PEDvolution's work so far was also highlighted, along with the possible misalignment of the strict geography of PEDs versus the less constrained geography of energy market stakeholders such Balance Responsible Parties.

- "*Urban planning, administrative and political challenges*" session: Acquired a better understanding of the complexity of processes in the public domain (e.g. municipalities) to deploy PEN/PED solutions. What stemmed out of the discussion is that apart from the municipalities which are considered the major stakeholders for PED's design and deployment, other projects have also considered construction companies and real-estate agencies as possible stakeholders – as in PEDvolution. Particularly in the French city of Lyon there was a combination of private and public initiatives for the creation of PEDs.

5 KPIS OVERVIEW AND PROGRESS

Monitoring and tracking the project's C&D&E KPIs is essential for following the overall impact, outreach and progress of activities. To facilitate this process, a dedicated internal monitoring and tracking tool (Annex II) has been developed to support accurate reporting from all consortium members. Guided by SXS for its regular updating, this tool assists continuous reporting, thereby ensuring contributions are recorded in a regular and timely manner.

The tool is aligned with the HE reporting platform, enabling seamless transfer of information for reporting purposed as required by CINEA. The following separate tabs have been created to record PEDvolution's C&D&E activities, including:

- **Communication activities**
- **Dissemination activities**
- **Scientific Publications**
- **Popularised publications**
- **Liaison with EU-initiatives**
- **Liaison with EU-projects**

To further streamline the monitoring process and ensure that the C&D&E progress remains on track, apart from the overall project KPIs defined in the GA, the project has set specific KPIs for each year. Table 13, presents an overview of the current status, highlighting progress made.

Based on the compiled information, it is evident that most of the year's KPIs have been achieved if not overachieved, exceeding initial expectations. Overall, the project C&D&E activities are well underway in terms of outreach, marking a promising start to the project and suggesting that C&D&E efforts are already effectively contributing to the project objectives. This solid foundation along with the continuous monitoring and tracking of the KPIs, will help ensure that the project maintains this momentum over the course of the project's implementation.

The KPIs related to the PEDvolution LinkedIn page and participation in 3rd party events, are among the key highlights. The most challenging KPIs, (i.e. the number of X (Twitter) followers as well as the number of reports downloaded) are comparatively behind initial expectations. One of the focus points during the upcoming period will be on boosting these numbers.

For this purpose, SXS has engaged all project partners to participate more actively in promoting the X (Twitter) account and sharing relevant posts. During relevant EB meetings, SXS has also emphasised the importance of regularly providing news and materials at even more recurring intervals, allowing for more frequent posts.

The limited number of report downloads from the project website, is due to the early stage of project outputs. Given that only the project's initial planning deliverables are available and that more substantial reports related to the development of the PEDvolution solutions are still to be developed and uploaded, figures are expected to be low during this phase of the project. Download numbers are expected to increase steadily during the Co-Development (Phase 2) of the project, when more impactful outputs are available for dissemination.

Overall, project partners have been dynamically involved in C&D&E activities during this project's 1st year. More consistent effort and regular communication with the C&D&E Manager is important to

improve and keep up to date the reporting process during the upcoming more intensive and results driven phases of the project.

Table 13: PEDvolution KPIs and status.

INDICATOR	TARGET (PROJECT DURATION)	TARGET (YEAR 1)	YEAR 1 (STATUS)
Website unique visitors*	>10000	>1500	1708
Website page views*	>30000	>5000	6270
Report downloads*	>8000	>300	390
Video views*	>2000	-	-
Project outreach contacts*	>2000	>500	570
Posts to digital hubs*	>10	>3	1
Social networks original posts*	>100	>30	48
LinkedIn followers*	>500	>100	474
Twitter followers*	>1000	>200	81
Representation in EU events*	>3	-	8
Representation in national/regional events*	>5	-	5
Final conference participants*	>120	-	-
News Alerts Recipients*	>1000	>500	567
News Alerts Issues*	>6	>2	2
News Alerts Open Rate*	30%	30%	36%
PEDvolution Scientific publication*	>5	-	-
LinkedIn total impressions**	-	-	61925
LinkedIn unique visitors**	-	-	687
LinkedIn total views**	-	-	2102

INDICATOR	TARGET (PROJECT DURATION)	TARGET (YEAR 1)	YEAR 1 (STATUS)
LinkedIn unique posts**	-	-	49
X(Twitter) unique posts**	-	-	41
Bluesky followers**	-	-	11
YouTube channel subscribers**	-	-	4
YouTube channel video views**	-	-	29
Brochures printed**	-	-	>400
Stakeholders reached in 3rd party events**	-	-	1590
Liaison with EU initiatives**	-	-	9
Liaison with EU projects**	-	-	13
Thematically relevant publications from PEDvolution partners	-	-	3

* KPI as defined in the GA and D10.1.

