



C·REAL

Creation of a
holistic methodology for
Renovation Advice with focus on
Lending solutions differentiated
by Target Group



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Table of content

1	Desk research	5
1.1	Objectives	5
1.2	Approach	5
1.3	The customer journey as a guide	5
2	Better understanding the challenge	5
2.1	The European housing market in numbers	5
2.2	The housing stock in Flanders and Limburg	6
2.2.1	The current situation in numbers	6
2.2.2	How the diversity of the Flemish housing stock generates an extra challenge	7
2.2.3	The link between income and renovation need	7
2.2.4	Measures of the Flemish government to increase the renovation rate	9
2.3	Lenders as key actors in the customer journey of a home owner (to be)	9
2.3.1	The financial institutions' involvement	9
2.3.2	The Energy Efficient Mortgages Initiative	10
2.3.3	Numbers on Belgian loans	10
2.3.4	Lenders as natural partners of home owners	11
3	Current practices and projects	12
3.1	Renovation advice and guidance practices	12
3.1.1	De huisdokter (Dubolimburg)	12
3.1.2	Renovation advice 'medium' on apartments (Dubolimburg)	12
3.1.3	Renovation guidance (Dubolimburg)	13
3.2	Tools	14
3.2.1	Renovation matrix (WERFGOED)	14
3.2.2	EPC+ (FLEMISH GOVERNMENT)	14
3.2.3	Scorecard woningkenmerken (VMSW)	15
3.2.4	Immopass - Technical audit of building in co-ownership	15
3.2.5	AXII PLANNER (PIXII)	16
3.2.6	RENOFASE (WTCB)	16
3.2.7	LCC ECOTOOP	17
3.2.8	TOTEM (OVAM)	17
3.2.9	COACHPRO (PARIS CLIMATE AGENCY)	17
3.2.10	SETLE SOFTWARE	18
3.2.11	QUICKSCAN RHEDCOOP	18

3.2.12	QUICKSCAN WALLORENO	19
3.2.13	BENOVATIETEST	19
3.2.14	TEST UW EPC – ENERGIESPAREN.BE.....	19
3.3	Research projects	20
3.3.1	Ace retrofitting	20
3.3.2	Innovate	21
3.3.3	Reimarkt	21
3.3.4	Full renovation apartment – FLUX 50	22
3.3.5	Leaf.....	23
3.3.6	BE REEL!.....	24
3.3.7	KREATie	24
3.3.8	Superhomes	25
3.4	Testimonials of peers.....	25
3.4.1	Barbara De Kezel - Ace Retrofitting – City of Antwerp	25
3.4.2	Bas Van de Kreeke- Mutatie+.....	25
3.4.3	Eddy Deruwe - BeReel.....	26
3.4.4	Anke Hermans - Energiecentrale City of Gent	26
3.4.5	Nanette Huysmans – Campaign to stimulate refurbishment of old apartments City of Genk and City of Hasselt	26
3.5	Projects and publications focused on financing renovation	30
3.5.1	Infinite Solutions Guidebook.....	30
3.5.2	FALCO	30
3.5.3	GNE Finance	31
3.6	Market practices in the financial sector	31
3.6.1	Financing the acquisition of a home	31
3.6.2	Financing the refurbishment of a house	31
3.6.3	Governmental Initiatives to finance refurbishment	32
3.6.4	Stimulating financing measures for mortgage clients to refurbish	33
3.6.5	Financial offering to ACO's.....	34
3.6.6	Mixed Financing	36
4	Engaging building professionals	36
4.1	Mapping thresholds vs opportunities	36
4.1.1	The construction sector	37
4.1.2	Home owners about renovation guidance	37

4.2	Flemish examples of cooperation with the construction sector.....	38
4.2.1	Werfgoed (Dubolimburg).....	38
4.2.2	RenoseeC - (Sint Niklaas renoveert – Liesbeth Boets).....	38
4.2.3	RenBEN - Leiedal.....	39
4.2.4	Group purchasing.....	40
5	Target group of home buyers and existing mortgage clients.....	40
5.1	Lessons learned.....	40
5.2	Most suitable tools or methodologies.....	41
5.2.1	Advice.....	41
5.2.2	Guiding home owners to the most suitable partner for implementation of the measures.....	41
6	Target group of associations of co-owners (ACO's).....	42
6.1	Lessons learned.....	42
6.2	Most suitable existing tools or methodologies (to use/to start from) for renovation advice and guidance.....	42
6.2.1	Renovation advice.....	42
6.2.2	Guidance for ACO's (Dubolimburg).....	42

1 Desk research

1.1 Objectives

In this desk research we are aiming to bring together useful insights from former research projects, current practices, the local framework conditions; in short all relevant background information on renovation in Flanders needed to start up C-REAL in a well-informed way.

It goes without saying that this reference work can also be very useful to inspire peers at the start of similar projects on home renovation.

1.2 Approach

We start with explaining the challenge by the description of the housing market in Flanders, of the goals and the role of lenders as key actors.

Furthermore we give an overview of current renovation practices, tools and research on renovation. This overview is completed by interviews of peers, in which they point out their successes, difficulties and important lessons.

For each topic we provide a short summary, an evaluation and a link to more information.

As one of the spearheads of C-REAL is to provide every renovation advice with an appropriate financing solution, it goes without saying that we have listed relevant research projects on financing as well as the existing financing solutions in Flanders while pointing out their success factors and thresholds.

Well aware of the fact that the execution of a renovation by the most suitable building partner is essential, we identify the current experiences on collaborations of renovation advisers with the building sector.

Finally we summarize per target group which learned lessons must be taken into account and which existing tools we can start with as well as the necessary additions we have to provide.

1.3 The customer journey as a guide

The customer journey is key.

By mapping the customer journey for every target group, we can easily detect the barriers preventing people from undertaking renovation works on their homes; which is the first step in finding a solution for those barriers.

In this document we will review the different actors and actions involved with the aim of providing background and identifying what already existing insights and solutions we can learn from. In this way, we will start the roll-out of C-REAL in a well-informed way. It goes without saying that during the project, we will continually refine the initially drawn customer journey as our insights grow, in order to arrive at a customer journey that is as complete and accurate as possible.

2 Better understanding the challenge

2.1 The European housing market in numbers

General numbers

The overall size of the housing stock, along with its quality, can be generally seen as an indicator of quality of life and level of economic development of a country. The highest stock per 1,000 citizens could be found in Portugal and Italy with slightly over 581 dwellings. That is almost twice as big as housing stock in Israel, where there were only 293 dwellings per 1,000 citizens. Israel reported by almost 70 apartments less than in the United Kingdom, which had the second lowest number of dwellings per 1,000 citizens with 361 apartments.

Another three countries, Slovakia, Poland and Luxembourg, had less than 400 dwellings per 1,000 citizens. However, Poland and Luxembourg were also among countries with high development intensity, hence their housing stock is expected to grow. Portugal, Bulgaria and Spain were countries with relatively large housing stock per 1,000 citizens and the development intensity in terms of both initiated and completed dwellings. The largest housing stock could be found in Germany, 42.54 mil. dwellings, followed by France (35.67 mil.) and Italy (35.09 mil.). Spain (25.78 mil. dwellings), the United Kingdom (24.35 mil.) and Poland (14.82 mil.) were also countries with more than 10 mil. dwellings.

Contrary, the smallest stock was reported in Luxembourg with 244,000 apartments. Less than three million dwellings could be also found in Slovakia (2.06 mil.), Ireland (2.06 mil.), Norway (2.58 mil.), Denmark (2.68) and Israel (2.68 mil.).¹

Energy Use

Buildings account for 40% of EU energy use, and it is estimated that the EU needs to invest around €100 billion annually in building renovations to meet its energy and climate goals. The EU has increased the amount of public funds available for energy efficiency, but the European Commission has indicated that there is a need to boost private energy investments.

In Europe, Denmark and the UK were among the first countries to perform energy efficiency assessments of buildings in the 1970s and 1980s, respectively. In the early and mid-1990s, various European countries introduced mandatory energy efficiency requirements which were accompanied by the development and implementation of appropriate rating schemes. To name a few, in the UK, BREEAM and NHER were both introduced in 1990. In Ireland, ERBM was created in 1992 while in the Netherlands the energy performance of buildings was measured since the mid-90s. In 2002, the EPC was introduced as a requirement for European Union Member States by the Energy Performance of Buildings Directive. As a result, all Member States and some other European countries have established national building rating policies during the past two decades. Despite these initiatives, however, the usage of European energy rating information for research into the financial performance of property is rather rare.²

2.2 The housing stock in Flanders and Limburg

2.2.1 The current situation in numbers

In Flanders, there are 3,006,601 residential units, of which 820,989 are apartments. Homes have an average EPC of 481 and that of apartments is 290. The average construction year of these buildings is 1964, and 50% of Flemings live in homes dating back to before 1960. CO₂ emissions for residential buildings must fall by 42% by 2030 (6 M tonnes) and energy consumption must fall by 24% to achieve the values set in the energy plan. (source: SERV report: Climate and Energy Policy 2019-

¹ Deloitte property index 2020

² Creating an energy efficient mortgage for Europe, House of Finance, 2017

2024)The Province of Limburg has 291,482 single-family homes and 80,371 apartments. 63% of these buildings were built before 1981.(source: Limburg.incijfers.be)

In the larger cities in Limburg, there are many apartment buildings that are over 30 years old and that are in need of energy-saving measures. According to the “Limburg in terms of figures” database, Genk has approximately 5,600 apartments that date back to before 1981 and Hasselt has around 10,000.

The current renovation speed is estimated at 25,000 homes a year in Flanders. If 97% of the homes are to be renovated by 2050, the number must be increased to approximately 70,000 homes a year. To do so, all actors in the housing market will need to be mobilised as much as possible, within C-REAL the role of the lender will be crucial.

2.2.2 How the diversity of the Flemish housing stock generates an extra challenge

What is more, the Flemish housing stock is characterised by great diversity. On the one hand, there is no uniformity in housing typology, and on the other hand, there are many different owners of individual homes. This means that large-scale roll-out of standard solutions or a collective approach to renovation is very difficult. By cooperating intensively with the construction sector, we aim to provide replicable methods and tools that achieve a balance between customisation and standardisation and in this way boost the degree of renovation.

