How to overcome barriers to implementation of very low energy buildings

NorthPass

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Background

EU wants to increase the rate at which very low energy residential buildings are being built. The Northpass project (Intelligent Energy Europe) was initiated to study and overcome barriers in cold climate in Denmark, Norway, Sweden, Finland, Poland, Latvia, Estonia and Lithuania.

Methods

The PDS-method (Problem Detection Study) is a structured dialogue between different categories of stakeholders to identify problems/barriers from their different perspective.

Figure 1 Participants in the PDS – dialogue.
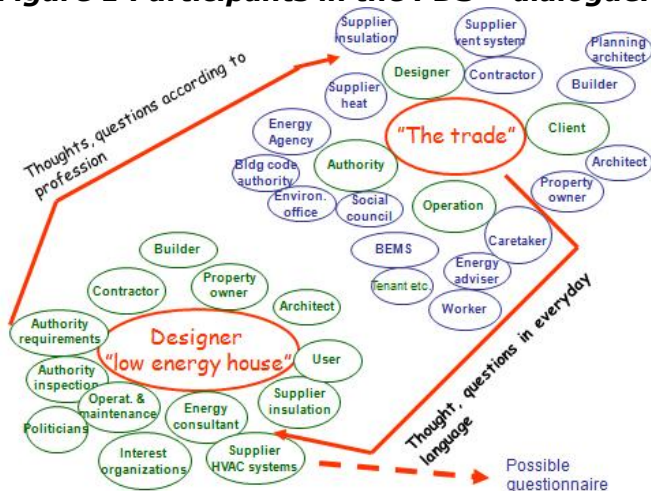
Common barriers

Market e.g. insufficient awareness among customers, low demand for low energy houses, inadequate marketing, too few and wrongly presented good examples, small national markets.

Requirements/regulations e.g. no or unclear definitions of very low energy houses.

Knowledge e.g. bad or inadequate experience/feedback of low energy houses, inadequate knowledge in general, too few good examples.

Costs e.g. high costs, incorrect cost estimates, no LCC.

SWOT-analysis

After the identification of barriers a SWOT-analysis was carried out, to determine disadvantages and advantages with very low energy residential buildings.

Figure 2 The principles of SWOT analysis.

Maintain, improve, promote

Neutralize, forestall, improve

Potential strengths: low energy house specifications, good robustness/quality, low emission of GHG, attractive architecture, energy certification.

Potential opportunities: stringent performance oriented legislation/standards, increasing energy costs, low running costs and good reputation.

Potential weaknesses: insufficient competence to build, lacking robustness/quality, indoor environment problems, operation and use problems.

Potential threats: low interest in low energy buildings, inadequate customer awareness and inadequate knowledge of constructions.

Conclusions

To increase the number of very low energy residential buildings the following is needed:

- ***LCC-analysis***
- ***Continued education*** of designers, contractors, workers
- ***Reliable information*** on good examples
- ***Trustworthy*** performance
- A ***standardized*** way to measure and compare performance.
- More ***good examples***
- A ***national strategy*** towards making very low energy buildings
- ***Legislation/standards/specification*** must be more ***harmonized within Europe***