



BuildHeat

**Attenuating heating & cooling consumption
A toolkit for renovating residential buildings**

BUILDHEAT PROMOTES ENERGY EFFICIENCY TO CREATE VALUE FOR URBAN REGENERATION



By retrofitting multifamily houses with the best available technologies, BuildHeat delivers **high-energy performance**, comfort, and **healthy living conditions**.

BuildHeat drives change in the construction sector, bringing information and coherence to the market. Decision-making and planning processes are thus enhanced through:

1. Efficient, reliable, non-intrusive and cost-effective technologies readily made available on the market.
2. Functional, systemic and easy-to-implement solutions, enhancing energy standards, comfort and healthiness, with an investment cost 50-60% lower than the new built.
3. Innovative business models designed to mobilize large investments from the public and private sectors.

BuildHeat integrated solutions help **reduce the space heating and domestic hot water demand** from the actual standards (170-190 kWh/m²y) to around 50 – 70 kWh/m²y.

Not only does the project promote relevant **economic development opportunities**, it also anticipates new legislation and raises **awareness about energy consumption** and the environment.

BuildHeat has demonstrated its innovative retrofit solution in **4 demo sites**, located in **Zaragoza** (ES), **Salford** (UK), **Pinerolo** (IT) and **Gleisdorf** (AT) accounting for more than 120 dwellings overall.

ESTABLISHED **HEATING** & **COOLING** TECHNOLOGIES FOR INNOVATIVE SYSTEMIC RETROFIT



SOLUTION 1: photovoltaic-powered heat pump system with mechanical ventilation and hot water storage for single dwellings.
Benefits: increased total storage capacity, reduced thermal loss and control and monitoring of energy use.



SOLUTION 3: multifunctional façade, including insulation and active elements.
Benefits: easy installation of cladding, installation and active elements like solar thermal collectors PV panels, pipelines, air ducts and electric cables.



SOLUTION 2: water storage tank, supplying individual dwellings with domestic hot water, space heating and space cooling.
Benefits: autonomous renewable electricity self-consumption and optimised DHW generation and ventilation according to needs.



SOLUTION 4: ICT infrastructure connecting and monitoring all the decentralised units.
Benefits: optimised energy use and distribution thanks to communications from individuals flats to building managers.

CRITERIA FOR SYSTEMIC TECHNOLOGY PACKAGES

1. High-energy performance, comfort and healthiness
2. Non-intrusive and easy installation
3. Scalability from dwelling to district level in terms of energy management and financing
4. Bankability

The project has designed novel financial mechanisms to harness investment synergies between private and public funding. BuildHeat proposes a risk mitigation approach generating value for investors: the aggregation of consumers and buildings into clusters or districts creates local ecosystems that are attractive for investors.



BuildHeat

Standardised approaches and products for the systemic retrofit of residential Buildings, focusing on heating and cooling consumptions attenuation.

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**Learn more about the project
and check the technical outcomes
on www.buildheat.eu**



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