2.2.3 The link between income and renovation need

- 1 in 10 of house owners in Flanders live in bad or very bad comfort (as for 1 in 6 tenants and 1 and 5 social tenants)
- 4,8 billion euros has to be invested to achieve 2050 targets (average cost of 55k euros per home)
- 16 to 17 billion euros of the above-mentioned investment cannot be torn by owners themselves (they would exceed their common budget)

1. Renovation need relates to income

In a study commissioned by Steunpunt Wonen (Steunpunt Wonen, Katleen Vandebroek (KU Leuven), 2019, Drepels voor renovatie aan de vraagzijde), we find some evidence for the statement that households with lower income often are resident in housings with a significantly higher renovation need. But this same study also points out that just these households are most unlikely to find the financing to overdue this renovation. In the occasion that they can find some financing, often this financing is insufficient to overdue all renovation needs. Amounts of renovation budget are significantly lower in this type of households than for households with larger income and less renovation needs. Though we aren't one hundred percent sure of this effect, it can be important for C-REAL to lighten the great renovation need within this focus group.

Actually, the effect is double: households with lower income do often resident houses with greater needs concerning sustainability and comfort but often are less likely to receive sufficient funding to overcome these needs.

Once again, the importance of finding solutions to access affordable sustainable living for every household is high-lightened here.

2. Type of renovation need

The same study (Steunpunt Wonen, Katleen Vandebroeck (KU Leuven) also did research on the specific renovation need in Flemish households. Researchers conclude that about 62% of the households believe they have sufficient roof or attic floor insulation in their homes. Numbers are decreasing when we talk about wall insulation, only 47% point out to have sufficient wall insulation in their house. Concerning floor insulation numbers are even less encouraging: only 29% state to have sufficient floor insulation. And it gets worse: in only 18% of the residents, included in this research, there is high efficiency glass. Still a great renovation need detected in this study. *Here again, concerning these insulation needs, the same difference between households with higher and lower incomes is detected: the lower the income the less insulation.*

3. Motives and thresholds

Katleen Vandebroeck (KU Leuven) also did some research about motives and thresholds to or not to refurbish in the next few years. The most important reason to refurbish are listed in her study: Main reason detected is to lower energy costs and lower waste of energy (77%). Second most important reason seems to be enjoying more comfort (68%) and third is to save environment (58%). Last in this row of reasons: to be able to stay longer in their homes after retirement (39%).

Speaking about thresholds, Katleen Vandebroeck states that many households state that it isn't necessary to refurbish. This can be a misconception of the state of the house. Other reasons are no time or no priority. Furthermore, some households declare that they don't have the financial space to invest in this kind of renovation. As a steady third reason there is the technical complexity of some renovation works.

Furthermore, age is playing an important role in whether or not to refurbish energetically: the younger the residents, the lower EPC-values seem to be. Older residents do not seem to be willing to invest in their residence anymore.

In summary: Most important thresholds to take into account are technical, financial, organisational or practical thresholds but also a lack of motivation/incentive or a lack of information concerning the practical planning and technical solutions.

4. Knowledge of people about grants, special loans and other incentives

Katleen Vandebroeck did some research on these factors and she concludes that the lower the income of the households the lower is the knowledge about all incentives available.

Katleen Vandebroeck states that renovation needs are the highest within the group of most vulnerable households, but renovation activity is the lowest within the same group. She found yet again more evidence to suspect the great importance of the financial threshold.

As a general conclusion, Katleen Vandebroeck provides following final recommendations. *The existing financial instruments must be adapted.* For example, we can try to find a solution for the

pre-financing problems, or we can try to increase the financial incentives for owners in this category of households.

Furthermore, we should address the problem of the lack of information. We must search for *different channels to reach everyone in this target group*. Unburden these households to the maximum. Lower the practical and organisational threshold to a minimum.

2.2.4 Measures of the Flemish government to increase the renovation rate

Buildings in Flanders are the second in row, responsible for greenhouse gas emissions (28%). So great efforts must be made on the buildings to achieve the 2050 target (low-carbon society). From the EPC-database, we learn that, at this moment, only about 3,5% of the existing residential pool meets the 2050 target.

To meet the target the Flemish Government will focus on supporting owners at key moments by reducing costs and by providing effective financial and tax support. But also, the development of ‘de Woningpas’ will play a key role in convincing owners and buyers to invest in some energetic retrofits.

Furthermore, the Flemish Government has optimised the EPC; it now offers a concrete step-by-step plan including a cost price indication. However, by comparing many EPC-reports, we notice that the price indication is not very accurate and still leaves much to the imagination.

Since 2010, Flemish Government provides an interest-free loan for some specific target groups to do energetic retrofits. This seems to be a very successful initiative: in ten years already 21 000 of these loans are awarded for a total amount of 175 million euros. This initiative is being expanded: From January 2021, recent owners of residential buildings that score low on energy efficiency can rely on interest-free loans up to 60 000 euros, spread over a maximum of 20 years.

2.3 Lenders as key actors in the customer journey of a home owner (to be)

2.3.1 The financial institutions’ involvement

Reaction to sustainability issues has not just been the preserve of international governments and organisations. Reaction is currently happening within banks. It has been stated that, because of pressure from customers and investors, as well as regulators, banks have already begun to recognise that there are sustainability risks and they have begun supporting the transition to a more sustainable economy through the integration of sustainability factors into their risk management models and governance frameworks.³

Sustainable finance has become part of the lexicon of both financial institutions and their supervisors in recent times. It has been described as ‘the provision of finance to investments taking into account environmental, social and governance considerations’. To that end environmental

³ Alexander S.K. and Fisher P., 2018, Banking regulation and sustainability. Available at SSRN: <https://ssrn.com/abstract=3299351> or <http://dx.doi.org/10.2139/ssrn.3299351>, p. 2

considerations have been referred to as climate change mitigation and adaptation, as well as the environment more broadly and the related risks (e.g., natural disasters).⁴

2.3.2 The Energy Efficient Mortgages Initiative

Mortgage lenders are particularly vulnerable to property market risks and are impacted by the quality of the housing stock. Therefore, financial institutions can play a game changing role in bringing Energy Efficiency to the EU housing stock. E.g., The Energy Efficient Mortgages (EEM) Initiative is a pan-European private bank financing mechanism that aims to stimulate and finance investment in energy efficient buildings, energy saving renovations in order to secure a greener and more sustainable future for all. First, investing in energy efficiency for housing stock creates a lower risk profile for customers. This is the fact because of the impact of energy costs to income. Furthermore, there is an impact on the value of the housing stock ensuring wealth conservation and loss mitigation against energy transition risks. This way financial institutions can identify some consumer key drivers to accelerate investments in EU housing stock (Energy Efficient Mortgages). The EEMI wants to create a “energy efficient mortgage” label that lenders can use if they finance the renovation of dwellings with respect of the new EU taxonomy for sustainable finance. Refinancing these mortgages via labelled green bonds could ultimately result in a lower tariff for the clients and stimulate home-owners financially to go the extra mile when renovating their homes up to high standards of energy efficiency.

2.3.3 Numbers on Belgian loans

The amount of mortgage lending per capita of the adult population is increasing. In 2018, at EUR 27,123, it is well above the European average of the EU-19 (EUR 17,290) and the EU-28 (EUR 17,404). Even when looking at mortgage credit as a percentage of GDP (54.70% in 2018), it can be concluded that Belgium is above the European average of the EU-19 (41.7%). Nevertheless, it can be said that responsible credit is still provided in Belgium, which is evident, among other things, from the fact that the default rate of mortgage credit has declined since the financial-economic crisis of 2008. In November 2020 no more than 0.80% of Belgian mortgages were overdue.

Expressed in euros, the mortgage loan portfolio (estimated at 246 billion at the end of 2018) is nine times the size of the consumer loan portfolio (25.9 billion). It is also noticeable that, in terms of amount, the growth of mortgage credit (+ 80% over 10 years) is 2.5 times higher than that of consumer credit (+ 32.5% over 10 years). The reason for this can be sought, among other things, in the sharply declining interest rates for mortgage loans since more than ten years (see point 3.4.4). Inflation over the same period was about 19%.

More specifically with regard to loans for the purchase of a home, the average amount up to 2005 more or less followed the property prices (see chart below), but since then the average loan amount

⁴ Adrienne Coleton, Maria Font Brucart, Pilar Gutierrez, Fabien Le Tennier & Christian Moor - EBA STAFF PAPER SERIES, N. 6 – JANUARY 2020 SUSTAINABLE FINANCE – Market practices https://eba.europa.eu/sites/default/documents/files/document_library/Sustainable%20finance%20Market%20practices.pdf

has increased significantly less quickly or even stabilized, while house prices continued to rise. After some years of stabilization at around EUR 125,000, the average amount of loans for the purchase of a home has started to increase again from 2010, gradually increasing to around EUR 163,000 in the third quarter of 2019.

The average amount of loans for the construction of a house has also started to increase again since the second quarter of 2016 and is now around EUR 175,000. The average amount for loans for the purchase of a house in combination with a renovation, on the other hand, stabilizes at around 195,000 EUR.

Renovation credits evolved strongly in 2015, partly due to changing legislation in the field of VAT for renovations, which increased from 6% to 21% for homes aged 5 to 10 years from 1 January 2016. This positive trend was also continued in 2016. From 2017 to the first nine months of 2019, a fairly stable level was reached, without rocketing highs. However, the abolition of the housing bonus in Flanders from 01.01.2020 may also cause an upsurge in the last quarter of 2019 in terms of renovation credits.

The outstanding amount of residential mortgage lending reached about EUR 246 bn at the end of 2018 (against EUR 233 bn at the end of 2017).¹ In 2018, the number of new mortgage credit contracts was about 253,000 for a total amount of almost EUR 34 bn (refinancing transactions not included). The number of mortgage credits went up by more than 4%, whereas their amount went up by almost 9% to reach again an all-time high. The number of loans for the purpose of purchasing went up by 7%. The number of construction loans also went up by more than 3%. The number of loans granted for renovation (-4.4%), however, decreased, but less substantially than in 2017 (-21%).

According to Eurostat figures, the home ownership rate in Belgium reached in the beginning of 2018 72.70%, thereby ending the decreasing trend since 2013 and reaching again the level of 2010. The most common mortgage product is a loan with a term of 20 – 25 years, a fixed interest rate throughout the full loan term and a fixed amount of monthly instalments. The average maturity of a mortgage loan at origination is estimated at 22.5 years.

2.3.4 Lenders as natural partners of home owners

In Belgium there are 4.8 million households and more than 3.2 million mortgages.

Approximately 2.5% (www.statistiekvlaanderen.be/verkochte-woningen) of Flemish homes are sold each year. 93% of starters (first purchase) apply for a mortgage.