** Additional KPIs – Year 1 status.

6 UPDATED WORK PLAN

WP11 «Project Communication, Dissemination and further exploitation (year 2)» focuses on continuing the implementation of the C&D&E activities from Phase 1, while initiating efforts to disseminate and exploit project results and outputs. This includes actively engaging and interacting with PEDs and Solution Developers. WP11 is divided into 3 tasks, each focusing on a distinct aspect of C&D&E objectives.

Figure 17, illustrates the main tasks along with the Lead Beneficiary (LB) for each.

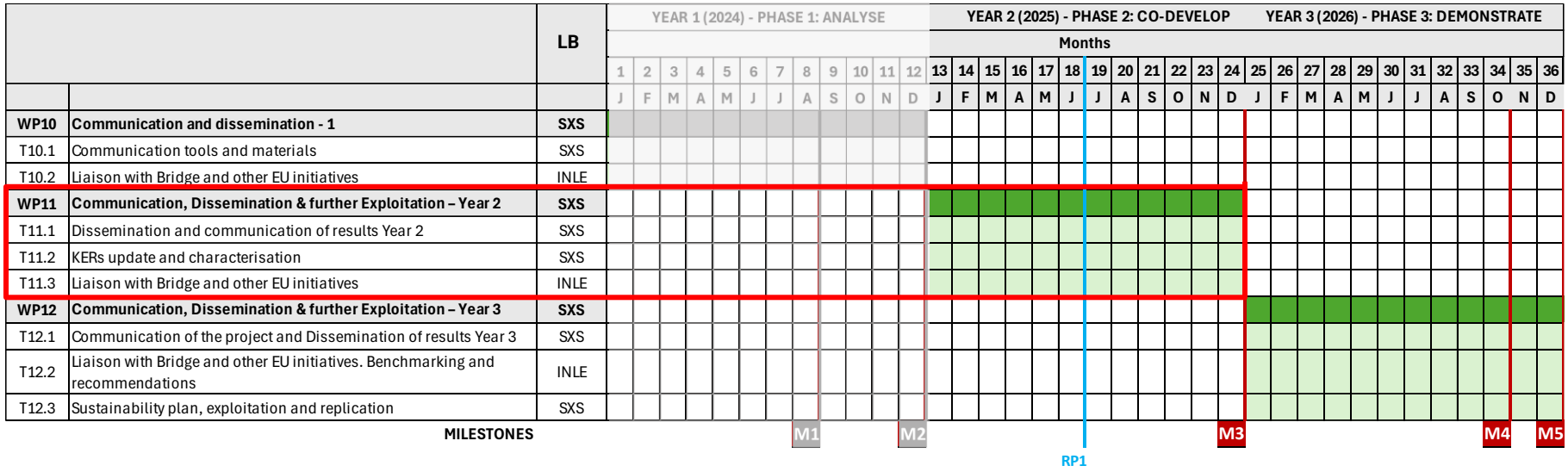

Figure 17: PEDvolution WP11 & WP12 - Gantt Chart - Work Plan overview.

T11.1: Communication of the project and Dissemination of results-year 2

This task concerns the continuation of the communication and dissemination activities from year 1, including participation in EU-level and national dissemination events, to further leverage the overall outreach network for sharing project results. An indicative list of such events is provided in D10. Overall, participation in at least 2 EU-level events is foreseen. Similarly, participation in at least 2 national events is anticipated in year 2. The participation of all partners is foreseen in this activity. Participation in these events is also an opportunity to leverage partners' membership, involvement and participation in relevant national networks for dissemination of project results.

During year 2, the project's online presence will be reinforced. Websites and social media pages will continue to be regularly updated in line with project progress, and as posts in relevant hubs will be published. Similarly, News Alerts will be issued bi-annually. This activity will be coordinated by SXS, with contributions from all project partners. Finally, SXS will develop a 3-5' advertorial video in English, presenting PEDvolution's ambitions and preliminary results in the context of the EU's climate and energy goals.

T11.2: KERs Update and Characterisation

Task 11.2 focuses on identifying and updating of the project's Key Exploitable Results (KERs) during and beyond the project's lifecycle. Coordinated by SXS, a follow-up to the initial KERs (as already identified in the GA) will be done by the Solution Developers and the PED Managers, as a first step to identify any additional KERs and secondly to mitigate any possible related risks to ensure timely adjustments as needed.

T11.3: Liaison with BRIDGE and other EU initiatives

This task builds on the liaison activities initiated in T10.2, allowing for the capacity building from PED Managers to those PEDs joining the project through the «PED demonstrators call» (T8.3), where the "ambassadors" of PEDs will be invited to share their experience.
PEDvolution will also actively participate in the annual BRIDGE general assembly and contribute to the relevant Working Groups, annual work program and related reports as required and exchange experiences and best practices with other projects, as initiated in T10.2. This activity is led by INLE, with contributions from VITO, SIN, ICOM, ZHAW, SWW, ESG.

