



As Europe struggles with the changing climate boosting electricity consumption peaks during both summer and winter, building renovation technologies are becoming essential. However, renovation technologies are often expensive, disintegrated, and their installation time is inefficient.

The time for us to act smart so we can live smart is now. The HEART innovation will help lead us towards the future of sustainable building renovation and drive the transition towards smart cities.

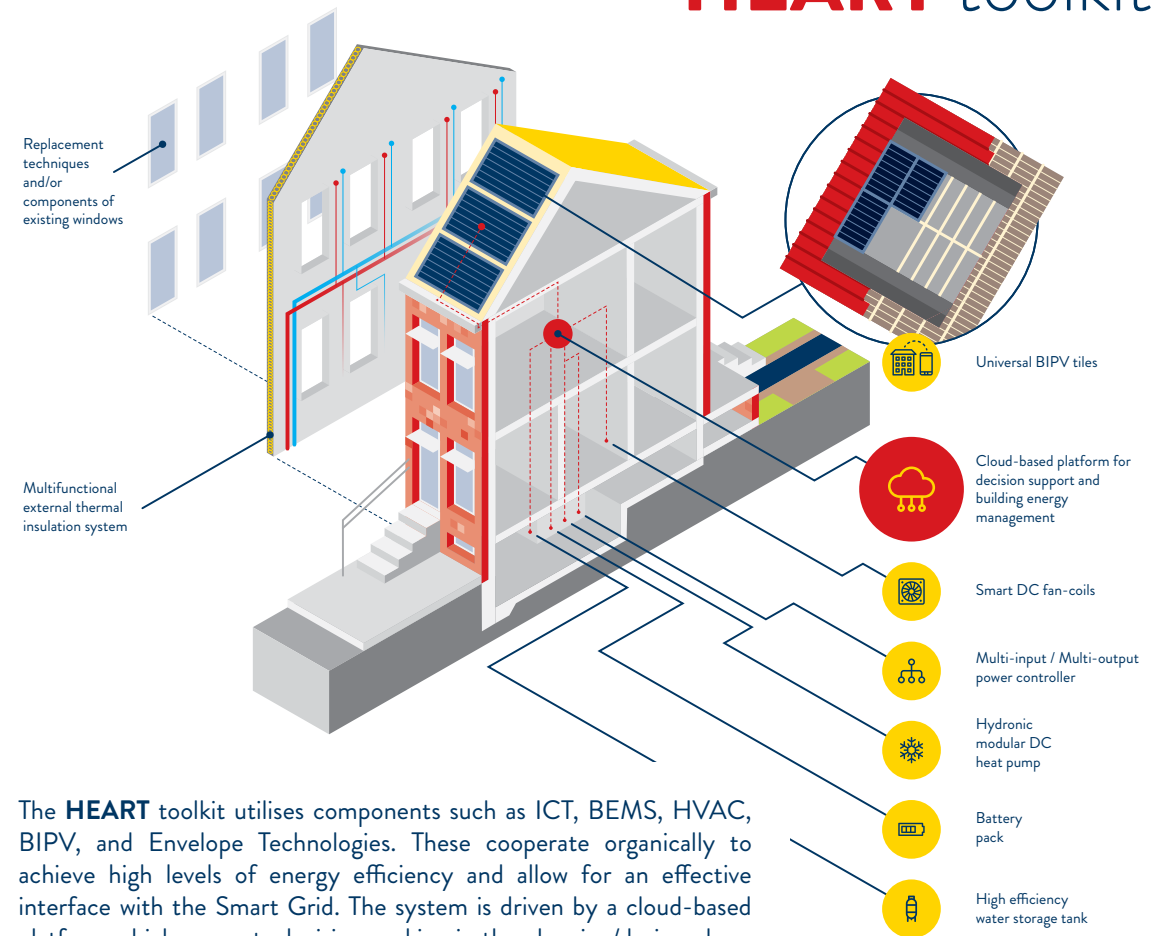
WHAT IS HEART?

HEART is a multifunctional toolkit which integrates several components to transform existing buildings into energy efficient smart buildings. It is also a quick decision-making tool which utilises advanced data analysis to predict and guarantee energy efficiency. While HEART is developed with a focus on existing buildings, the concept can be extended to new residential and commercial buildings.



The core of HEART is a cloud-based computing platform developed to address and support your specific energy-related needs and choices.

HEART toolkit



The **HEART** toolkit utilises components such as ICT, BEMS, HVAC, BIPV, and Envelope Technologies. These cooperate organically to achieve high levels of energy efficiency and allow for an effective interface with the Smart Grid. The system is driven by a cloud-based platform which supports decision-making in the planning/design phase and optimises energy performance in the operational one.

ICT Information and Communications Technology
BEMS Building Energy Management Systems

HVAC Heating, Ventilation and Air Conditioning
BIPV Building-integrated Photovoltaics

How HEART benefits you:

HEART is a toolkit that ensures benefits for all, including industry leaders, housing providers, and most importantly the residents living in these buildings.

- Improving the European building renovation process by simplifying it.
- Reducing total energy consumption, integrating renewable energy, and rationalising energy flow between buildings and smart grids.
- Involving stakeholders, supporting energy financing and the exploitation of renewable energy.
- Concept can be extended to new residential buildings in addition to existing buildings.

- Decreasing operating costs and consumer bills.
- Increasing thermal comfort for building users.
- Reducing the performance-related risk of the energy retrofit investments;

About HEART:

NAME
HEART – Holistic Energy and Architectural Retrofit Toolkit

COORDINATOR
Politecnico di Milano

TYPE OF PROJECT
H2020 IA Project

NUMBER OF PARTNERS
16 partners from 10 countries

PROJECT DURATION
4 years

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in [HEART Project \(H2020\)](#)

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The sum
of all things.

Partners.



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HEART