

NEW Integrated Methodology and **T**ools for **R**etrofit Design Towards a Next Generation of **EN**ergy Efficient and Sustainable Buildings and **D**istricts

13 7 3 36 partners countries demosites months









NewTREND seeks to improve the energy efficiency of the existing European building stock and to improve the current renovation rate by developing a new participatory integrated design methodology and toolstargeted to the energy retrofit of buildings and neighbourhoods, establishing energy performance as a key component of refurbishments.

The NewTREND methodology and tools will be validated in three real refurbishment projects in Hungary, Finland and Spain.

In the three demo sites, the involvement of all the stakeholders in the design process will be evaluated and specific activities will be dedicated to inhabitants and users.

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Integrated
Design
Methodology

Including a guided process through all steps of refurbishment from concept to operation and a decision process for the selection, design and optimisation of retrofitting solution for buildings in their neighbourhood context Interoperable, distributed, multi-model data exchange server to store information on energy efficient design and integration with neighbourhood energy systems, linking existing data model formats at building and district levels



District Information Model



Focus on all stakeholders (including inhabitants and building users) in the design process, through pre-design multisession community design charrettes, review dialogue in the construction phases and post-occupancy evaluation workshops



Enabling a structured, standardized crowdsourced data collection approach through a web-based tool accessible from tablets and smartphones, supporting design teams in on-site inspections and direct data entry in the DIM





Ensuring the correct implementation of the Integrated Design Methodology through a project management infrastructure, a user friendly GUI customised to the stakeholders, including visualisation and participation options

Cloud-based platform to evaluate retrofitting needs, guide the decision makers to select the best energy retrofitting strategy, balance the building in its district, through Dynamic Simulation Modelling, GIS, KPI and optimisation tools



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