Finally, all partners will continue to update the Monitoring and Tracking tool as regards T11.1 and T11.3, to closely monitor activities and ensure the consortium is working efficiently towards achieving the defined C&D&E objectives as foreseen by the project's GA. Figure 18 below, presents a detailed breakdown of each planned task for 2025.

As a result of the above tasks, the following public deliverables are foreseen to be developed by December 2024 (M24):

- D11.2 "Communication and dissemination activities- year 2" (LB: SXS)
- D11.3 "KERs and characterisation" (LB: SXS)

		2025											
		2	2	2	2	2	2	2	2	2	2	2	2
WP11: Project Communication, Dissemination and further Exploitation (Year 2)		13	14	15	16	17	18	19	20	21	22	23	24
T11.1	**Communication of the project and Dissemination of results - Year 2 (M13-24)**	J	F	M	A	M	J	J	A	S	O	N	D
ST11.1.1	*EU dissemination events and networks (SXS/ALL)*												
ST11.1.2	*National dissemination events and networks (SXS/ALL)*												
ST11.1.3	*Project online presence updates (SXS/ALL)*												
	Website updates												
	Social media account updates												
	Digital Hub updates												
	News Alerts												
ST11.1.4	*Other communication material (SXS)*												
	Advertorial video												
T11.2	**KERs update and characterisation (M13-24)**	J	F	M	A	M	J	J	A	S	O	N	D
T11.2	*Identification and updating of Key Exploitable Results (SXS/PED Managers)*												
T11.3	**Liaison with BRIDGE and other EU initiatives (M13-24)**	J	F	M	A	M	J	J	A	S	O	N	D
T11.3	***Liaison with BRIDGE and other EU inititatives (M13-24) (INLE/VITO, SIN, ICOM, ZHAW, SWW, ESG)***												

Figure 18PEDvolution WP11 – detailed Work Plan.

7 CONCLUSION

The C&D&E activities of the 1st year have been successfully completed in a timely manner. KPIs are progressing well, and overall, the project has made significant initial first steps towards building a diverse audience. This foundation will act as a basis to further expand dissemination, impact, and exploitation in the upcoming period, including the co-development, and demonstration phases, during which the project's main results are to be developed.

Collaboration between consortium partners has been effective, fostering efficient coordination and supporting the smooth implementation of project tasks and activities. This cooperative environment has proven instrumental and has contributed significantly towards achieving the project's goals so far. More frequent communication would further support this process and ensure its continuation during the upcoming period, when activities are more intense and impactful.

During the first 12 months of PEDvolution, the project's foreseen communication tools and channels have been developed, enabling consistent communication, a strong online presence and leveraging outreach opportunities. Furthermore, PEDvolution has contributed significantly to the uptake of the liaison activities, both with other EU-initiatives such as BRIDGE, and as regards cooperation with thematically relevant EU projects and networks; there creating the ground for exchange of knowledge and ideas between similar initiatives and networks.

The activities planned for next year are crucial not only for achieving the project's overall C&D&E objectives, but also for enhancing the project's overall impact and advancing its exploitation strategy. These efforts will build on the foundational work completed in the first year, aiming to expand the project's visibility, foster stakeholder engagement, and drive meaningful outreach.

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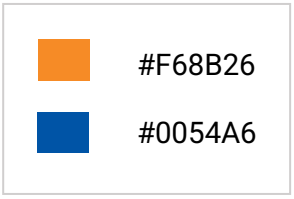
ANNEX I: PROJECT IDENTITY AND TEMPLATES

PEDVOLUTION LOGO WITH AND WITHOUT TAGLINE

PEDVOLUTION BASIC COLOUR PALETTE



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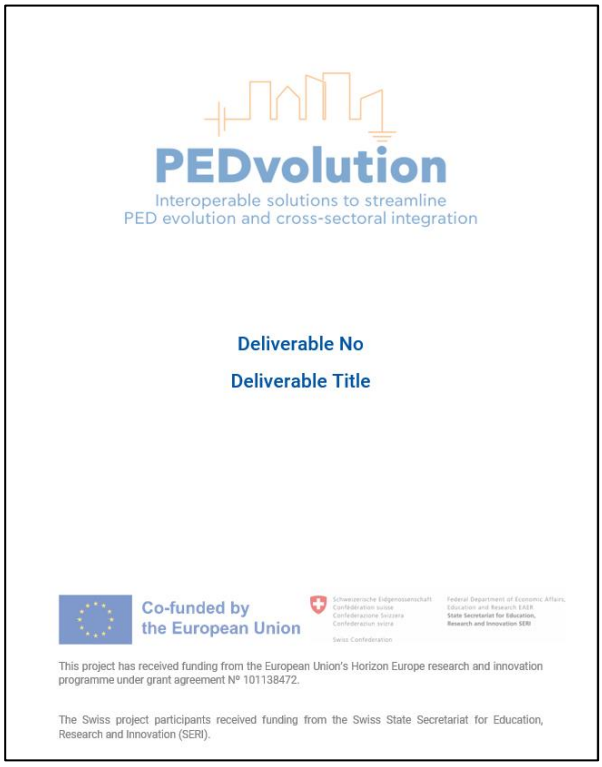
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Education, Research and Innovation SERI

