

## **Increasing the quality and the value of existing buildings to expand energy retrofit practices**

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*In the recent years, numerous European Projects have tackled the technical aspects of energy efficiency through the search for innovative technological solutions to achieve energy efficiency in the building construction market. In this context, it is widely acknowledged that energy efficiency challenge in buildings mainly concerns the energy refurbishment and the investments in existing buildings.*

*However, today a very limited part of the existing building stock is renovated every year, in Europe and Worldwide. This investment gap in the deep renovation sector is due to the fact that the required up-front investments are high and characterized by an excessively high degree of risk, long payback times and a general “invisibility of the energy benefit”.*

*Building on top of the outcomes of some of the EU projects focussing on both energy and financial issues, and in particular on the results of ABRACADABRA and the lessons learnt so far from Pro-GET-onE, in this special issue we have aimed at finding solutions to shift the identified gaps into opportunities for future development in deep renovation of buildings, thus providing new knowledge on technologies and financial issues to promote and implement energy zero buildings in existing cities.*

*In particular, non-energy related benefits like the real estate value of existing buildings in the deep energy renovation has been regarded as the main tool to provide cost effective solutions by reducing the payback time of the energy*

*retrofit interventions, while increasing the architectural value and the social attractiveness. Furthermore, cognitive, behavioural and social aspects of decision-making in the deep renovation of existing buildings have been effectively illustrated.*

*Generally, the research works contained in this issue, including the reports, the description and the critical analysis of some European Research Projects' experiences have investigated the potential improvement of the overall building performance given by the implementation of innovative interdisciplinary interactions and synergies intertwining different concepts in the design of the buildings and the co-related technologies. In the strategic perspective of creating new design concepts and paradigms for attractive, energy efficient and safe buildings, the combination of the seismic and energy issues, conceived according to a user-orientated approach, is undoubtedly one of the most relevant.*

Annarita Ferrante

*Editor*