So it is fair to say that mortgage lenders have a direct relation to a vast majority of home-owners. It is very rare for people to buy a home without taking out a mortgage.

This makes mortgage lenders key actors in the customer journey of a home owner (to be), especially if there is a need of renovation.

The lender has to contact the purchasers on various occasions and has a great deal of information at its disposal. In Belgium, more than 3 million people (32.9%) have at least one mortgage and there is therefore a client relationship with a lender that is related to the home.

Although it would also benefit himself, the lender typically makes little use of this privileged position to encourage the borrower to make the home energy efficient. Lower energy costs for borrowers

result in more repayment capacity for the loan and therefore -at least theoretically -fewer payment problems and less defaulting. A home that is valued higher is beneficial for the lender in all respects. After all, the home functions as a guarantee (for the mortgage). Moreover, the quality of the lender's credit portfolio will increase if it relates to high-quality homes/guarantees. The average LTV (Loan-to-value) of home loans is falling, which definitely positively affects the lender's refinancing costs.

Conclusion: Actively involving mortgage lenders to induce clients to renovate their home can significantly accelerate the degree of renovation. Therefore this principle is one of C-REAL's focal points.

3 Current practices and projects

Below an overview of the most relevant inspirational current practices and projects as captured at the time of the start of C-REAL, September 2021. This is a non-exhaustive list that can never be complete as similar projects will emerge during and after the lifetime of C-REAL.

Listed are renovation advice and guidance formula's, tools, financial services and market practices in the financial sector.

3.1 Renovation advice and guidance practices

3.1.1 De huisdokter (Dubolimburg)

BRIEF INTRODUCTION

The 'huisdokter' is a popular advice formula that is offered since 2016 to all the inhabitants of the province of Limburg by Dubolimburg in cooperation with the municipalities.

A renovation advisor visits the site, providing a global scan of the building containing the following topics:

- Description of the current status of building envelope and technical installations
- Brief advisory report for complete building with a view to long-term energy objectives
- Conclusion with priority list

SUCCESSION FACTORS

- All parts of the building envelope and technical installations are mapped and a renovation proposal is drawn up
- Takes long-term energy targets into account
- Indicates possible lock ins

THRESHOLDS

- Report contains few images or drawings for clarification
- No cost estimate
- Written text instead of visual representation

MORE INFO

[De Huisdokter | DUBOLIMBURG](#)

3.1.2 Renovation advice 'medium' on apartments (Dubolimburg)

BRIEF INTRODUCTION

Dubolimburg provides renovation advice tailored to the specific needs of ACO's.

This advice contains the following aspects: a global scan of the building including an overview of the current situation in a checklist based on a site visit, a query of the owners, an extensive advisory report in function of long-term energy objectives with analysis of the building envelope and technical installations, including cost estimate of energy renovation measures and basic details and a Conclusion with priority list

Dubolimburg will also present the advice at the general meeting of co-owners.

SUCCESSION FACTORS

- All parts of the building envelope and techniques related to energy renovation are mapped and a renovation proposal is drawn up
- comprehensive advice for all energetic renovation measures
- cost estimate of various partial renovations
- ACO can easily request quotes based on a report
- problems with regard to safety (concrete rot, asbestos), comfort (acoustics, overheating, moisture ...) are not in detail discussed.
- report contains technical details that clarify measures to be implemented

THRESHOLDS

- Conclusion and priorities presented in text (not visual)
- May be too technical and comprehensive for some owners
- No guidance on the execution of the renovation works after delivery of advice

MORE INFO

[Appartementen | DUBOLIMBURG](#)

3.1.3 Renovation guidance (Dubolimburg)

BRIEF INTRODUCTION

Dubolimburg, in cooperation with a number of municipalities in Limburg, also provides guidance on the implementation of energy-saving measures.

This guidance follows the 'in-house doctor's advice' (see point 3.1.1).

The energy advisor provides a concrete technical solution and draws up a descriptive measurement sheet. Depending on the complexity of the measure to be implemented, Dubolimburg will use one of the following methods to guide the renovator to a suitable contractor:

- Simple measures (e.g. cavity wall insulation or attic floor insulation): layout 'personal proposal'.

Dubolimburg selected one contractor for these simple measures and agreed on prices for the most common items.

Dubolimburg is drawing up a personal proposal containing the following elements: description of the works, estimate of the works, energy savings, financing possibilities, premiums.

If the renovator wishes to respond, Dubolimburg will arrange for the contractor to go on site to confirm the offer, so that the works can be definitively ordered and carried out.

SUCCESSION FACTORS

- Rapid turnaround time
 - Separate tenders should not be requested
 - Renovator quickly has a good idea of the effective cost price
- The contractor is taken care of by the renovation advisor.
- Unit prices can be reduced as a result.

- Useful information bundled in one document

THRESHOLDS

- Not suitable for complex measures
- Complex measures (e.g. roof or wall insulation): pre-composed contractors collective Dubolimborg produces a descriptive measuring state with which the renovator can request quotations from contractors from a pre-composed contractors' collective.

SUCCESS FACTORS

- The renovator is free to choose the contractor
- More tailor-made work can be done

THRESHOLDS

- Longer turnaround time
- Reduced control of unit prices

3.2 Tools

3.2.1 Renovation matrix (WERFGOED)

BRIEF INTRODUCTION

The renovation matrix was developed during the Flanders funded project Werfgoed. It provides a global overview of the most common solutions for every possible energy saving measure.

They are displayed on a large sheet of paper, and to be used in the home that needs to be renovated, to make things more demonstrative.

For each measure that is applicable, a solution is chosen in consultation with the owner (possibly a second variant or combination of these).

After the visit and the on-site meeting, the data are poured into a calculation tool from which the renovation plan can be generated. In addition to a calculated energy level (before and after), energy consumption and comfort indicator, investment costs are also calculated per measure.

SUCCESS FACTORS

- The renovation plan is drawn up in consultation with the owner. Co-creation gets more involvement of the owner and a greater chance of success in execution
- Takes long-term energy targets into account
- Indicates possible lock ins
- Insight in the relation between choices
- Insight into energy score, energy cost savings potential
- Brief overview of the existing situation and choices made

THRESHOLDS

- Not suitable for renovation candidates with little understanding of renovation.
- Cost estimate is not detailed
- No comprehensive technical advice
- Developed for homes
- Tool may not be free to use

3.2.2 EPC+ (FLEMISH GOVERNMENT)

BRIEF INTRODUCTION

The EPC+ is a Tool developed by the Flemish government to inform buyers and tenants about the energy efficiency of a home / building. The layout of the EPC is mandatory for sale and rental. The EPC must be drawn up by a type A energy expert. In addition to the energy score, the EPC + also

includes the energy label. General recommendations are made to make the home more energy efficient and a cost indication is displayed.

SUCCESSION FACTORS

- Visually clear due to color codes and energy label
- Clear indication of building elements to be improved

THRESHOLDS

- Advice is general and not tailored to the project
- Cost estimation does not take into account regional price differences and specific choices. Cost estimate only for single-family homes

MORE INFO

[Energieprestatiecertificaten - Energiesparen](#)

3.2.3 Scorecard woningkenmerken (VMSW)

BRIEF INTRODUCTION

The tool, designed by VMSW – Flemish social housing company, consists of a checklist in Excel to map an existing building, it can be seen as a simplified condition measurement.

A score from 1 (excellent) to 6 (very poor) is to be set out for each building element.

A detailed explanation is provided for the consultant, so that an objective assessment can be made

In addition to energetic aspects, the state of certain building components is also mapped. Minus points are awarded for deficiencies in stability, safety and indoor climate

After completing the table, the building is assigned a score.

SUCCESSION FACTORS

- Objective way of mapping the existing situation by describing and taking photos of the different scores per sub-criterion
- condition of the building is shown in 1 overview

THRESHOLDS

- No advice has been included for energetic renovation
- Reference work for consultant counts 146 pages (this also contains elements about design that are not relevant to energetic renovation advice)

MORE INFO

[Woningkenmerken / Vlaamse Maatschappij voor Sociaal Wonen \(vmsw.be\)](#)

3.2.4 Immopass - Technical audit of building in co-ownership

BRIEF INTRODUCTION

Assessment of the existing condition of the following parts: environment and access, common parts, private units and technical installations and rooms.

Overview sheet with actions linked to timing and budget.

For each part that has been viewed, a photo is added with a brief explanation

SUCCESSION FACTORS

- By working with detailed photos per subject it is clear to a layman what it is about
- Cost indication of non-energetic measures
- Overview table with colors for short and long term measures

THRESHOLDS

- The focus is not on the energetic quality of the building, but rather on the general condition.

- Cost estimate consists of one amount, so it is not possible to calculate what is included
- Advice is very brief

3.2.5 AXII PLANNER (PIXII)

BRIEF INTRODUCTION

This tool was developed by PIXII, a Flemish energy neutral building knowledge platform, as a communication tool instead of a calculation tool for energy consumption / savings. It contains a checklist that can be used during a site visit and an online interface (excel program) to generate the existing condition of an apartment building + phased renovation plan.

Up to 5 renovation phases or strategies can be calculated in the planner in terms of energy consumption, energy savings, investment costs, CO2 emissions, etc., but the emphasis is mainly on informing, sensitizing and stimulating.

By means of the (max.) 5 phases, one can avoid lock-ins and plan a phased implementation and budgeting with the individual residents / owners.

SUCCESS FACTORS

- Can be used to inform ACO's or owners and encourage them to renovate.
- In addition to technical recommendations, the tool also contains guidelines regarding comfort.
- The tool is very user-friendly and has a visual output (color bars).
- The underlying calculations are based on the PHPP software, which makes them very accurate.
- All components of the building envelope and technical installations related to energetic renovation are mapped and a renovation proposal is drawn up.
- Cost estimate of different renovation phases.

THRESHOLDS

- The tool only includes energetic measures, so nothing in terms of safety, condition, home quality, moisture, ...
- The online interface is not stable (due to connection with external computer).
- Despite the user-friendliness of the program itself, there is little room to do your own interpretation (e.g. add an image)
- The output of the calculations does not always give a realistic estimate of the existing consumption because various parameters that are not always known can play a role here

3.2.6 RENOFASE (WTCB)

BRIEF INTRODUCTION

This tool, developed by The Scientific and Technical Center for the Construction Company, is focused on renovation of homes. It consists of an extensive checklist to map the existing condition of a building. There is a choice between a very extensive screening or a quick scan that assesses the most important parts.