"The Swiss project participants received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI)"

REPORT/DELIVERABLE TEMPLATE



PEDvolution

Interoperable solutions to streamline
PED evolution and cross-sectoral integration

Deliverable No

Deliverable Title

Co-funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N° 101138472.

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DX.X. Deliverable Title

Document Summary Information

Grant Agreement No	**101138472**	Acronym	**PEDvolution**
Full Title	**Interoperable solutions to streamline PED evolution and cross-sectoral integration**		
Start Date	**01/01/2024**	Duration	**36 months**
Project URL	**https://www.pedvolution.eu/**		
Deliverable			
Work Package			
Contractual due date		Actual submission date	
Nature		Dissemination Level	
Lead Beneficiary			
Responsible Author	**Fullname (Partner organisation)**		
Contributions from	**Fullname (Partner organisation)**		
Reviewed by	**Fullname (Partner organisation)**		

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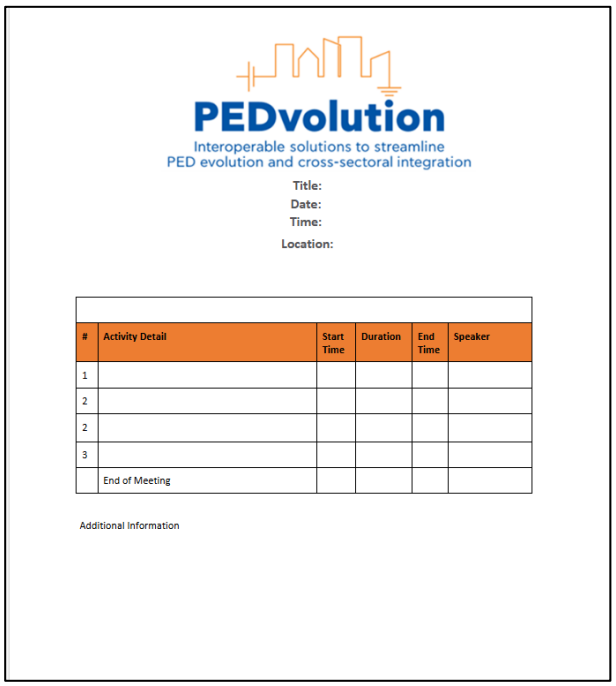
MEETING AGENDA AND MINUTES TEMPLATE



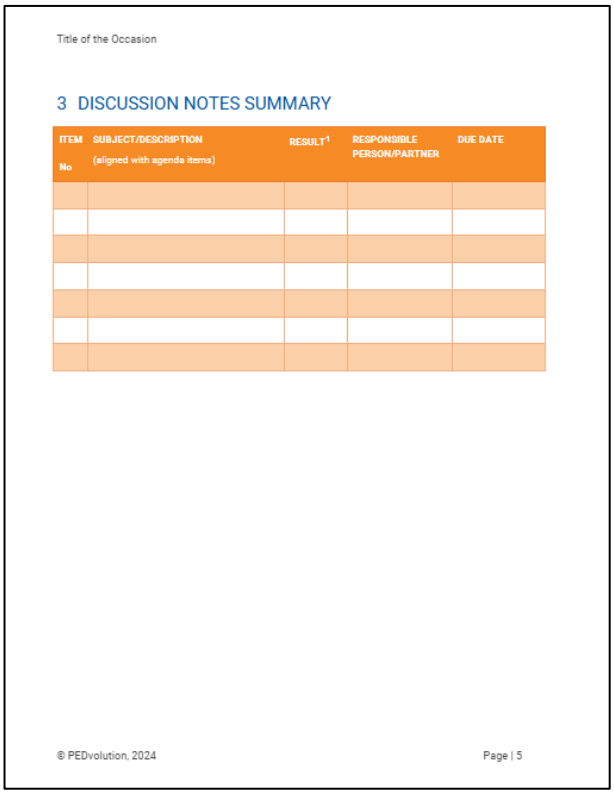
PEDvolution

Interoperable solutions to streamline
PED evolution and cross-sectoral integration

Title:
Date:
Time:
Location:

