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Mobilization of innovative design tools for refurbishment at district level

Innovation Action / Grant Agreement No: 680447 / Horizon 2020

MODER Objectives



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- The European project MODER develops
 - processes and practices that enable building owners to activate refurbishment at district and neighbourhood level with the help of energy management companies and engineering companies
 - business models for engineering companies, consultants and energy managers to profitably offer these services for owners
 - existing tools by adding new functionalities and improving the usability with the help of new visualisation.
- The main objective of MODER is to increase business of engineering companies, energy managers and consultants in supporting municipalities and building owners in European and global markets for the refurbishment of buildings at district level.





MODER interviewed stakeholders about drivers and barriers for district level refurbishment

■ DRIVERS AND BENEFITS

- There are different kinds of issues that either force or justify refurbishment of buildings at district level.
 - to achieve cost savings because of doing refurbishment projects for several buildings at the district at the same time
 - to better utilize RES for heating, cooling and local electricity generation
 - to find cost-effective financial solutions
 - to avoid mismatch





■ ASSUMED BARRIERS

- legal and institutional barriers related to town planning and building and environmental permission practices
- legal and institutional barriers related to the practices, taxes and fees of energy generation.
- presence of several owners; different interests
- presence of several actors; organization of work and collaboration
- lack of actors who would be able to act as activators
- lack of proper business models for different actors
- lack of proper procurement and delivery models; collaborative delivery models
- available energy performance assessment tools for district level
- lack of suitable plans of works etc.
- lack of design methods for the optimization of grid interaction and load matching

Results



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- There are some differences between countries but the most important barrier is the **involvement of several owners** in the process of refurbishment at district level and the related difficulties to find an agreement.
- Important barriers are also problems related to the **legislation with regard to town planning and lack of actors that would initiate** the refurbishment project and motivate owners and other stakeholders are important barriers.
- Difficulties are also related to the current practices, **taxes and fees of energy generation**
- and lack of proper business models and lack of **tools that support the optimization of grid interaction and load matching.**





Delivery models for refurbishment at district level

- MODER studies the following delivery models that are preliminarily seen interesting for energy-efficient refurbishment at district level:
 - Invite-to-project (one central actor as an initiator)
 - Distributed Design-Build (coordination of separate DB projects)
 - Public-private or private-private partnership
 - Alliance



MODER Partners



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- Sweco, Sweco Rakennetekniikka Oy, Finland, Coordinator
- VTT, Technical Research Centre of Finland Ltd, Finland
- Fraunhofer IBP, Fraunhofer Institute for Building Physics, Germany
- Siemens AG, Germany
- REM PRO, REM PRO limited liability company, Latvia
- W/E Consultants Sustainable Building, The Netherlands
- ertex solar, ertex solartechnik GmbH, Austria
- ZRMK, Building and Civil Engineering Institute ZRMK Ltd, Slovenia
- FinnEnergia, Finland
- LEAG, Local Energy Agency of Gorenjska, Slovenia.
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