SUCCESS FACTORS

- Maps the existing state in detail and also includes non-energetic elements

THRESHOLDS

- Very extensive checklist which will take a lot of time to go through
- Several criteria are described in text without pictures for clarification
- This instrument does not generate advice

3.2.7 LCC ECOTOOP

BRIEF INTRODUCTION

Calculation tool for multi-year budget. Excel calculation tool in which the syndic or building manager must enter information himself. The intention is to map out the future costs of operating and maintaining the building and translating them into reserves to be created.

SUCCESS FACTORS

- Tool to unburden the building manager
- Provides insight into multi-year budget and savings plan

THRESHOLDS

- No focus on energetic renovation
- Not a simple tool
- No unambiguous screening method leading to measures to be taken

3.2.8 TOTEM (OVAM)

BRIEF INTRODUCTION

Method to evaluate environmental impact of building elements or buildings. Mainly intended to evaluate the choice between different building materials.

SUCCESS FACTORS

- Takes into account the impact of materials used in a building element or in the entire building
- Provides insight into environmental costs beyond the energetic
- Provides future link with Flemish energy performance regulations

THRESHOLDS

- No reference figures have been defined for what is a good or bad score
- No advice on measures
- Building parameters must be entered completely

MORE INFO

[Totem](#)

3.2.9 COACHPRO (PARIS CLIMATE AGENCY)

BRIEF INTRODUCTION

A free, online collaborative tool developed by the Paris Climate Agency (Agence Parisienne du Climat)

In France, this web-based platform has already successfully assisted condominium owners (demand) and building professionals (supply) through an iterative process which cultivates trust relationships and generates direct and indirect jobs.

This tool was improved and adapted to be used in other parts of Europe (as a part of the ACE-Retrofitting project):

[Wonen en Verhuizen \(Maastricht\)](#)

[Reno Copro \(Luik\)](#)

[Frankfurt Sanierungswegweiser](#)

[Antwerp Samen Klimaattactief](#)

[Saving Energy Aberdeen](#)

3.2.10 SETLE SOFTWARE

BRIEF INTRODUCTION

Designed for support in the pre-purchase phase.

Both real estate agents and prospective buyers can easily calculate the costs for the renovation works that apply to the property they might sell or buy

SUCCESS FACTORS

- user-friendly, webbased interface that can be used on mobile devices on site
- realistic cost estimates
- gives a clear insight in the necessary works.

THRESHOLDS

- not all energy saving measures can be taken into account, but the tool is in full development and the designers plan to add the necessary measures to come to a complete renovation strategy.

MORE INFO

<https://www.setle.be/>

3.2.11 QUICKSCAN RHEDCOOP

BRIEF INTRODUCTION

This instrument has a threefold purpose:

- a quick inventory and collection of data;
- map the condition of the building in terms of condition, energy and comfort;
- make this visual for the building owner, local government or other stakeholders.

With the long-term renovation strategy of the Flemish government as a starting point - and the local ambition of the municipality or city in the Covenant of Mayors - this tool can form the basis for a strategic real estate plan (cfr. [SURE2050](#)), a multi-year maintenance plan and / or a renovation process.

The instrument includes a checklist for site visits, input sheets, a quick scan, an action plan and a savings plan.

In addition to "assessments", the quick scan also contains "advice" to achieve the energy and climate objectives without running the risk of technical or economic lock-ins.

This concerns a first indicative scan that can be further detailed afterwards with figures (investment, energy saving, CO2 reduction).

SUCCESS FACTORS

- The tool provides a nice summary of the energetic state of the building and also pays attention to the condition, comfort and environment (CO2).
- Can be completed quickly (if all information is available).
- The output is very visual using color codes.
- Link with Flemish and provincial energy and climate objectives.
- Is designed for public buildings, but can easily be adapted for eg apartment buildings.

THRESHOLDS

- Still under development and very generic, as a consequence exceptions or special features are difficult to integrate.
- Input sheets for eg images / details are not available

3.2.12 QUICKSCAN WALLORENO

BRIEF INTRODUCTION

QuickScan is a tool, developed by the researchers of the Be Reel project, in name of Walloreno. This also is a tool with which people can calculate their energy label themselves, filling in some rather simplistic information about (the state of) their building. Question here is whether this tool shows sufficient insights in what to conduct exactly to obtain a better EPC-label. This tool makes up a refurbishment plan and points out what works to do with priority and what works to do next.

SUCCESS FACTORS

By working with visuals it gets more easy for people to fill in the right information about their homes.

THRESHOLDS

The simplicity of the information needed to end-up in a report can also be a threshold. The more specific the information, the better and the more qualitative the report gets.

MORE INFO

[Mon Quickscan](#)

3.2.13 BENOVIETEST

BRIEF INTRODUCTION

For a very detailed approach we have to look closely at the Benovietest. This is a tool in which people have to generate very detailed information of their homes, such as insulation type and value or efficiency value of the glazing. Not only is asked for detailed information, the tool also explains where to look for this information or how one can know what to fill in. Eventually, a funded report is available to download.

SUCCESS FACTORS

The detailed information makes sure the report is funded and trustworthy.

THRESHOLDS

The demand for detailed information makes the tool very vulnerable: are people willing to spend that amount of time to fill in this questionnaire?

MORE INFO

[Doe de BENOvietest, ontdek hoe goed \(of slecht\) jouw woning scoort. \(mijnbenovatie.be\)](#)

3.2.14 TEST UW EPC – ENERGIESPAREN.BE

BRIEF INTRODUCTION

With this test, developed by the Flemish Government, one can calculate its EPC by means of a few simple questions and compare it with that of other houses in Flanders.

SUCCESS FACTORS

The comparison with other and similar homes in Flanders.

The possibility to fill in future refurbishments to determine future EPC-label.

THRESHOLDS

Not always clear whether it is even possible to reach a specific EPC-label.

MORE INFO

[Test uw EPC | Energiesparen](#)

3.3 Research projects

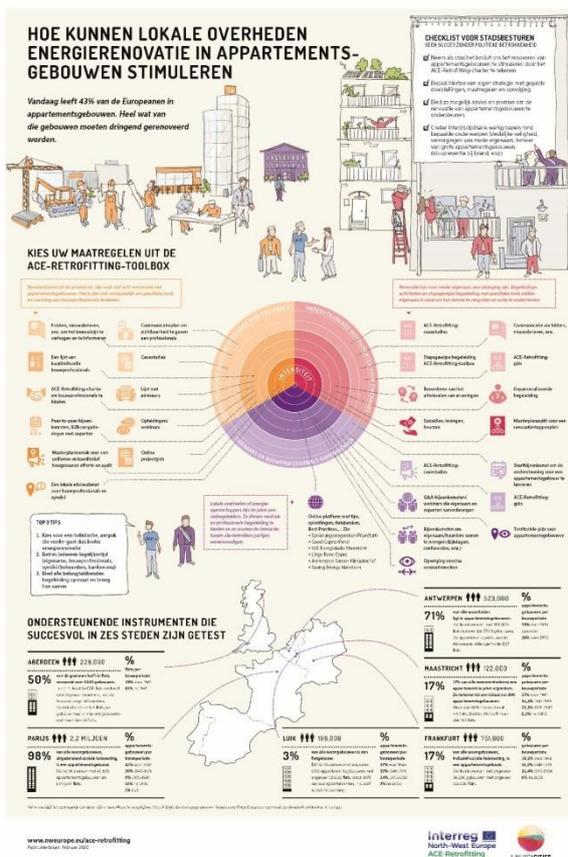
3.3.1 Ace retrofitting

BRIEF INTRODUCTION

Through the ACE Retrofitting project local governments learn to act as facilitators between co-owners and building experts.

Energy Cities, the European city network, along with six local authorities from five different countries design a method and governance framework that will help overcome the legal, human and financial barriers that are currently hindering energy retrofitting of condominiums.

The Step-by-Step tool tool developed in the framework of the ACE-Retrofitting project is an important help in this process.



SUCCESS FACTORS and THRESHOLDS

Annemarie Van Zeijl about 'stakeholder processes during energy retrofitting in condominiums' 'A project run by several co-owners can be fun. At the same time, it is also a challenge to bring different interests together.' Annemarie explains how co-owners can collectively make their building more energy efficient: Accelerating energy retrofits in condominiums: Interview with Annemarie Van Zeijl

An interview with Barbara De Kezel, project manager of the Antwerp pilot, learns that the main bottleneck is the lack of an appropriate financing for ACO's. Furthermore, the excellent definition of the target group is crucial for her. She also argues in favor of abandoning the so-called QuickScans because afterwards, surprises keep coming out. The key, according to Barbara, is the "expert study", but it costs a lot of money. Moreover, it is important to have enough experts who can carry out such a study, especially if larger volumes are to be produced.

Barbara is clear about the current ACO credit: given the cost price of such projects, it must be possible to finance in the longer term than the current short terms. And the role of the syndic is also crucial. Building a revenue model around him or her may help.

MORE INFO

[ACE RETROFITTING WEBSITE](#)

3.3.2 Innovate

BRIEF INTRODUCTION

The main objective of the INNOVATE project is to develop and roll-out integrated energy efficiency service packages in 11 target territories. Ideally they will be offered in one location - a one-stop shop.

According to the researchers there are several types of one-stop-shops and they differ according to their extend of responsibility for the result of the renovation works and for the overall customer journey. They suggest 4 models, with one of them exclusively focussing on ESCO-models. They claim that ESCO models are the only models which guarantee energy savings and pay for them but at the same time they are most expensive and therefore only applicable for big investments. The other 3 models differ by meaning of the fee paid by the customer.

SUCCESS FACTORS and THRESHOLDS are described in a [guidebook](#) on how to launch a one-stop-shop. Furthermore, they published 15 recommendations for future research projects. The statements that is most striking is the following: *“Only an online platform can bring the results you need. If you are ambitious, you can’t handle without online presence.”*

What’s more, the partners think it’s a good idea to create a physical shop (if there is enough money to do so). Physical presence can speed up things a lot. If there isn’t enough money yet it is a possibility to think about alternative resources for the shop. A fee from installers in return for marketing for example. *“Be as close as you can with the homeowners is their head advice. It is all about the local homeowners and local stakeholders. But be aware: local suppliers might not always reach the quality you need...”*

In several studies, and again in Innovate, it has become clear that successful retrofits can only take place when there is sufficient political will and support. In case where these two items aren’t present it is very difficult or even impossible to convince residents to come to action. Nowadays, there still is a big gap between drivers and barriers.

