



INVOLVEMENT AND ORGANISATION OF THE SUPPLY SIDE

REFURB DELIVERABLE REPORT 3.3 & 3.4

Overview and
one-stop shop solutions
for private homeowners



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Deliverable D3.3 & D3.4 Involvement and organisation of the supply side

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Summary

Renovation by the private sector towards increased energy efficiency is seriously lagging behind. As more than sufficient technological solutions are available, focus must be on removing non-technological barriers. The main barriers relate to fragmentation of the renovation offer, resulting in inefficient or only partial solutions. In addition to financial restrictions and unclear benefits, homeowners do not have a structured way to obtain all the necessary information. One way to solve this is the use of a 'one-stop-shop concept'. Many have been put in practice. Some were successful, others not. They often lack an understanding of the concerns and demands of homeowners.

The REFURB project focuses on the complex interplay of barriers through coordinated process organization, innovation and optimization. This way the REFURB project will bridge the gap between supply and demand side. Therefore, WP2 and WP3 were dedicated to analyse demand and supply-side drivers respectively.

This report is part of WP3 ('supply side mapping') that focuses on the supply side. For the REFURB project the supply side means everyone who can be a single-point-of contact in a one-stop-shop solution, that is: contractors, architects, engineers, energy consultants, government etc...

To uptake the market of NZEB renovations, the supply side must change behaviour; from selling technology to selling functionality. To undergo this change, the supply side needs access to proper information and training. This is explored further in this deliverable.

As learnt from WP2, D2.5, the customer journey is an important description process of the customer before and during renovation to NZEB. In this report, a closer view on the current involvement and organisation of the supply chain around the customer journey within the one-stop-shop solutions is explored. The analysis focuses on the countries partner of REFURB project.

Roles in Single Family House NZEB renovation

Belgium, Denmark, the Netherlands and Germany all selected single family houses as the main segment. The actors of the supply side and their roles are rather similar, only Germany has a more particular role definition as explained below.

In all the countries, **friends, family and internet** are sought for advice, recommendations and ideas. A recommended contractor by a friend or neighbour is of high relevance. Specially in the **Netherlands**, the peer pressure by using neighbours for benchmarking is exploit. The role of ambassador is more present than in the rest of the countries.

The **service provider** is usually the contractor. In **Belgium**, there is an obligation by law to have the roles of an architect, safety coordinator, energy reporter and ventilation reporter. Depending on the size of the works, the same stakeholder may undertake more than one role. In the rest of the countries there are no specific requirements on roles or necessary education. **Denmark** only specifies requirements on the calculations done to estimate the renovation class.

The **local authority** is responsible in all the countries for the subsidies and issuing permits. In **Denmark**, the tax administration is heavily involved since there exist a tax reduction due to the refurbishment project. In the **Netherlands and Germany**, the local authority takes up an active role launching awareness campaigns and information programs.

In all the countries, the **banks** are responsible for the financing and the loans for the owner to undertake the renovation measures. In the **Netherlands**, banks are also providing independent financial advice on possibilities of financing and subsidies.

Energy consultancy services are used in the **Netherlands** for energy advice and are very much present in Germany. That is what distinguishes **Germany** from the rest of the countries. This energy consultant provides a wide range of advice depending on the target group: home energy checks, stationary energy consultation on energetic refurbishment, initial consultation at local information centres, initial on-site consultation, on-site orientation and counselling service, concept-oriented consulting engagement. More details in **Fejl! Henvisningskilde ikke fundet..**

Finally, in **Denmark**, the **energy supply company** entails a specific role of approving the expenses and payments of the kWh subsidy.

Roles in multiapartment buildings NZEB renovation

Estonia and Slovenia selected the segment of multiapartment buildings as the most representative for their countries. However, they seem to have a very different way to organize NZEB renovations.

In **Estonia**, the **energy agency** is responsible for launching awareness campaigns and for providing all general information regarding energy efficiency. While the **local authority** issues the building permit and supervises the legal aspects of the construction, the **building inspector** is in charge of supervising the technical aspects of the construction process. He is hired by the owners of the building and it is a compulsory role in Estonia. The **KredEx Fund** provides consultation, subsidy and expertise if needed. The **energy consultants** provide advice on HVAC and technical aspects of the renovation. In Estonia, there is no obligation to hire a **building manager**. In case he participates, he can represent the home owners in the negotiations. On the other hand, a **technical consultant** must be hired to be eligible for the renovation fund. He supervises the project design and coordinates the tendering amongst other responsibilities.

Regarding the training initiatives to change behaviour in the supply side, the majority of the training initiatives concentrate on the technical part to address the issue of quality constructions and renovations. Few initiatives were found about training the supply side on the behavioural change.

Denmark has deployed a program, Better housing, to form professionals on the advice about energy renovations for private households. There, the missing support from the municipalities hampers a broader market uptake. The Charlie project addressed several stakeholders in the renovation such as the household, the service provider and the financing institution. Charlie behaved as a coach supporting the household in all the steps of the customer journey.

In France, a tool has been developed to train professionals and targeting also households. The objective is to form groups of craftsmen with complementary skills, gathered around a pilot, and able to propose high-performance energy retrofits at a controlled price.

