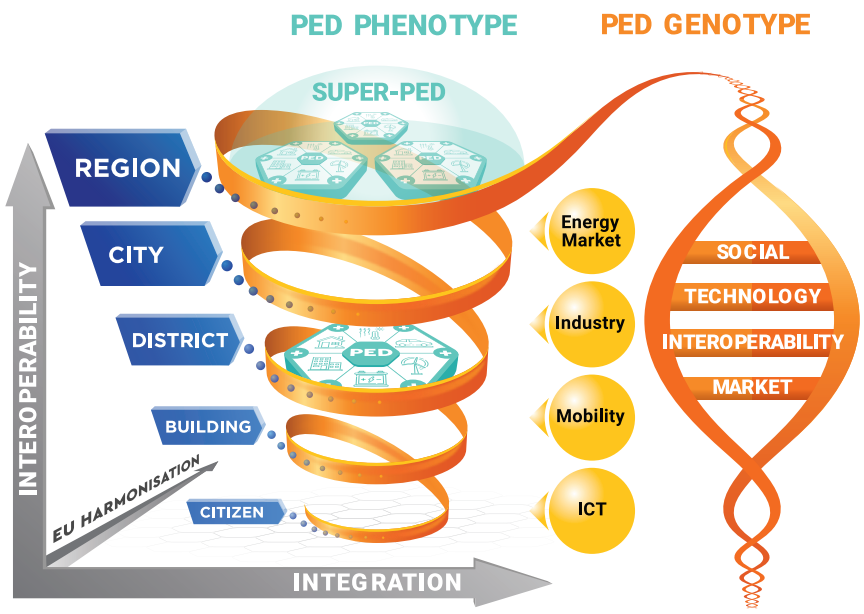

PEDvolution

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

Co-funded by the European Union

This project has received funding from the Horizon Europe Framework Programme (HORIZON) under Grant Agreement No. 101138472. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

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

PEDvolution
@PEDvolutionEU
www.pedvolution.eu