



PRESS RELEASE

21 September 2020 - Reggio Emilia - North Italy

HEART: SMART BUILDING

Meeting in Reggio Emilia with European partners and stakeholders to present the innovative project that transforms an existing building into a highly energy efficient smart building.

Transforming an existing building into a high-efficiency smart building: this is the goal of the HEART project (Holistic Energy and Architectural Retrofit Toolkit) project.

Funded by the Horizon 2020 program, through the application of an innovative toolkit aimed at making existing buildings "smarter", HEART aims 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, coordinated by the Politecnico di Milano, involves 16 partners from 11 different European countries; the experimentation takes place on two buildings with the same characteristics, geographically located in central Europe (Lyon - France) and in southern Europe (Reggio Emilia - Italy). In fact, the moderate climate requires the building's energy performance related to both winter heating and summer cooling, as well as the production of domestic hot water.

The European partners and stakeholders met on *Wednesday 23 and Thursday 24 September* in Reggio Emilia, in the Municipality of Bagnolo in Piano, to take stock of the situation on the works of the first building involved in the pilot project. It is a four-storey condominium, built in 1985, consisting of 12 apartments varying in size between 43 and 63 square meters, to which the HEART kit is being installed which includes modular panels for the insulation of the facades, technical and components for redeveloping windows, photovoltaic tiles, a cloud platform to monitor and manage energy consumption, fan coils for air conditioning, thermal storage, batteries, heat pumps and a multifunctional converter.

The first day of study, *Wednesday 23 September*, is dedicated to the partners of the project, who after visiting the work area in Bagnolo in Piano and illustrating the activities managed by Acer Reggio Emilia, to



which the Politecnico di Milano has entrusted the management of the works, will be able to discuss processes and technologies, exchange information and experiences.

On *Thursday 24 September* a workshop will be held at the Bagnolo in Piano site for engineers, architects and professionals in the construction sector, who will be shown the toolkit for reducing the energy consumption of residential buildings. A guided tour is planned during which the technologies installed will be illustrated with particular attention to the installation phase.

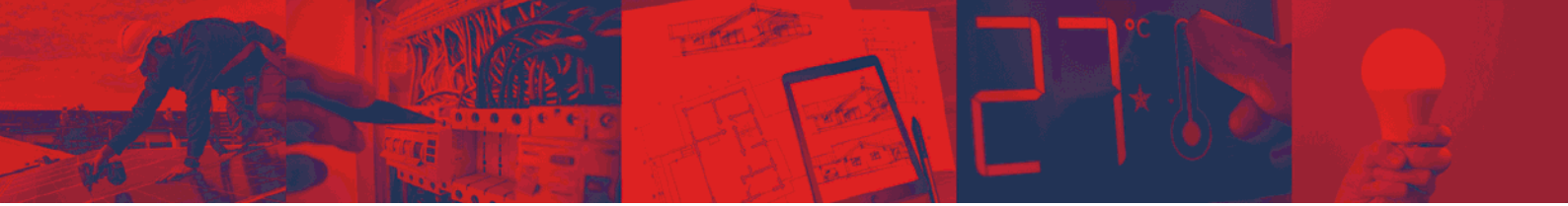
"The project aims to improve the quality of the design and outline a process of industrialization of the construction and redevelopment activities - explain the engineer Michela Buzzetti, co-founder and partner of the spin-off ZH and the engineer Claudio Del Pero, associate professor at the Milan Polytechnic - to direct the building redevelopment sector towards new levels of technological development, as has already happened in other industrial sectors in line with the innovative processes of industry 4.0 and the European Green Deal".

The decarbonisation of the building stock is among the priorities of the post-Covid recovery plan and one of the cornerstones of the European Green Deal. It is estimated that the construction sector is responsible for 40% of energy consumption and 36% of greenhouse gas emissions in Europe.

The European and national regulatory framework provides for the obligation, starting from 1 January 2021, to construct nearly zero energy buildings (nZEB), i.e. buildings for which at least 50% of the total energy needs (heating, cooling, ventilation, water hot water) is covered by renewable energy sources present on site.

The optimal field of application of HEART is represented by existing buildings, subjected to a smart building upgrade, but the system can also be effectively used in new buildings: the HEART system can become a control and guarantee tool, capable of stimulating, supporting and promote public and private incentives and financial investments in the energy efficiency of buildings.

Online subscription here: https://www.res.re.it/edizioni/HEART_The_sum_of_all_things/8109



Learn more:

- Sign-up to HEART's [newsletter](#) and visit the website: www.heartproject.eu
- Read: [The future of Smart Energy Homes in 32 Words - A Housing Europe HEART Glossary](#)

About HEART:

The HEART toolkit incorporates different components and technologies, which cooperate to transform an existing building into a smart building. In developing this toolkit, the project advances and improves energy efficiency and the use of renewable energies in buildings across Europe. Particularly in Central and Southern Europe where climate change is leading to increased electricity consumption both during summer and winter seasons. The core of HEART is a cloud-based computing platform that includes decision-making and energy management features. The HEART toolkit thus becomes the heart of a building, regulating its energy consumption and energy flow.

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