

CLIMA 2016 – WS28 Cost-effective deep renovation of buildings
24.05.2016



DEEP ENERGY RENOVATION AND ONE-STOP-SHOP SOLUTIONS
FOR PRIVATE HOME OWNERS

Tine Steen Larsen, associate professor, Aalborg University

www.go-refurb.eu



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **No 649865**

The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.

About the project

- Inspire homeowners to carry out deep energy renovations
- Achieve 50-80% reduction in energy use
- Easy, economical and efficient
- Bridging demand and supply side
- One-Stop-Shop



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



About the project

- Focus on 'deep renovation'
- Push the market of energy renovation in existing buildings even further
- The project builds on existing knowledge and best practice
- Is funded with 2 mio. € by Horizon2020



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



13 partners in 6 EU countries

- Local authorities
- Local companies
- Knowledge institutions

From Belgium, the Netherlands, Germany, Slovenia, Estonia, Denmark



AALBORG UNIVERSITET



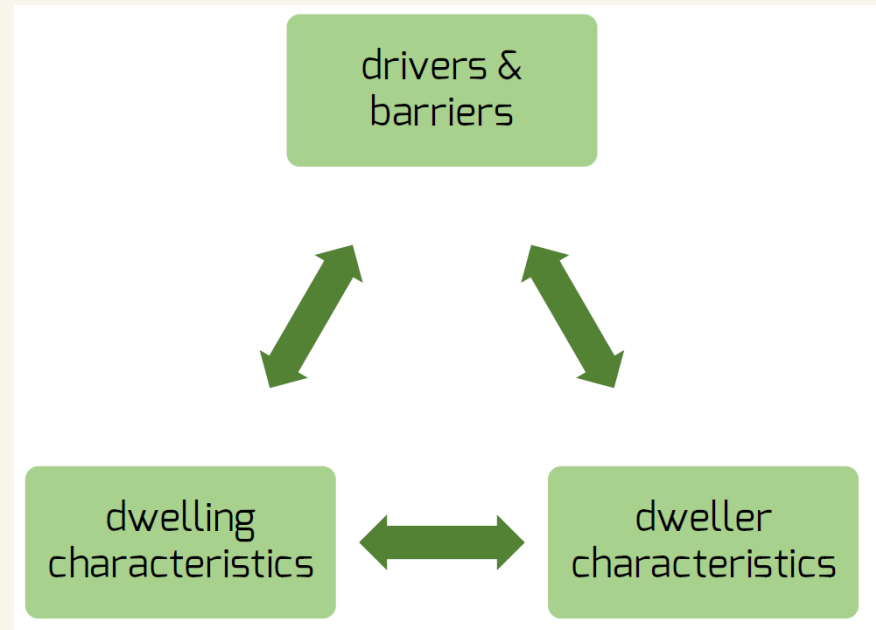
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