#	Activity Detail	Start Time	Duration	End Time	Speaker
1					
2					
2					
3					
	End of Meeting				

Additional Information



Title of the Occasion

3 DISCUSSION NOTES SUMMARY

ITEM No	SUBJECT/DESCRIPTION (aligned with agenda items)	RESULT[1]	RESPONSIBLE PERSON/PARTNER	DUE DATE

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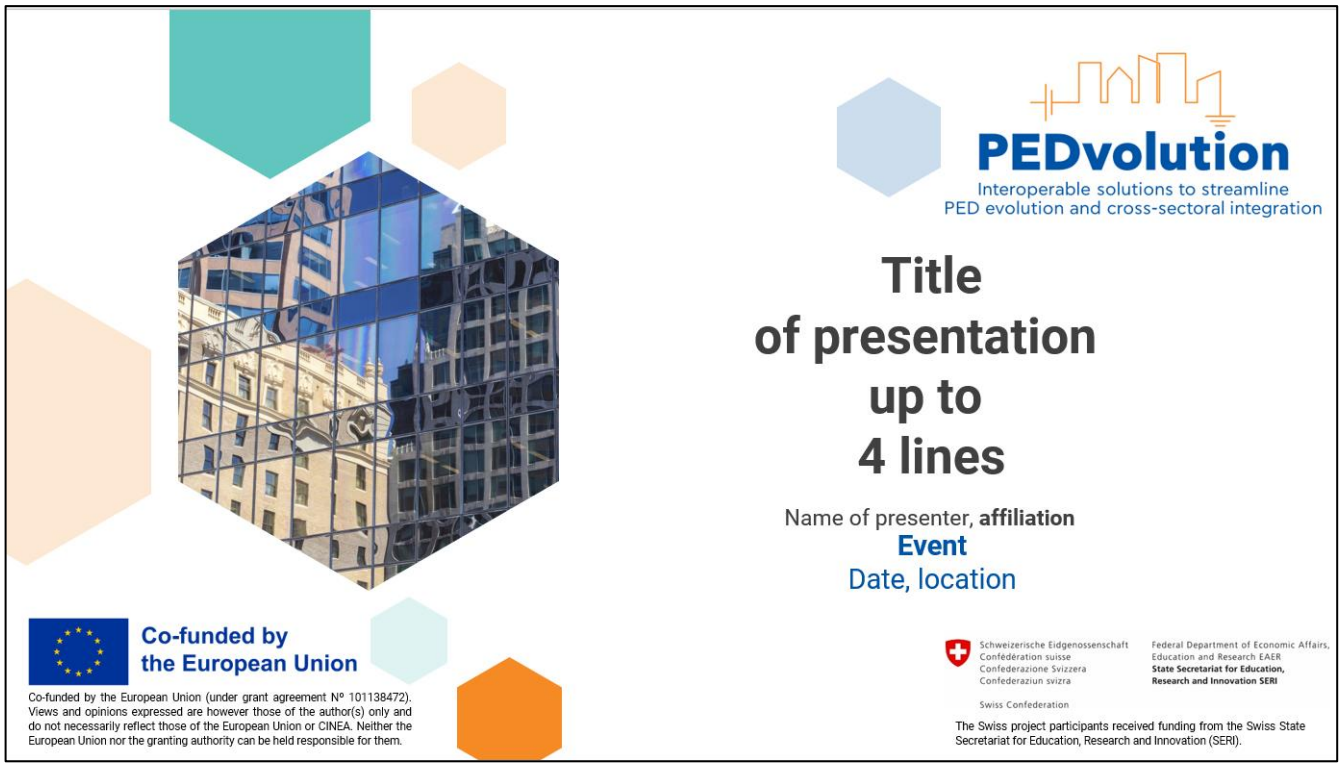
PRESENTATION TEMPLATE



PEDvolution

Interoperable solutions to streamline
PED evolution and cross-sectoral integration

