

Mobilization of innovative design tools for refurbishing of buildings at district level

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Dear Receiver

The European MODER project has started to work for the development of tools and processes for energy-efficient refurbishment at district level.



There are several issues that justify refurbishment at district level in addition to building level approach. It may be possible to achieve cost savings and find more cost-effective financial solutions when doing refurbishment projects for several buildings at the district at the same time. It may also be possible to better utilize renewable energy sources for heating, cooling and local electricity generation, when the local energy solutions can serve for several buildings instead of one single building. In addition, full optimisation of the performance of (Near Zero Energy Buildings (NZEBS) requires that load matching and grid interaction aspects are taken into account. District level refurbishment projects can benefit from energy resource sharing on block level or on building group level.

However, there are also barriers for the energy-efficient refurbishment at district level. The objective of the MODER is to develop solutions for these problems.

We will develop 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 (see Figure 1). We will also develop business models for engineering companies, consultants and energy managers to profitably offer these services for owners. We will improve existing tools by adding new functionalities and improving the usability by potential users and in different use cases 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.

First MODER deliverables

We started the work by studying barriers for the energy-efficient refurbishment at district level. We interviewed 63 stakeholders in different countries and found that there are several barriers. The most important ones are related to legal and institutional issues and complicated process issues.

There are some differences between countries but the most important barrier seems to be the involvement of several owners into the process of refurbishment at district level and the related difficulties to find an agreement. In addition, 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, lack of proper business models and lack of tools that support the optimization of grid interaction and load matching. However, there was more scatter in views with regard to three last mentioned barriers. The full report of barriers for district level refurbishment will soon be available as a conference paper.

The first MODER workshop

MODER will test the processes and practices in real cases. The Kranj (Slovenia) case study will be based on the ongoing energy renovation project of existing public and apartment buildings. The MODER project also organised the first workshop in Kranj. The Mayor of City of Kranj Mr. Boštjan Trilar welcomed MODER, coordinator Mr Jyri Nieminen introduced the MODER project and Mr Anton Pogačnik introduced the Kranj case study. Kočevje case study and two case studies from Vienna were also presented. In addition, the District Energy Concept Advisor ([District ECA tool](#)), information about building typologies, and the Finnish experiences about the role of municipalities in sustainable building were presented. Please see all presentations in MODER web page (www.moderproject.eu).



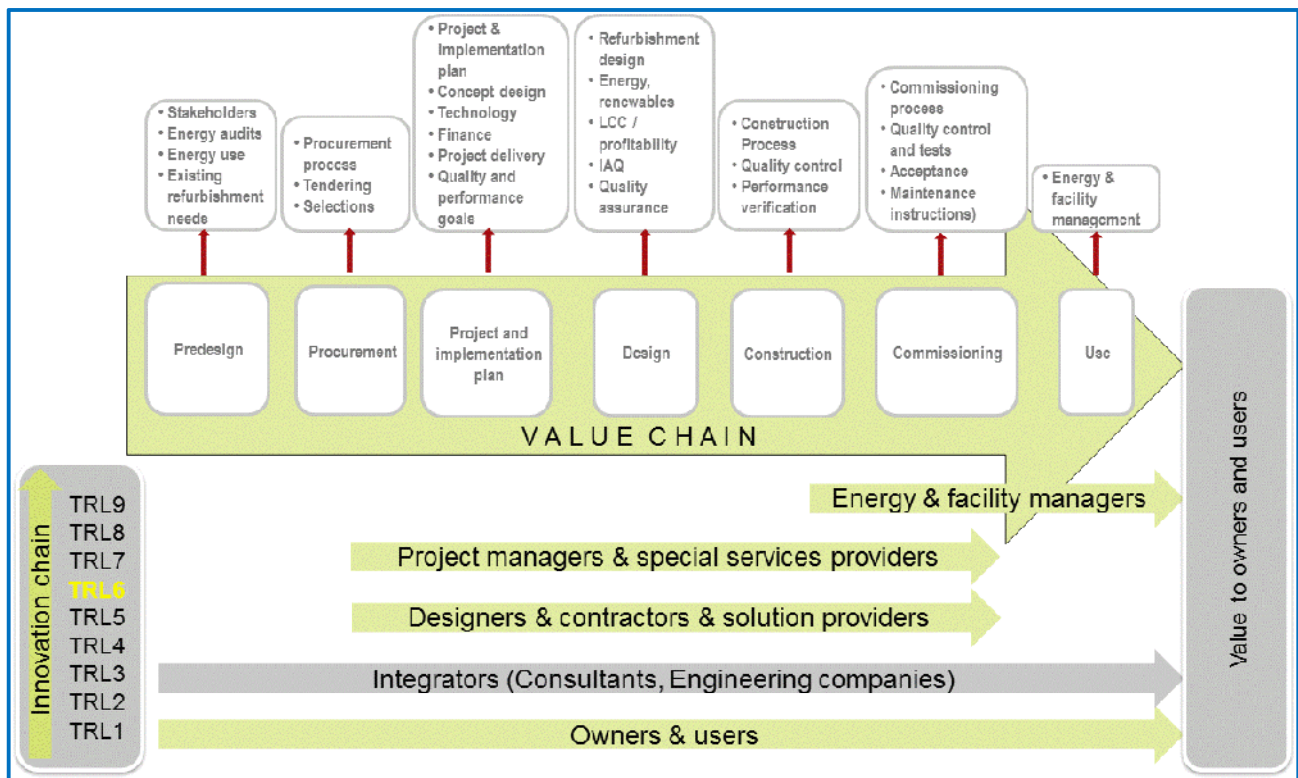


Figure 1

The value chain in district level energy-efficient refurbishment projects as preliminarily illustrated by MODER

Contact information

Coordinator: Jyri Nieminen jyri.nieminen@sweco.fi

Website: www.moderproject.eu

MODER partners

- Sweco, Sweco Rakennetekniikka Oy, Finland
- 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
- FinnEnergi, Finland
- LEAG, Local Energy Agency of Gorenjska, Slovenia.