Drivers and barriers for deep renovation

Depend on

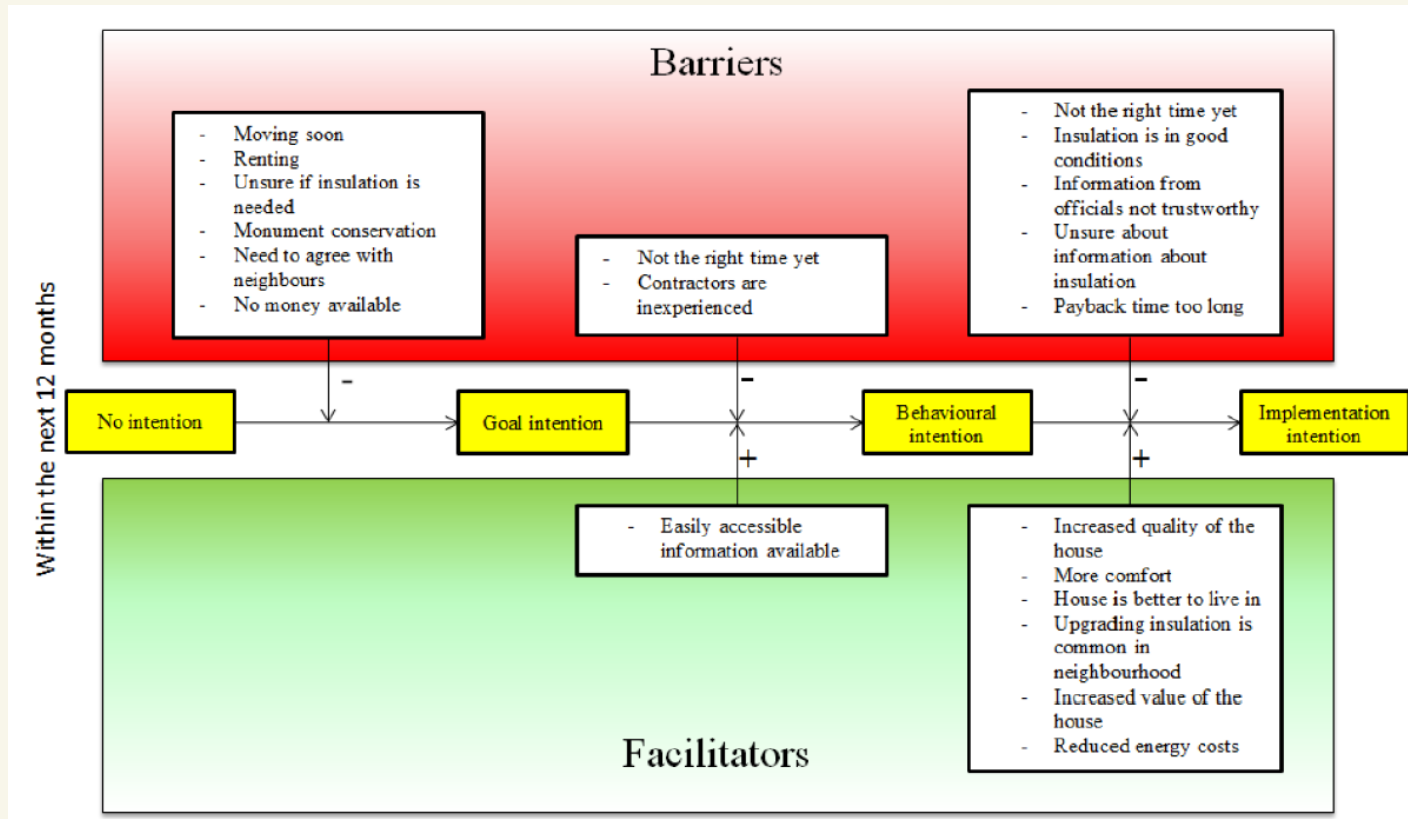
- The dweller (income, age, family pattern, young family, empty nesters, convinced energy savers, just moved in)
- The dwelling (type, condition, energy bill)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



Drivers & barriers in different stages of the decision making process



Source: Christian A. Klöckner, NTNU, Norway, 2013



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



Technical drivers and barriers

Technical drivers and barriers are linked with the dwelling characteristics and the challenge to renovate to NZEB.

DRIVERS:

Urgency for renovation & lock-ins

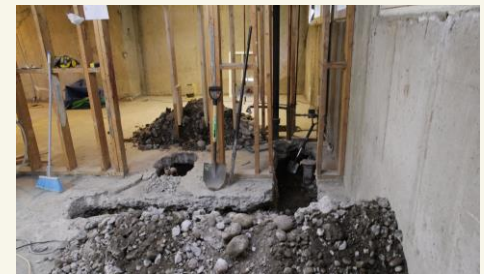
Availability of tailor-made stepwise approach for NZEB-renovation

Inconveniences and defects in the house

BARRIERS:

Inconvenience linked to the renovation

Technical possibilities



Financial drivers and barriers

Financial drivers and barriers are linked with the financial possibilities of the dweller and the cost of the NZEB-renovation.

DRIVERS:

Subsidies, financial incentives, etc.

Energy bill

Return on investment

BARRIERS:

Feel secure about investment

Cost for NZEB-renovation

BOTH:

Availability of financial possibilities to invest

Willingness to invest in energy efficiency / competing products



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



Social and behavioural drivers and barriers

Social and behavioral drivers and barriers are linked with the decision making process of the dweller.

DRIVERS:

Renovation needs & intentions: increase comfort level, cosiness, personalization, taste, adjust architectural concept...

Advice, unburdening & guidance

Awareness of energy saving potential

Accurate, reliable & tailor-made information

General knowledge level

Neighbourhood action, group action

BARRIERS:

Decision making, self-reliance & empowerment

BOTH:

Momentums for renovation (why now?)