Title of presentation up to 4 lines

Name of presenter, **affiliation**
Event
Date, location

Co-funded by the European Union

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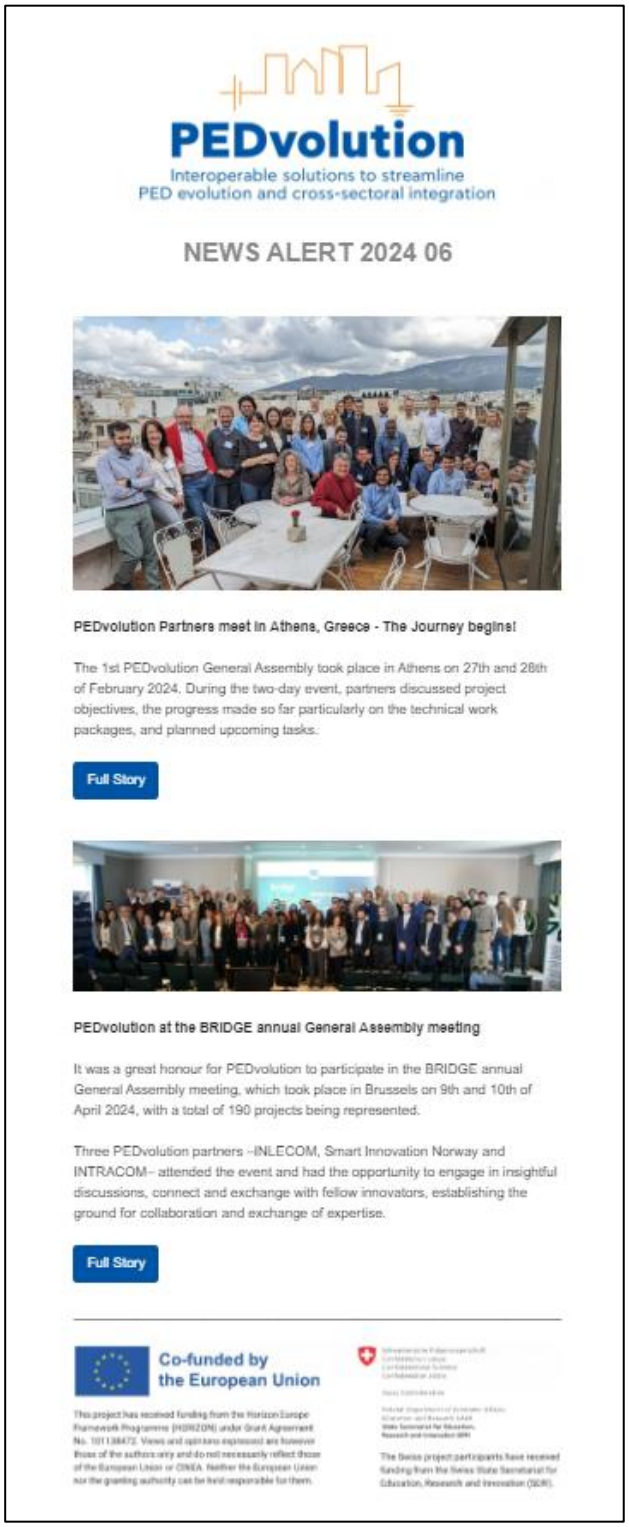
Swiss Confederation

Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Education, Research and Innovation SERI

The Swiss project participants received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).

NEWS ALERT TEMPLATE



PEDvolution

Interoperable solutions to streamline
PED evolution and cross-sectoral integration

NEWS ALERT 2024 06

PEDvolution Partners meet in Athens, Greece - The Journey begins!

The 1st PEDvolution General Assembly took place in Athens on 27th and 28th of February 2024. During the two-day event, partners discussed project objectives, the progress made so far particularly on the technical work packages, and planned upcoming tasks.

Full Story

PEDvolution at the BRIDGE annual General Assembly meeting

It was a great honour for PEDvolution to participate in the BRIDGE annual General Assembly meeting, which took place in Brussels on 9th and 10th of April 2024, with a total of 190 projects being represented.

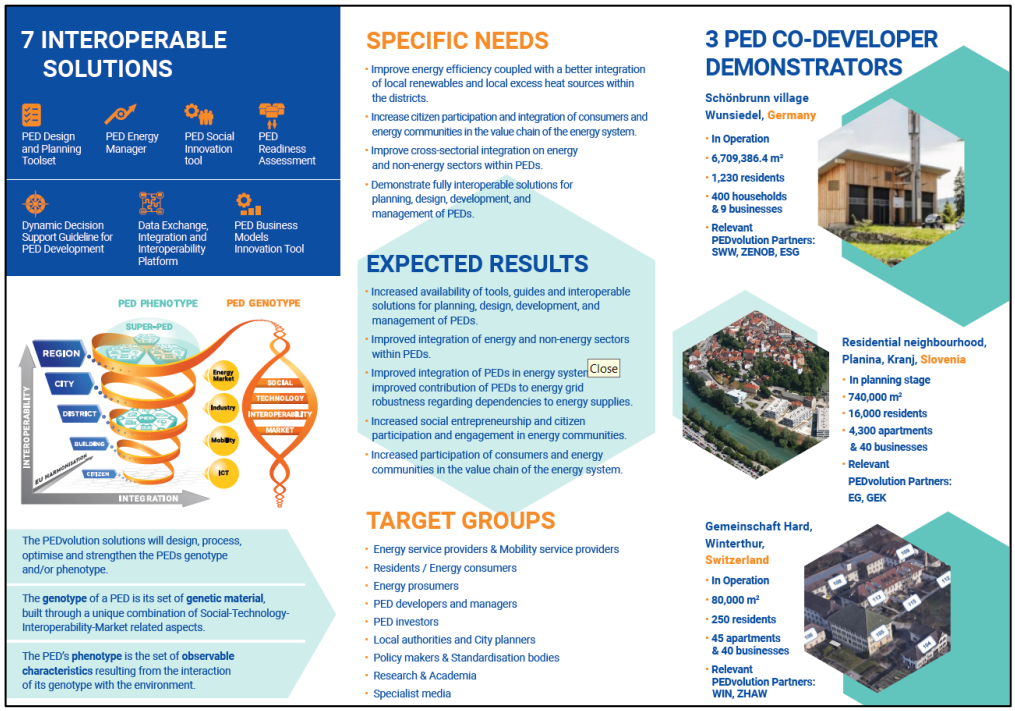
Three PEDvolution partners –INLECOM, Smart Innovation Norway and INTRACOM– attended the event and had the opportunity to engage in insightful discussions, connect and exchange with fellow innovators, establishing the ground for collaboration and exchange of expertise.