MORE INFO

[INNOVATE](#)

3.3.3 Reimarkt

BRIEF INTRODUCTION

One-stop shop in the Netherlands focusing on service provision. Having energy-saving measures implemented in your home is understood as selling products, the key issue of which is customer satisfaction. Offering service and a fixed supply of measures selected by Reimarkt to make your

home more energy-efficient. Not assuming full renovation, but allowing individual measures to be carried out at their own speed.

In fact, Reimarkt is systemizing the housing stock. They are matching technical properties with suitable products. That way, they create customized sustainable renovations for 85% of the Netherlands. They strongly focus on Living Quality instead of technical solutions for saving energy. Every household at its own pace towards a comfortable and sustainable house is their favorite statement. Through software they manage to connect suppliers, residents and activators. Excellent level of communication and information is key for them in their process. For them it remains necessary to trigger customers offline and to guide them online.

LESSONS LEARNED

People are unburdened

Viable business model that works without subsidies and can be scaled up

Need for physical presence: seeing is believing

MORE INFO

<https://reimarkt.nl/>

3.3.4 Full renovation apartment – FLUX 50

BRIEF INTRODUCTION

Feasibility study (in cooperation with Renotec and Wattson) of the total renovation of energy in apartment buildings as part of a Flux50 project. This innovative and holistic approach to renovation aims to convince stakeholders, new types of ESCO formulas, new flows of income, business modelling and financing solutions, in short, the general unburdening of ACOs and building management bodies.

LESSONS LEARNED

Antoon Soete, co-founder of Wattson:

'You have quite a few barriers that make it very difficult to define a conclusive business case.

High acquisition and start-up costs make that there is no supply of solutions.

In addition, there is actually no demand because financing instruments are not available or only partially available. Also, the knowledge of syndics is limited.

Moreover, there is no real obligation to take action from the government.

The legal minimums for setting up a reserve fund and drawing up a multi-year maintenance plan are very limited.

Waarom verloopt energierenovatie zo moeizaam in appartementen?



You solve the problem through an integrated approach based on roles where every element really counts. It is an and / and story and therefore not a menu card to choose from!

Hoe krijgen we de trein aan het rijden: 5 speerpunten



3.3.5 Leaf

BRIEF INTRODUCTION

Provides solutions for the limitations of co-ownership. Technical toolkit and toolkit for committing residents and letting them make decisions.

LESSONS LEARNED

Engaging owners and residents in a multi-occupancy building can be very challenging and time intensive. This is worsened where no formal management arrangement exists or there are changes

in the property managers or property management staff. It can also be challenging where residents have different priorities – for example, where there is a high or low turnover of owners. Even where successful, decision-making can take a long time.

Securing finance is critical but can be difficult to obtain and can prevent projects proceeding but Government or local subsidies vary across the EU. The perception of acceptable capital costs and payback periods can also vary. Making subsidies available for only a given period (e.g. one year) can encourage owners to take them up. However, funding regimes which are regularly changing and unpredictable hamper project planning and can lead to projects being cancelled.

EPCs provide a starting point for retrofit but alone will not drive them. The EPC system in each country has limitations including inaccuracies of software, limited recommendations and they can be difficult for owners to understand. In the UK, EPCs are not whole-property for blocks of apartments, compounding the problem.

MORE INFO

<https://ec.europa.eu/energy/intelligent/projects/en/projects/leaf>

3.3.6 BE REEL!

BRIEF INTRODUCTION

LIFE project, coordinated by the Flemish Energy Agency (VEA), which aims to bring about the in-depth renovation of nearly 8,500 homes during its project lifetime (2018-2024).

Nine Limburg actors, some of which are municipalities, are involved in this project.

In an interview with Eddy Deruwe, Mister Deruwe pointed out that there is a strong need to educate renovation advisors about the tools available in the market. Furthermore, a digital platform is under construction to raise up success ratios of the coming pilots. Mister Deruwe is also a bit sceptic about the level of guidance customers need when thinking about renovation. Do we have to go all-in on that or do we have to limit information to what customers are able to or are willing to handle? Therefore, in Wallonia, they have developed a new QuickScan. This scan is managed by a roadmap and is very customer friendly. In only a few clicks, one can easily see what investments are needed to make their building more energy efficient.

LESSONS (TO BE) LEARNED

Their pilot projects on “one-stop shops” that offer renovation advice and guidance, and the innovative business models for the private rental market and large apartment buildings with co-owners they set out to develop will be of particular interest to us.

MORE INFO

<https://www.be-reel.be/>

3.3.7 KREAtie

BRIEF INTRODUCTION

K.R.E.A.tie is an initiative to develop a methodology for purchasing and renovation loan to be linked to renovation and energy advice. The method has many goals - more energy-efficient homes, higher living comfort, increase in value of the property, increase renovation rate for specific target group

and higher guarantees on execution and repayment capacity - and will be tested and evaluated. Twenty homes in Limbourg and Igemo region are used as a test case.

LESSONS (TO BE) LEARNED

At this moment, already 11 homes are being tested. The project ends at the end of 2021, so it still is too early to draw general conclusions. But according to the people of this project it already seems clear that offering renovation guidance at the same time as laying the puzzle of financing the project, shows some effects concerning the depth of the renovation. People overthink their options better and renovation budget is more in line with the needs.

Furthermore, this small experiment already made clear that prospective mortgage clients are not always willing to accept the offer of advice, even if it comes free of any cost or obligation. Prospects need to be triggered to participate in the project and the lender will have to be an active stakeholder to make it successful.

MORE INFO

[K.R.E.A.tie - Onesto](#)

3.3.8 Superhomes

SuperHomes provides a 'one stop shop' deep retrofit service for domestic homes in Ireland. The SuperHomes 2030 project aims to dramatically scale this service over 3 years, increasing completed retrofits from 100 houses in 2019 (€6M) to 500 houses in 2023 (€36M).

More info

[Finance and Poor Information Main Barriers to Home Energy Retrofits - Superhomes](#)

3.4 Testimonials of peers

3.4.1 Barbara De Kezel - Ace Retrofitting – City of Antwerp

Some Learning Lessons Barbara wants to share:

- Begin by defining your target group very accurately
- Do not use QuickScans to avoid nasty surprises afterwards
- Expert Study is key but is also very expensive
- ACO credit solutions of today are incomplete: we are in need of longer terms
- Make sure there are enough experts to conduct the studies

3.4.2 Bas Van de Kreeke- Mutatie+

Bas has his own company in construction works: Habenu – Van de Kreeke. Since 2014 he and his team are busy studying possibilities of modular constructions both for new construction as for renovation. Bas states that his most important finding up till now is that the kind of behaviour of the inhabitants of a house is key. Every building reacts different, depending on who is living in it. Let's take that fact into account and change thinking about construction and renovation.

According to Bas, the key to energetic renovation is not in the materials used or the number of measures taken, but in the combination of this latter with the right calculation of the energy consumption of the specific household.

Furthermore Bas says that it is very important to unburden people to a maximum. People don't want to think much about measuring their energy use. The only thing that matters for most people are the euros. What's in it for me, everyone is asking.

To unburden people to a maximum we are in need of maintenance packages as well as energy packages. It's time to think of "living as a service", Bas stipulates.

3.4.3 Eddy Deruwe - BeReel

In contrast to what some other advisors already stated, Eddy Deruwe is questioning the information overload some tools and projects are giving people. Mister Deruwe thinks it is more useful to give people less but more accurate information about the possibilities of their homes. Otherwise there is a chance that we overwhelm people and that chances of effective renovation will decrease drastically. Therefore he is in favor of QuickScans. However, what is even more important for him is that the advisor, who will make use of the tools, do have access to enough training about it. In his project, Be REEL!, Eddy Deruwe therefore intends to prepare additional educational programs.

3.4.4 Anke Hermans - Energiecentrale City of Gent

Anke Hermans tells us a bit more about the daily business of Energiecentrale Gent and more specifically about the CRM-system they use to optimize the contact with the inhabitants of the city.

What is very specific about the possibilities of their CRM-system is the ability to connect inhabitants with contractors. The customer (inhabitant) is able to draw a list of contractors, needed for a specific renovation work. The customer can choose himself with which contractor he is going to cooperate with. According to Anke this tool fits the need to unburden people as much as possible.

Eventually, quotations from the contractors also end up at the Energiecentrale and this way the advisors can help inhabitants very easily to compare the quotations of different contractors. Together with the advisor, the customers can make a funded choice of the priority works and the contractors to do the job.

3.4.5 Nanette Huysmans – Campaign to stimulate refurbishment of old apartments City of Genk and City of Hasselt

Nanette Huysmans is an architect and Dubolimborg's renovation adviser specialized in apartments. She was project manager on the campaigns mentioned above and has a very good view on the success factors and THRESHOLDS that involve the renovation trajectory of the focus group of apartments.

Nanette shared the insights below, following the customer journey of a renovation trajectory of an ACO as Nanette had experienced it.

3.4.5.1 Recruitment

The follow-up of the registration of candidate ACO's and the explanation of the guidance process at the general meeting of the ACO's was done by the municipal services.

After signing a declaration of commitment to participate by the ACO, the renovation adviser took action.

The use of the municipalities as a recruitment channel was a success.

3.4.5.2 Survey

Subsequently, a survey of the residents was organized with the aim of identifying the complaints and the priorities.

The results were found to be unusable due to the low response. Perhaps it is better to have this questionnaire completed at once during the explanation of the renovation trajectory at the general meeting.

3.4.5.3 Collection of info on the building

- Site visit by renovation consultant with a survey of the existing condition of the building
- request of building plans
- energy consumption,
- other relevant information to map the building

It turned out that the Syndics generally did not have the building plans. It is best to have the building plans looked up in their archives via the city services. For this, there is a need for a permanent contact point at the municipality, otherwise this will not go smoothly.

An adequate checklist as a guideline during the site visit is necessary. This could be a more detailed version than the current one, possibly in combination with an app if the checklist becomes too long, cfr tool Rhedcoop.

Perhaps the combination of a global, concise list with more detailed fill-in sheets per topic that needs to be explored in more detail, would be ideal.

3.4.5.4 Advice

This advice involves an extensive explanation of the best practices on refurbishing all building parts and technical installations as well as a measurement statement of the building parts based on the available plans.

The current advisory report was based on an organically grown template. It was too extensive for residents, but very complete and suitable to request prices. Now it is not enough of an awareness-raising document.

