HEART: TOOLKIT TO HELP DECARBONISE THE EUROPEAN BUILDING STOCK

Funded by the EU's Horizon 2020 program, the HEART project is aimed at making existing buildings "smarter", through the application of an innovative toolkit. Such a toolkit is able to reduce energy consumption, with overall savings on heating, summer air conditioning and domestic hot water production variable between 60% and 90%, and to significantly improve comfort for the inhabitants who will be able to manage their consumption directly.

The HEART project is developing and testing several components that promise to facilitate renovation by using: a multifunctional prefabricated facade system, universal photovoltaic tiles, a high-efficiency water storage tank, direct current smart fan coils and heat pumps, a multi-input/multi-output controller and a cloud-based platform to support decision making and energy management phases.

HEART PILOT PROJECT

In Reggio Emilia, Italy, a four-storey condominium, constructed in 1985, is getting transformed into a smart building using the HEART Toolkit. The current BER rating of the building is 'Class E', and the project aims to improve the postrenovation rating to 'Class A'.





ICTInformation and Communications TechnologyBEMSBuilding Energy Management Systems

HVACHeating, Ventilation and Air ConditioningBIPVBuilding-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;

General facts about HEART

NAME HEART - Holistic Energy and Architectural Retrofit Toolkit - The Sum of All Things

COORDINATOR Politecnico de Milano

TYPE OF PROJECT H2020 IA Project NUMBER OF PARTNERS 16 partners from 10 countries

PROJECT DURATION

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