Full Story

Co-funded by the European Union

PRINTABLE MATERIALS

BROCHURE



POSTER


PED PHENOTYPE
PED GENOTYPE
SUPER-PED
REGION
CITY
DISTRICT
BUILDING
CITIZEN
INTEROPERABILITY
INTEGRATION
Energy Market
Industry
Mobility
ICT
SOCIAL
TECHNOLOGY
INTEROPERABILITY
MARKET
PEDvolution
Interoperable solutions to streamline Positive Energy District evolution and cross-sectoral integration
ACCOMMODATING THE CONSTANT EVOLUTION OF PEDs
CONTEXT
Positive Energy Districts (PEDs) are the pinnacle of urban energy ecosystems.
They can improve energy efficiency, integrate local renewable energy sources & excess heat more effectively and enable interaction with the energy & non-energy sectors, like mobility & ICT.
A crucial, often neglected, fact is that PEDs are in constant evolution, due to ever-evolving changes in their environment, including social context, legislation, energy market, technologies and energy prices.
Still the DNA of PEDs varies and the implementation & evolution of different PEDs, as well as their probability of success in the urban energy transition, is determined by the environment.
OBJECTIVES – SPECIFIC NEEDS
Improve energy efficiency coupled with a better integration of local renewables and local excess heat sources within the districts.
Increase citizen participation and integration of consumers and energy communities in the value chain of the energy system.
Improve cross-sectorial integration on energy and non-energy sectors within PEDs (between buildings, the users and the regional energy, mobility & ICT systems).
Demonstrate fully interoperable solutions for planning, design, development and management of PEDs.
7 SOLUTIONS
PEDvolution paves the way for cross-sectoral integration of ever-evolving PEDs, through the co-development and implementation of 7 interoperable solutions.
PED Design and Planning Toolset
Dynamic Decision Support Guideline for PED Development
PED Energy Manager
Data Exchange, Integration and Interoperability Platform
PED Readiness Assessment
PED Business Models
PED Social Innovation Tool
EXPECTED OUTCOMES
1. Increased availability of tools, guides and interoperable solutions for planning, design, development and management of PEDs.
2. Improved integration of energy (e.g. distributed renewable energy generation, waste heat utilisation, storage) and non-energy sectors (e.g. mobility) within PEDs.
3. Improved integration of PEDs in energy systems and improved contribution of PEDs to energy grid robustness regarding dependencies to energy supplies.
4. Increased social entrepreneurship and citizen participation and engagement in energy communities.
5. Increased participation of consumers and energy communities in the value chain of the energy system.
Project start date: 01/01/2024
Duration: 36 months
7 countries
15 organisations
Total EU Budget: 4,3 million €
PED CO-DEVELOPER DEMONSTRATORS
Schönbrunn village Wunsiedel, Germany
Residential neighbourhood Planina, Kranj, Slovenia
Gemeinschaft Hard, Winterthur, Switzerland
PARTNERS
ASSOCIATED ENTITIES
inlecom
vito
NTNU
sympraxis
offset energy
INTRACOM
zh
aw
Stadt Winterthur
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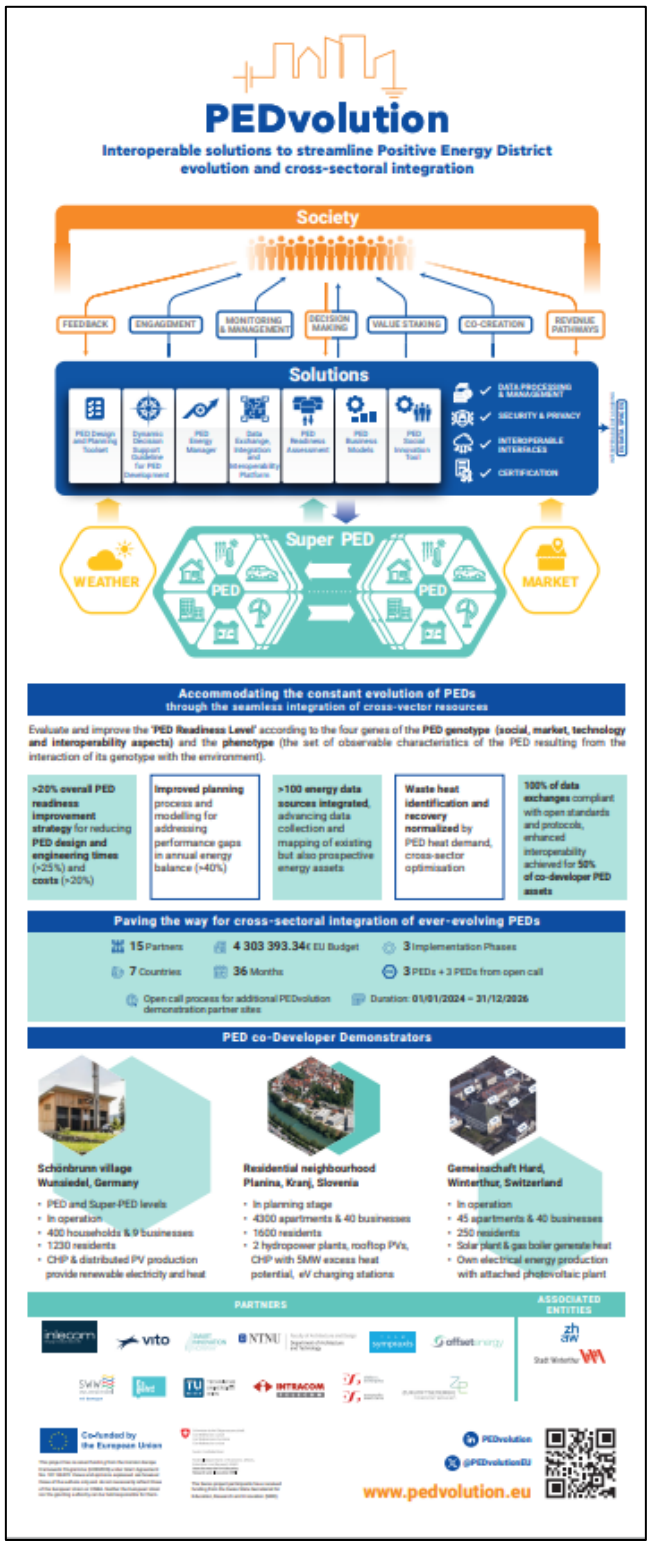
ROLL-UP BANNER