The deliverable report D3.2 "Existing renovation solutions towards NZEB" identified **seven one-stop-shop** solutions in Belgium, Denmark, Germany and the Netherlands. One of the key characteristics identified in the report included the organisation of the supply side. Therefore, in this deliverable, these initiatives are analysed more in-depth, focusing specifically on how the supply-side was involved and how the supply side was organised in these programmes.

Key success and fail factors were identified in the SWOT-analysis further complemented with literature study and the partners' experience. The success and fail factors are summarized here:

A more **cooperative model instead of a competitive one** is recognised as a success factor, as it encourages to find suitable partners who are complementary to each other and form strong partnerships.

Related with previous point, the **independency** of the renovation advisor was emphasised in a number of cases, so the renovation advisor could really be the linking pin between supply and demand side. This point can become a fail factor.

Furthermore, the Dutch examples pointed out the importance of the involvement and cooperation of **local policy level**.

Closely related is the aspect of **branding and creating trust with the customers**. A quality label could be a possible strategy, as a way to distinguish competent supply side actors.

Lastly but equally important, in order to achieve success with the more complicated NZEB renovations, it was pointed out the importance to include highly qualified energy advisors as partners. This emphasises the need of **good training programmes** in order to have better qualified experts.

A number of fail factors were identified related to **quality assurance, time investment needed**. Lastly and equally important, a number of **financial factors** were identified.

CONCLUSIONS ON SUPPLIER INVOLVEMENT STRATEGY

A supply involvement strategy should be able to adapt, depending on the type of supply side actor and specific renovation package. The supply side consists of different types of building actors: manufacturers, craftsmen, contractors, architects, engineers, energy consultants, renovation advisors and so on. In the analysed examples, there was a clear focus on the following key actors¹:

1. Energy and renovation advisors (including related consultants such as energy experts, ventilation expert etc.);
2. Craftsmen and contractors;

They each require a slightly different approach. Therefore, there could be no "uniform" supply involvement strategy without taking into consideration the type of supply side actor. Instead, the strategy should be tailored to the building actor targeted, eventually starting from a general framework but nevertheless customizable

Provide dedicated training programmes. The majority of the training initiatives for the supply side concentrate on the technical training to address the issue of quality constructions and renovations. Few initiatives were found about training the supply side on the behavioural change.

"Dedicated" does not mean that these training programmes should only focus on technical, NZEB-related topics, on the contrary. The analysed examples pointed-out two focus areas:

¹ The role of architects was not explicitly covered, but it can be assumed that they can take up both roles: the architect as a renovation advisor, or the architect as a building professional.

1. There is a need for training on non-technical topics. Slim Wonen highlighted the importance of marketing workshops. Better Home focused on education in communication and how to provide good service to customers.
2. Participating in training programmes can be a prerequisite for partnership. However, continued training should be encouraged as well to maintain the necessary quality level (continuous learning). Ecohome organised additional training to ensure the high level consulting expertise.

Provide support to the involved partners, this way unburdening the supplier. To improve the level of engagement, it is recommended to clearly point out the benefits when participating (basically providing the answer to the question “*what’s in for me*”). Identified examples include:

- Access to tools: In the Better home programme, craftsmen could obtain apps or tools for calculating the of energy savings and monitoring the customer journey.
- Administrative support: The craftsmen do not have to pay to get leads. The secretary of Better Home followed-up potential leads and distributed them among the craftsmen depending on qualification and geographical criteria
- Access to information and network: In the Ecohome initiative, joined parties were granted access to the “Ecohome partner portal” and furthermore, they could directly obtain customer enquiries from their region

Closely related with previous point: **In order to reach SMEs, the threshold to participate in a renovation package should be low enough.** This means that the concept should be clear and not too time demanding for small craftsmen companies or SMEs. Other good examples identified: In the Better House programme, it was relatively easy to become advisor, as a result of flexible and online courses with a holistic education program. Furthermore, in the same programme, it was not difficult SMEs who offer “Better House” plans to obtain a Quality Plan as required from the Danish Energy Agency.

Lastly and equally important, **creating a community and providing network opportunities** allow partners to exchange experience and to collaborate with each other. Partners should have the feeling that they join something greater. Setting up a recognisable brand (branding) further complements this.

RECOMMENDATIONS FOR ORGANISING THE SUPPLY SIDE

Taking into account the success and fail factors as identified earlier, the following recommendations are suggested for organising the supply side:

1. **Develop a solid business case** between a single-point-of-contact to the homeowner (e.g. a renovation advisor) and the building professionals. Interdependency was quoted as a prerequisite.
2. **Compose a “pool” of building professionals.** A distinction should be made between renovation advisors on the one hand and building professionals on the other hand (which can be further distinguished in craftsmen or contractors, architects, and engineers or consultants). Ideally, this pool should be of cooperative instead of competitive nature.
3. **Define quality requirements** which have to be met by building professionals as a prerequisite to participate in the renovation package. However, the level of complexity and associated costs should be limited in order to engage the smaller SMEs as well.

4. Offer **good training programmes**, to ensure that all building professionals and renovation advisors possess the required knowledge level and skills to participate in the renovation packages.
5. Take into account the **time investment and financial aspects** associated with the NZEB renovations investment by the customer. These can be barriers, both for the demand side as the supply side.