Perhaps it is better to work with an intermediate step, namely a preliminary advice in the form of a simple instrument with graphically displayed scores, measures to be taken and a list of priorities. This can be used to test certain preferences - before working out a more elaborate advice - during a separate, informal meeting for the syndic, management board and other interested owners

It deserves attention to investigate the most suitable working method:: immediately work out all possible measures in full and then make a visual summary (to make it more comprehensible for the ACO). Or to provide a more limited general advice first and then work out the measures that are desirable.

We must not lose sight of the importance that all necessary measures are ultimately dealt with. The final advice should not be limited to the measures that are considered desirable by the ACO.

With a thoroughly detailed renovation advice, an adequate long-term plan can be drawn up. That way, it is possible to look 30 years ahead in order to meet future standards. A multi-year budget with financing path can also be linked to it.

3.4.5.5 Presentation of advice to ACO

The advisory report is presented to the general meeting by the renovation consultant.

The general meeting takes place 1X (unless a special general meeting is planned) per year, at a fixed time, so this should be taken into account.

If the technical advice is simply reviewed, it is not manageable for laymen.

The financial plan / costs can be daunting. Costs to be incurred must be presented with the necessary caution. It is better to first look at which measures are planned in the short term and first propose a financing solution for this.

Before presenting the financial plan to the general meeting, it is best to arrange an interim meeting with the syndic in order to include any other planned costs in this initial financing calculation.

3.4.5.6 Guidance in the implementation of the energy-saving measures

For the measures that the ACO wishes to carry out in the near future, a descriptive measurement statement is drawn up, with which the Syndic himself requests quotations.

The offers received are compared by the renovation consultant. The syndic chooses the best offer.

Syndics always need 3 offers per measure. So it is not possible to pre-select one contractor and present an offer based on the unit pricing of this one contractor. In this case it is better to offer a descriptive measuring statement/technical solution and then have the syndic request quotations from contractors from a collective with pre-selected contractors.

Furthermore is clear description of the tasks the renovation consultant will take on a necessity:

- *Will the renovation advisor accompany the contractor on each site visit during the quotation phase? If not, a very clear descriptive statement of measurement is necessary.*
- *It may also be necessary to draw up and discuss the quotation comparison with the syndic on the management board (also inviting other interested co-owners without obligation), as the knowledge of the syndicates is generally insufficient to compare different quotations correctly.*
- *If necessary, the renovation consultant will refer to the architect for further follow-up. To this end, it is useful to develop a network of architects so that the ACO's can be referred to a reliable partner. If necessary, a pool of architects can be set up within this framework.*
- *With regard to the technical installations, the services to be included in the renovation supervision should be determined. For example, a heat loss calculation can be included in the*

advice. It should be possible to refer to a reliable partner for more complex calculations. A pool of specialists could also be set up for this purpose.

3.4.5.7 Other relevant experiences with syndics and ACO's

WITH SYNDICATE/MANAGEMENT BOARD

Experiences have been very varied, from very helpful and involved to very dismissive and afraid of extra work. The latter group is more likely to discourage owners from renovating. The syndic can therefore be both an encouraging and a restraining factor.

WITH ACO

In general, the advice is seen as an added value, in order to gain more insight into the renovation needs and possibilities of the building.

There are very large differences in type of owner, financial capacity, level of knowledge and expectations.

In medium-sized flats, personal conflicts are often an inhibiting factor in arriving at a renovation.

3.4.5.8 Summary of success factors and THRESHOLDS

SUCCESS FACTORS

- Recruitment and follow-up by municipal service
- Turnaround time: advice was ready in time to be presented at general meeting
- Management Board: presentation of the preliminary advice was generally welcomed in a positive way
- General meeting: time was often too short to ask questions because the renovation advice was only one of the items on the agenda. A solution can be to convene a special general meeting.
- After the advice, most ACO's started working with one or more measures, so the advice worked sensitizing.

THRESHOLDS

- Negative impact on residents' motivation by disinterested syndic or by conflicts in ACO
- The lack of a sounding board, it is better to work in a team on an advice formula, propose it to several experts and ask for feedback.
- The advice was less in-depth in terms of techniques
- The translation of the technical advice into presentation on VME without losing depth was still lacking.
- The presentation of the advice at the ACO was not well received because it was too technical and because of the high cost of the proposed measures, without providing a financing solution.

TIP

Ask residents who have already entered the renovation counselling process:

- How did the residents experience the advice?
- What have they done with it?
- Did it encourage them to renovate more thoroughly/faster?

3.5 Projects and publications focused on financing renovation

3.5.1 Infinite Solutions Guidebook

BRIEF INTRODUCTION

In this guidebook, Energy Cities' members share their experience and guide us through the process of setting up a soft loan scheme. What is a soft loan scheme, and why is it useful to introduce such a scheme to finance energy retrofit work. Furthermore several cases are described in detail and recommendations are given.

SUCCESS FACTORS

Make the access to soft loans and all related support services as simple as possible. Ideally, create a 'one stop shop' where homeowners can find all the information and support they need.

Focus on target groups that really need support and tailor a simple financing tool for specific target groups.

Create a guarantee fund if banks are reluctant to provide funding.

Create schemes that allow longer maturities, so homeowners can adjust the amount of monthly loan repayments according to their financial resources and, ideally, to take into account the financial savings achieved thanks to energy savings.

A bank is not a technical expert: You can train the partner banks so that they are able to provide basic advice on the energy retrofit programme to homeowners but it is not their core business to carry out technical checks of energy renovation work, homeowners' eligibility or relevance of contractors' quotes. Provide the technical support to homeowners and let the banks focus on their own job.

THRESHOLDS

For a successful soft loan scheme, governments need to be involved and engaged.

Homeowners' points of view are the most important aspect: do not create a scheme that is easy for you but not for homeowners.

More info

[Infinite Solutions Guidebook | Energy Cities \(energy-cities.eu\)](https://energy-cities.eu)

3.5.2 FALCO

BRIEF INTRODUCTION

FALCO's main objective is to further develop and pilot financing solutions and accompany (policy) measures in support of local climate action plans in Flanders. This unique combination of financing & accompanying measures will lift existing financial & non-financial barriers and will unlock a sustainable energy investments potential that has been left untapped until now.

A funding mechanism will be developed to enhance the implementation of ambitious local climate plans. The model aims to provide a financing solution for the broad spectrum of the local climate action plan, instead of adopting a common individual project-by-project financing approach, where only the most profitable projects get funded ("cherry picking"). FALCO will focus on lifting financial and non-financial investment barriers and emphasize mobilization of private capital instead of public budgets. It aims to establish a revolving fund whereby financial means are reallocated to other projects.

SUCCESS FACTORS

Possible Energy Renovation Loan 2.0

Their research showed that third party financing with an earnings model via demand side management could offer a solution for social housing, but has not yet been developed sufficiently.

THRESHOLDS

Project is running since 2017 but no real solutions developed yet.

More info

[FALCO - Our ambition \(financinglocalclimateplans.eu\)](https://financinglocalclimateplans.eu)

3.5.3 GNE Finance

GNE Solutions works to support cities and regions in mitigating climate change by offering full-service eco-sustainable home renovation programs. Buildings also emit 40% of energy and are responsible for 36% of all CO2 emissions in the EU. This makes effective, eco-sustainable renovation indispensable for a healthy future. Doing nothing is not an option. The growing consensus among European cities dictates that we need actional solutions to tackle climate change. In order to undertake the necessary EU-wide deep energy renovation, substantial funds need to be unlocked. GNE Solutions has the right experience & know-how to achieve this.

More info

[GNE Finance | Global New Energy Finance](#)

3.6 Market practices in the financial sector

3.6.1 Financing the acquisition of a home

In Flanders, to finance the acquisition of a home, the most established way is to use a mortgage. The advantage of mortgage loans is the longitude of the term in which one can finance its home. Starting from one up till 30 years offers a lot of flexibility and comfort in monthly payments. Because market prices of the housing market in Flanders are still increasing, people have to borrow more to buy a house and therefore pay more monthly and a larger part of their income serves to pay off the loan. Fortunately, long term interest rates have been declining in recent decades and the low interest rates partly compensate for higher loan amounts.

Mortgages are often supplemented with renovation loans. Such renovation loans do not have to be covered by mortgages; also, personal loans are commonly used. One of the biggest challenges however, is the increasing amount of people who suffer of a lack in savings. More and more banks in Belgium have set strong limitations in the amount people can loan in proportion to the value of the loan.

In Flanders, there are common financial institutions, such as banks, who offer mortgage credits. And on the other hand, we have the recognized credit companies. The latter are the ones, often covered by government protection, that provide loans to specific target groups: people with lower income, people with little savings, singles...

3.6.2 Financing the refurbishment of a house

Classic mortgages

- Flexible term (1 to 30 years)
- Lower interest rates (in regard to personal loans)
- Mortgage necessary (bank guarantee)
- Possible for acquisition and/or refurbishment

Renovation (Personal) loans

- Shorter terms (often 1 to 10 years)
- No mortgage necessary
- Higher interest rates (in regard to mortgage loans)

Green loans or Energy loans

- Shorter terms (often 1 to 10 years)
- Same principles as personal (renovation) loans
- Discounts based on green investments

3.6.3 Governmental Initiatives to finance refurbishment

In order to stimulate owners to refurbish their homes energetically, Flemish and local governments have developed specific loan formulas.

One of the most successful initiatives is the Flemish Energy Loan. This type of loan is available for people belonging to a specific target group. If someone meets the conditions to belong to this group, that person can borrow up to 15,000 euros at 0% for green refurbishments. Moreover, people in this target group get free guidance in determining what works have to be conducted and to compare the offers from different contractors.

If owners do not belong to the specific target group, as mentioned above, they still can get a loan at a very interesting interest rate. In that case, one can get a loan up to 30,000 euros at 1,5% for a combination of green investments and other refurbishments. This loan is an initiative of the Province of Limbourg; thus, it only applies for inhabitants of this province.

SUCCESS FACTORS

- Low interest rates
- No extra costs
- Free guidance possible
- Flexible early repayment

THRESHOLDS

- Short terms (10 years is maximum)

MORE INFO

[Energielening | Vlaanderen.be](https://www.energielening.vlaanderen.be)

Starting 1st of January 2021 Flemish Government is launching another energy loan:
[The interest-free renovation loan.](#)

The interest-free renovation loan is only available for those who buy, inherit or receive a house or apartment with a poor energy performance in 2021. It is therefore only possible after a transfer of ownership. By 'inheritance in 2021' is meant the date of death (= 'falling open of the inheritance' and therefore not the date of the deed resulting from it). Furthermore, it must concern acquisition in full ownership (100% natural persons).