ANNEX II: MONITORING AND TRACKING TOOL

1. Communication activities								
Activity (Short label as described in communication, dissemination, exploitation plan)*	Title of activity	Date (dd/mm/year)	Place	Partner (short name)	Organisation (O) or Participation (P)	Link	Description*	Communication channel*
Workshop	GREEN BUILD workshop / Climate-neutral cities	20/3/2024	Cluj-Napoca, Romania	SIN	P	https://docs.google.com/forms/d/e/1FAIpQLSeLtDjWlLiwn0xc8BXIpWzuT4RIcBzQgkNjkphyQBzaRAhx-A/closedform	Workshop organised by SIN in the framwork of the GreenBUild project financed by Innovation Norway. The objective of the project is to create capacity building between Norway and Romania on twinning digital and sustainability, and PEDvolution was presented as a best practice when it comes to systemic colleboration in a community/area.	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)
3rd Party Event	Energy Efficiency in Buildings Conference	5/4/2024	Athens, Greece	SXS	P	https://www.energyefficiencyinbuildings.gr/	Participation at the event with a stand and roll-up banner to promote the PEDvolution project, its objectives and foreseen results and to engage in networking activities.	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)
PEDvolution press release	Revolutionizing Energy Transition: The PEDvolution Project	30/4/2024	Halden, Norway	SIN	P	https://smartinnovationnorway.com/en/nyheter/revolutionizing-energy-transition-the-pedvolution-project/	Press release / news article about the project and SIN's contribution for SIN's website.	Press release
Workshop	Citizen Participation	19/4/2024	Plzn, Czech Republich	SWW,ESG	P		Workshop at the University of Plzn, invited SWW and ESG to show the work done regarding citizen particpation	Event (conference, meeting, workshop, internet debate, round table, group discussion, etc.)
In-House Presentation	Citizen Participation	30/4/2024	Sokolov, Czech Republic	SWW,ESG	P		Workshop in a SUAS, a Czech company for energy, invited SWW and ESG to show the work done regarding citizen particpation	Other
Updates in social media account	Post on social media	26/4/2024	LinkedIn	ICOM	O	https://www.linkedin.com/posts/intracom-telecom_intracomtelecom-evolution-positive-activity-7188121578746900480-v51L	Post on ICOM's LinkedIn account regarding PEDvolution's 1st GA meeting in Athens	Social media