

## PROJECT COORDINATOR

AIT Austrian Institute of Technology  
GmbH

## BUDGET AND DURATION

Total costs/grant:

3.633.065 € / 2.994.853 €

01.01.2023 – 31.12.2025

## CONTACT

 [www.parmenides-project.eu](http://www.parmenides-project.eu)

 [info@parmenides.eu](mailto:info@parmenides.eu)

 PARMENIDES Project

 @PARMENIDES\_EU



## THE CONSORTIUM



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COORDINATED BY



**PARMENIDES**  
Plug&Play eneRgy  
ManagEmeNt for  
hybrID Energy Storage

## WHY PARMENIDES?

The ongoing transition of the energy system is accompanied by **digitalization** activities, enabling new applications. This results in a fragmentation of existing platforms, protocols, and standards. Therefore, interoperability among various platforms as well as **cross-domain interoperability** must be ensured. The usage of ontologies provides an opportunity to address cross-platform and cross-domain interoperability.

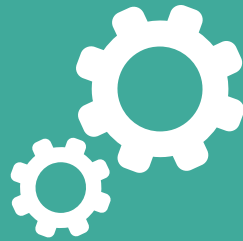
## OUR MISSION

PARMENIDES aims to develop a **new ontology** with a focus on the electricity and heating domain for buildings, customers, and energy communities. It will support different use cases, focusing on the utilization of **Hybrid Energy Storage Systems (HESS)**.

To support a number of use cases, a new generation of innovative **Energy Management Systems (EMS)** will be developed, capable of using ontology as a knowledge base. This will enable a generic software design and ensures the scalability and replicability of the solution.



## NEW ONTOLOGY



## ENERGY MANAGEMENT SYSTEM



## SECURE DATA EXCHANGE

## PILOT DEMOS

As a framework for the integration of the EMS, PARMENIDES will define an information and communication architecture, enabling an **interoperable, reliable, and secure exchange of data** and instructions.

The developed EMS will be demonstrated in very diverse pilots in Austria and Sweden. The Austrian pilot will address energy communities with different storage technologies, while the Swedish pilot will focus on flexibility, from a very short time scale through innovative heat pump control, to electrical and thermal batteries and seasonal storage through geothermal borehole heat exchangers.

## PROJECT QUICK FACTS

