Mobilization for energy renovation
Innovative tools for the uptake of deep renovation of the existing
building stock based on behavioural insights

Victoria Taranu, promoter dr. ir. Griet Verbeeck
Faculty of Architecture and Arts, Hasselt University

PROBLEM STATEMENT

5 out of 10 houses in Flanders were built before 19701
- In the context of climate change it is a priority to reduce the energy demand and shift to renewable sources of energy
- Flanders has a big potential of home renovation due to a high rate of home ownership (70%). The vast majority of Flemish acknowledge the importance of energy efficiency, 65.5% of dwellers considers it very important and 30.0% rather important1.
- The measures taken for the uptake of deep energy renovation have lower impact than expected due to various reasons, one being that these policies treat the dwellers as a rational decision maker.
- The Elaboration Likelihood Model by Cacioppo stipulates two routes through which messages are processed: central processing (effortful deliberation) and peripheral (less conscious).
- The gap between intention and action has to be filled not only with information and sensitization campaigns that influence rational decision making.
- In Flanders, 1 out of 10 houses was renovated in the last 10 years2.

OBJECTIVES

- There is an increase in research and public policies based on methodologies from behavioural economy that focus on peripheral, less conscious decision making.
- The research will verify the efficiency or inefficiency of nudging and other methods regarding irrational decision making in boosting deep energy renovation.
- Nudging is not an alternative to the traditional behavioural change models, but rather a catalyst. Subsidies and incentives aim to eliminate the objective external factors, the campaigns aim to fill in the informational and attitudinal gap. These are tools to influence the cognitive decision making, whilst nudging will contribute to the parallel peripheral, less conscious message processing.
- Firstly will be analyzed the technological and socio-economic context of Flanders. With this background, we will translate behavioural insights into effective tools and methods for public and NGO campaigns. In order to be efficient, these tools must be elaborated with a solid analysis of specific technological, social and normative factors that impede deep energy renovation nowadays.

METHODOLOGY

- Analysis of the status quo, the lock-in solutions of the Belgian renovation market
- Demand side Management approach: identifications out of all sustainable solutions the ones to be promoted as an alternative or as an upgrade of the existing common practices
- Define in collaboration with Living Labs different levels of renovation and certain packages, rather than single technological solutions to be promoted
- Analysis of the European, national, regional and local normative framework
- Categorize the existing campaigns on energy renovation according to Behavioural Change Models
- Determine the weaknesses and the strengths of existing policies under the optics of behavioral insights

TECHNOLOGICAL APPROACH

Traditional behavioural change

Innovative behavioural change

TESTING THE TOOLS

Once elaborated, the traditional and innovative tools will be tested in the following Flemish Living Labs:
- Werfged
- Ecoren
- Mutatie+

In these real life case experiments with dwellers nudges will be compared to control groups in order to evaluate their impact. Another aspect to be verified is whether the response to nudges is influenced by socio-economic factors such as gender, income, age, ethnicity, etc. The statistical results will prove the efficiency or inefficiency of the elaborated tools and methods. It will allow us to outline behavioral trends and efficient methods of implementation of deep energy renovation.

REFERENCES

2 TABULA. (2012).