Key factor to be considered for the interest-free renovation loan is the EPC-label. For houses EPC-label at the start of the refurbishment has to be E or F and for apartments D, E or F. After the refurbishment labels should have fallen to A, B or C.

SUCCESS FACTORS

- Longer term possible (up to 20 years)
- No extra costs
- Flexible early repayment possible

THRESHOLDS

- The connection to the EPC-label: risk of not sure to make it to the predefined label

MORE INFO

[Renteloze lening voor nieuwe eigenaars in 2021 bij energierenovatie | Vlaanderen.be](https://www.vlaanderen.be/renteloze-lening-voor-nieuwe-eigenaars-in-2021-bij-energie-renovatie)

3.6.4 Stimulating financing measures for mortgage clients to refurbish

3.6.4.1 General possibilities of Financial Institutions to finance refurbishments

Green Loans

These so called 'Green Loans' are specifically intended for financing green investments. This includes matters such as the installation of a heating system, heat pumps, insulation, rainwater recovery, the performance of an energy audit, geothermal heating, solar water heater, ventilation, the construction of a green roof, solar panels, high-efficiency glazing or thermostatic taps. Bpost bank and Axa, for example, already offer an energy loan from 1.59 percent. With a green loan you can usually also finance other than green investments, although green investments - depending on the financial institution - usually have to represent 50 to 75 percent of the total investment amount.

Renovation Loans

You can of course finance green investments with a normal renovation (personal, not mortgage) loan, with which you can finance much more investments than just energy-saving measures. In that case, you must take into account that the interest rates on renovation or refurbishment loans are higher than those on green loans. At the major banks, the interest on renovation loans is heading towards 2.95 percent.

Re-admissions

You can also finance new investments in your homes by means of a capital renewal within your existing mortgage loan. It means that you re-borrow the repaid capital from the bank. This is done at the interest rates in effect at that time. It will really depend on whether such a re-withdrawal with your bank is more advantageous than a green loan.

3.6.4.2 Triodos Bank

An interesting financial institution as an example of stimulating clients to refurbish energetically, is Triodos Bank. Triodos Bank is a financial institution that profiles itself as durable. They only invest in durable projects and as to mortgages, they only grant credit to projects in which there is sufficient attention for durability and sustainable energy. For our C-REAL project, what is of particular interest, is the way they operate when talking about durable mortgages. E.g., to encourage people to build an energy neutral residential housing, they grant discounts on their interest rates depending on the energy level of the housing. They not only take the E-level into account, also they look at the saved amount of energy use per year (<https://www.triodos.nl/over-triodos-bank>).

3.6.4.3 Other Banks

Belfius Bank

Belfius bank makes a small effort to encourage energy-efficient construction: they provide an extra discount of 0.25 percent on the interest rate of the full home loan, if the e-level of 30 or less is reached.

BNP Paribas

BNP goes one step further: if the e-level of 30 (or less) is reached, the customer does not have to pay any costs to keep the money for the construction works reserved with the bank.

3.6.5 Financial offering to ACO's

In Belgium, there are four financial institutions that have a specific offer for ACO's, to refurbish the common parts. We summarize them below and have a quick look at the (dis)advantages of each of them. Here and there there are a few smaller initiatives, but they are not worth mentioning because of their small scale.

Furthermore, financial offering for ACO's is rather rare and complex. In many recent projects it was the finding that it stays hard to convince individual members of ACO's to invest in the common parts of their building. It is clear that we have to get rid of the thresholds in order to speed up investments.

3.6.5.1 KBC

One of the Financial Institutions in Belgium that already has developed an offer for ACO's concerning renovation, is KBC. KBC has developed the ACO renovation loan.

It is an investment loan for ACO's, with

- A term of 3 to 10 years
- A fixed interest rate
- Equal refunds

The renovation credit is intended for sustainable and necessary renovation work worth at least 50,000 euros in the common parts of the building, such as roof insulation, facade renovation or the installation of high-efficiency glass. At least 3 members of the VME take out the credit. The term of the credit is a maximum of 10 years.

SUCCESS FACTORS

The ACO must take out credit insurance (Atradius) for ACO's as a guarantee for the credit. As a result, the ACO and all members are insured if a co-owner remains in default.

Not every co-owner has to get a loan.

THRESHOLDS

The credit insurance often is expensive.

The term of 3 to 10 years turns out to be too short.

More info

[Ontdek het KBC-Renovatiekrediet voor VME's - KBC Bank & Verzekering](#)

3.6.5.2 Triodos

In the past, there were some cases in which Triodos bank supplied loans for ACO's, but we can't find any more information about this initiative on their website. We will further investigate this issue.

Triodos is part of our C-REAL expert group, so it will be possible to map this in the near future.

3.6.5.3 Federale Verzekering

The ACO loan of Federale Verzekering is taken out collectively by the ACO, with the aim of financing renovation and refurbishment of the common parts of the building.

In the proposal, Federale Verzekering also takes into account an insurance (Atradius) for the ACO. This insurance must protect the members against non-payment of one of the co-owners.

SUCCESS FACTORS

Mortgage-free.

Not every co-owner has to get a loan.

Insurance to insure co-owners in case of default of one of the members.

THRESHOLDS

Term only 1 to 10 years.

Limited amount (< 1 million euros)

Insurance is obligated and often expensive

More info

[Lening aan Vereniging voor Mede-Eigenaars | Federale Verzekering](#)

3.6.5.4 Belfius

Belfius Bank has not specified any conditions of the ACO loan. On their website the only thing that is available, is an application form for a customized simulation.

More info

[https://www.belfius.be/common/NL/multimedia/MMDownloadableFile/Business/Financing/MMI krediet VME.pdf](https://www.belfius.be/common/NL/multimedia/MMDownloadableFile/Business/Financing/MMI_krediet_VME.pdf)

3.6.5.5 Flemish Energy Loan

For associations of co-owners, the maximum loan amount of the regular Flemish Energy Loan (as described in chapter 8.4.3) can be increased by 7,500 euros per housing unit in the building for which the association is responsible.

3.6.6 Mixed Financing

In a study⁵, concerning mixed forms of financing, we observe other valuable learning lessons. In this study, starting point was the point of view of the financiers: Which bottlenecks do they experience when financing climate projects? Mixed financing is the strategic use of public capital to attract private capital. They can take different forms: grants, loans or even re-financing solutions. Most important finding, concerning this type of financing, is that a well-defined policy is necessary to overcome risk issues of private investors towards their financial institutions. However, this does not seem an interesting instrument to finance private households energetic retrofitting.

4 Engaging building professionals

In a study of Ryckewaert (*Ryckewaert, Van den Broeck, Vastmans, 2019, Renovatie van de Vlaamse woningvoorraad: vaststellingen en beleidsaanbevelingen. Inschatting van de noden en kosten en identificeren van drempels aan vraag- en aanbodzijde. Leuven: Steunpunt Wonen*), researchers discovered the structural gap between supply and demand in the construction sector.

Since several years there is an increasing demand but building professionals are not able to offer sufficient supply. Building companies suffer of a structural lack in manpower. Therefore, there is a structural and still increasing gap between the renovation rate and the ambition to speed up this rate in the next few years.

This study highlights the need of Flemish government to not only focus on financial, technical, organisational or informational thresholds, but to focus also on the structural shortage of manpower in the construction sector.

4.1 Mapping thresholds vs opportunities

Within C-REAL, a work package is dedicated to the cooperation between renovation advisor and building professional.

The first step in developing the most suitable form of cooperation was to sound out the experiences of Dubolimborg clients who have already received renovation support. On the other hand, we also questioned the construction professionals themselves. The aim was in both cases to see how we could remove the barriers to cooperation. This process was extensively described in deliverable 6.1, below we point out the most important findings.

⁵ Studie naar de mogelijkheden van gemengde financiële instrumenten voor de financiering van duurzame projecten – Departement Omgeving – Danny Frans/Annick Gommers/Luc Wittebolle - 2020

4.1.1 The construction sector

In depts interviews of contractors and representatives of the building sector seemed the most appropriate way to come to an impetus for developing the most appropriate collaboration formula between renovation advisor and contractor.

4.1.1.1 Unburdening as guiding theme

All interviews showed that the theme of unburdening the contractor - removing some of the problems he encounters on a daily basis - can be the key to achieving a satisfactory cooperation. Ideally, the renovation consultant can not only relieve the contractor of a lot of work, but also reduce certain risks.

It became clear that the aim should not only be to unburden the home owner by offering renovation advice and guidance on how to implement energy-saving measures, but that renovation guidance must be designed in such a way that the contractor also clearly benefits from cooperation. For cooperation with the building sector to be successful, the renovation consultant must be able to offer quality leads: projects that are well prepared, then proceed smoothly (both in the quotation phase and in the implementation phase) and are also completed smoothly (delivery and payment).

The methodology of cooperation with the building sector was therefore designed in consultation with this sector and with the idea of unburdening building professionals in order to achieve cooperation that benefits all parties. What are the needs of the sector and how can we, as renovation consultants, meet them?

During various sessions, these needs were mapped out and a model for cooperation was drawn up. This model was then presented to the interviewees and fine-tuned.

4.1.1.2 Communication with the building sector

In addition to a concrete model for cooperation between the renovation advisor and the construction sector, we came up with communication concepts (respectively based on the contractor's lack of time to prepare renovation projects in a qualitative way and on the increase of financial security during the execution of renovation works) that can be used for positioning the renovation advisor (in this case Dubolimburg) and for future recruitment of the contractors' target group.

4.1.2 Home owners about renovation guidance

All home owners who had signed up for renovation guidance in the last 4 years at Dubolimburg were invited to participate in a questionnaire to find out the thresholds and the successfactors of guided renovation trajectories in which the renovation advisor has a collaboration with the building sector. Most important learnings were that the home owners are very satisfied about the renovation trajectory because of the independent advice, the customized and targeted approach. People are mostly satisfied with the clarity of the offers, however optimizations can be made in the number of quotations and the speed of delivery. Price was the main driver to have the works implemented by another contractor than proposed by Dubolimburg.

4.2 Flemish examples of cooperation with the construction sector

4.2.1 Werfgoed (Dubolimburg)

BRIEF INTRODUCTION

Collective renovation of individual homes. By means of a renovation matrix, a total renovation approach was drawn up in consultation with the residents.