Availability of time to manage renovation project



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



DEMAND ↔ SUPPLY

- Bridging demand and supply side
- Mapping of the supply side
- Mapping all the different technical solutions that fit consumer needs



One-stop-shop concept



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865



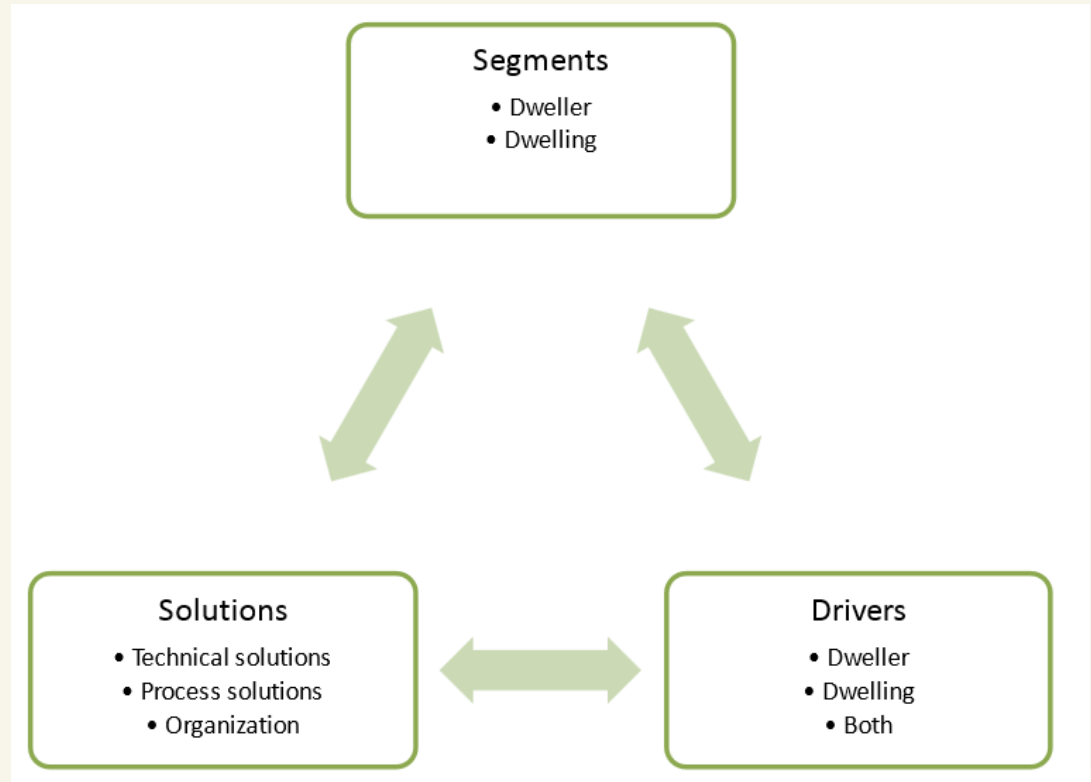
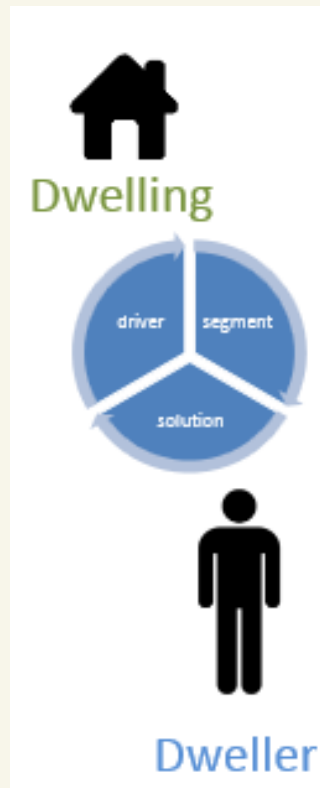
One-stop-shop concept

Holistic approach to the renovation process by combining **technology combinations** and **improved communication** between the house-owner and the supplier

- Local partnerships
- Local energy solutions
- Closeness to consumers in the participating countries
- Simplifies the possibilities and gives an overview
- Prioritizes the investment
- Provides a compelling offer



Tailormade solutions



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865





”
Best case examples from 6 EU countries
will inspire home owners to take action



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 649865





<http://go-refurb.eu/>

deep home energy renovation exceeding borders and regions

www.go-refurb.eu



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **No 649865**

The sole responsibility for the content of this presentation lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.