Contractors were selected through an open call for tenders for the implementation of specific measures. The aim was to unburden the contractors by providing the client with a personalised proposal in advance, based on predetermined unit prices.

SUCCESS FACTORS

In addition to price, qualitative selection criteria were also used to choose the contractors.

For simple works such as cavity insulation or attic insulation, the personalised proposal was drawn up using predetermined prices. Using this methodology, several projects could be carried out successfully.

The mapping of the existing situation together with a concrete renovation proposal with measurements unburdened both the client and the contractor.

THRESHOLDS

Very few contractors took part in the call for tenders, so that in practice there was no real selection.

When applying the principle to apartments, it emerged that a syndic in principle needs three tenders to present to the ACO. In this context, therefore, it is not possible to work with a pre-selected contractor. A pool of contractors could be a solution here.

For more complex works, such as a complete roof renovation, it was not possible for a renovation supervisor to draw up a personalised proposal due to the great diversity of building styles and corresponding renovation methods.

In the Flemish context, each resident wants to press his or her own stamp on the house, which means that standard solutions are sometimes not possible.

4.2.2 RenoseeC - (Sint Niklaas renoveert – Liesbeth Boets)

BRIEF INTRODUCTION

Renovations with social, economic and ecological added value through a collective approach

Target group: neighbourhood renovation

RenoseeC supports the client and acts as a renovation supervisor and mediator between the construction partners.

Construction teams:

Construction teams are used to execute the renovation plans. Building teams consist of architects (in the case of extensive renovations), main contractors, contractors and installers. These construction teams are actively involved from the first step of the renovation plans.

For a new neighbourhood project, an open call is launched in which construction teams are free to apply. The building teams that are selected after a qualitative selection will be involved in the next phase of preparing offers and implementing the renovation plans. Each construction team is assigned a cluster of building sites.

Standardisation:

In order to guarantee high-quality execution, a catalogue of construction-technical solutions was drawn up within this project. For various renovation measures, a number of standard solutions were further developed in collaboration with KULeuven and Pixii. This offers clarity and guarantees to

both the client and the construction teams. In addition, manufacturers of the building materials are directly involved in this project in order to ensure in-depth technical support on site.

SUCCESS FACTORS

Relieving you of all your worries (applying for permits, drawing up subsidy dossiers, developing a plan of approach, making payments, mediating in conflicts, quality control, etc.)

Working with reliable building actors convinces residents to renovate.

THRESHOLDS

Standardisation is only possible in neighbourhoods with similar houses.

Freedom of choice is more limited because standard solutions from companies in the consortium are used.

The architect was not suitable person to take on the role of central contact because of neutrality and possible conflicts of interest. Hence Renoseec provides an independent contact person.

MORE INFO

www.renoseec.com

4.2.3 RenBEN - Leiedal

BRIEF INTRODUCTION

Target group: private rental market - aim to limit nuisance and unburden

Pilot project for 3 groups of terraced houses

Several methods for cooperation with the construction industry were tested:

- Group purchasing via an intermediary after going through the public procurement procedure. Through the intermediary, several offers were requested from local contractors. The offers were checked by the renovation consultant and then delivered to the owner.
- Appointment of general contractor for total renovation projects (Bostoen as partner in project).
- Group purchasing without intermediary: pool of energy-conscious contractors for smaller works. During the selection, knowledge of airtightness, thermal performance, common problems, was tested. Contractors have to complete a checklist beforehand. Agreements are made in connection with lead time (site visit within 2 weeks, then quotation within 2 weeks). References are requested and also checked by renovation advisors.

SUCCESS FACTORS

SPOC - Central point of contact for private individuals is important but in practice not always easy to apply because of the various parties involved.

2,6 mio was invested in 2 years time

The energy advisor makes a preparatory file with a list of measurements, a description and photos so that the contractor does not usually have to visit the site. This means time saved for the contractor.

Work carried out was published on Facebook, generating extra advertising for the contractor.

Cooperation with the architects' pool was also set up for follow-up.

THRESHOLDS

General

The expectations of some owners were sometimes broader than the services foreseen within the remit of the renovation counsellor. For example, there was an expectation that certain services that were part of the actual implementation would also be free of charge.

The target group of landlords is difficult to convince to implement energy saving measures.

It proves difficult to apply standard prices for renovations; a tailor-made estimate is appropriate.

- Group purchasing via intermediary: by involving an additional intermediary, the distance to the local contractor became great. Local contractors who quote a price always want to make a site visit, which makes the process more cumbersome. For the customer, there is an additional person in the process, which complicates the SPOC system.
- Appointment of general contractor: Most owners choose to carry out small individual measures rather than a total renovation. Total renovation projects did not prove profitable for the contractor because of the large time investment.
- Pool of energy-conscious contractors: If the selection procedure is too extensive beforehand, small contractors do not sign up. For some works, the pool consisted of only 3 or 4 contractors, so that the award often went to the same contractor because of the price.

MORE INFO

[RenBEN | Warmer Wonen](#)

4.2.4 Group purchasing

BRIEF INTRODUCTION

The province or an intermunicipal organisation organises group purchasings in order to have as many consumers as possible carry out certain measures. This is often part of achieving the intended CO2 objectives.

SUCCESS FACTORS

Uniting as many consumers as possible creates an economy of scale. A supplier has the prospect of a large number of additional customers, enabling him to offer a better price.

Participants do not have to search for themselves and receive contact details and rates from pre-selected contractors.

THRESHOLDS

Not every supplier participates in a group purchase.

Smaller contractors often cannot participate because they do not have sufficient capacity to carry out sufficient realisations in the short term.

A smaller contractor who does not participate can be cheaper than the larger company that eventually wins the group buy.

The selection is often based solely on the lowest price and not on quality.

5 Target group of home buyers and existing mortgage clients

5.1 Lessons learned

In several studies it has become clear that refurbishments can only take place when there is sufficient political will and support. In case where these two items aren't present it is very difficult or

even impossible to convince residents to come to action. Nowadays, there still is a big gap between drivers and barriers.

Energy refurbishment is found to be largely based on social and psychological factors. When marketing the energy services, one must take these insights into account. Monitoring of the services and being available all along the renovation process is key to be sure of a qualitative and energy efficient refurbishment.

Still applicable for further research:

- For buyers, we have to be quick to establish necessary renovation costs
- We need extra triggers or stimuli to make people receptive for the offer of advice and guidance
- Unburden home owners of the technical complexity, but be as accurate as possible
- Allowing individual measures to be carried out at their own speed, but with a final zero energy focus

5.2 Most suitable tools or methodologies

5.2.1 Advice

5.2.1.1 Setle software

Suitable for the lender to generate a preliminary advice with cost estimate without the help of a renovation adviser. Of big importance for the target group of buyers is timing. The current real estate market in Flanders requires candidates to decide about whether or not to buy a house, within a matter of hours or - at most – a couple of days. During this limited period of time, it would be wise to already have a good idea about renovation needs and costs. If not people might buy a house, they later cannot afford to renovate. This must be avoided at any time. Missing this key moment means the dwelling that was bought remains unrenovated for many years to come.

During this project we will further investigate if Setle can be used to optimize this crucial first step of the process.

5.2.1.2 Huisdokterrapport (Dubolimburg)

This methodology (see 3.1.1) will be the starting point for a more in dept renovation advice.

In order to come to an even more complete renovation advice, the following additional elements will be integrated:

- Cost estimate, for which a user friendly template will be drawn up. Possibly the methodology for cost estimates in the quickscan developed during Rhedcoop (see 3.2.11) can be useful as a starting point.
- Financing proposal provided by Onesto, as all pilots will be Onesto clients.
- An overview of applicable premiums.
- A calculation of possible energy savings, to come to a net cost of the renovation

5.2.2 Guiding home owners to the most suitable partner for implementation of the measures

Starting point will be the Dubolimburg' renovation guidance as described under 3.1.3

This topic was elaborated in deliverable 6.2: service design of selection procedure contractors

After extensive research and consultation with the construction sector, we came to the conclusion that cooperation in the form of a low-threshold 'contractors' collective' would have the best chance of success.

The idea is that the renovation advisor thoroughly prepares the entire preliminary process and thus relieves the contractor of a great deal of work (the advice - the choice of measures - the technical solution - the estimate - the measurement state) and also provides quality leads (well-informed customers who are certain to carry out the work and have appropriate financing for it).

The contractors- members of the consortium can provide qualitative price quotations on short notice, home owners can decide quicker to have the measures implemented. This will not only speed up the process for all parties involved, but will also lead to more qualitative work.

6 Target group of associations of co-owners (ACO's)

6.1 Lessons learned

Thorough overall renovation advice makes ACO's think about long-term planning, rather than having necessary measures implemented on an ad hoc basis.

The syndics often do not have the necessary knowledge to correctly assess which works are necessary and in what order they should be carried out in order to avoid lock-ins. They often have insufficient technical knowledge to select the most fit contractor.

They also lack the time to take on these additional tasks. The role of the renovation consultant is therefore a necessity in order to speed up and improve the quality of the renovation of old flats.

Thresholds remain the achievement of unanimity between owners, the offer of a long-term financing solution and the lack of a legal framework obliging owners to carry out energy-saving measures.

Within C-REAL, in addition to offering qualitative renovation advice and guidance on the implementation of energy-saving measures, we are also fully committed to motivating owners and offering them a suitable financing solution.

6.2 Most suitable existing tools or methodologies (to use/to start from) for renovation advice and guidance

6.2.1 Renovation advice

6.2.1.1 Quickscan Rhedcoop

This quickscan seems useful to map the current status of the building elements and to swiftly formulate a preliminary and to a layman understandable renovation advice

6.2.1.2 Medium renovation advice for ACO's (Dubolimborg)

Following the presentation of this brief advice to the syndic, and taking into account his comments and preferences, a comprehensive overall renovation advice will be drawn up.

To this end, we can take the Dubolimborg 'medium' renovation advice as a starting point. This advice will be complemented with the following topics:

- A financial advice
- A long-term maintenance plan

6.2.2 Guidance for ACO's (Dubolimborg)

Starting point will be the Dubolimborg' renovation guidance towards the most suitable party to execute the works, as described under 5.2.2

Furthermore, this guidance will also focus on guiding an ACO with different owners with different interests, towards a supported, unified decision.

To this end, we will first of all focus on informing the owners about the need to renovate their building, but also about the course of the renovation guidance.

Participation is a second important key to achieving results. From the outset, we will focus on a participative process in which a delegation of co-owners will be heard at every step of the renovation trajectory.