



C·REAL

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



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This report contains a description of the adjusted financial service so far for the target group of Buyers and for the target group of Existing Mortgage Clients.

Target Group(s):

Stakeholders in search for optimised financial services for financing renovation towards more energy efficiency.

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General Introduction

The main objective of C-REAL is to establish a permanent, structural collaboration between a mortgage lender (Onesto) and a renovation adviser (Dubolimburg) to increase the degree of renovation and improve renovation quality in the province of Limburg. In addition to this and to achieve full customer satisfaction, an effective cooperation between the renovation adviser and contractors will be set up. Actively involving lenders to encourage home owners and home buyers to renovate provides significant added value.

Lenders play a crucial role in purchasing and are frequently in contact with purchasers. Moreover, based on the existing customer relationship regarding the home, lenders can address owners directly. It is of great importance to lenders that homes that they finance are made optimally energy-efficient and are refurbished qualitatively, as it is believed to reduce their financing risk.

A supply of suitable financing options, combined with a range of services to provide advice and guidance for the renovation, and timely and qualitative execution, provides all parties with significant added value, which paves the way for a clear, solid and scalable business model. In setting up these structural collaborations and offering integrated home renovation services, we focus on 3 target groups, guiding them through the whole customer journey. We support new home owners, existing mortgage clients and ACO's (Associations of Co-Owners).

Executive Summary

This report contains the deliverable *'D3.5 Report containing description of the adjusted financial service for all target groups'*. In this first period and phase of preparation we have examined closely all existing financial tools, methods and functionalities. We identified the problem areas and opportunities in the customer journey and identified where and how the financial service can be improved to promote energy renovation.

In what follows we will have a closer look at this process and we will guide you through our propositions of optimisation for the financial service with regard to our C-REAL pilots. We already described the existing financial formulas in our Desk Research, so in this chapter the focus will be on how to use these (optimised) formulas to the advantage of our C-REAL target groups. We will do this by first setting the scene and successively discussing each target group and the associated financial solutions.

1 Short introduction on the housing market

1.1 Home ownership in Belgium

Home ownership is an important issue for Belgian households. They place a high value on buying and owning their own home. This is very often a life goal for many Belgians. Typically, people save their income for many years for this purpose, especially younger households.

More than 70% of Belgians are home owners, regardless of whether or not they have an outstanding mortgage. This is above the average of the euro area countries. However, home ownership among the poorest households (households below 60% of the median income) has fallen dramatically in less than two decades, from 57% to 37% between 2003 and 2021.ⁱ

Residential property prices have risen significantly in Belgium for many decades without any major downward correction. In total, between 1973 and 2021, prices increased by a factor of 15. Even taking into account inflation, they still tripled. The Belgian median price for an attached or semi-detached house amounted to 255,000 euros. A buyer had to pay 360,000 euros for a detached house. In the Flemish Region attached and semi-detached houses cost 280,000 euros, and detached houses cost 395,000 euros (Statbel figures – 2022Q1).

The recent acceleration of dwelling price growth despite the economic downturn and the very recent uptick in mortgage rates have revived concerns about a deterioration in housing affordability.

1.2 Building stock characteristics and renovation potential in Flandersⁱⁱ

The three largest energy consumption sectors in Flanders are industry, residential and transport sectors. Transforming buildings will play an important role in increasing the energy efficiency in densely populated Flanders. The Flemish climate policy plan encourages the renovation of residential buildings, rebuilding after demolition and making the heating installation more sustainable. But we have a long way to go.

The Flemish building stock is characterized by a large proportion of old buildings. Approximately 55% of single family dwellings date back to the sixties or earlier. 28,5% of these were built before WWII.

Table 1: Land registry data (2019)ⁱⁱⁱ

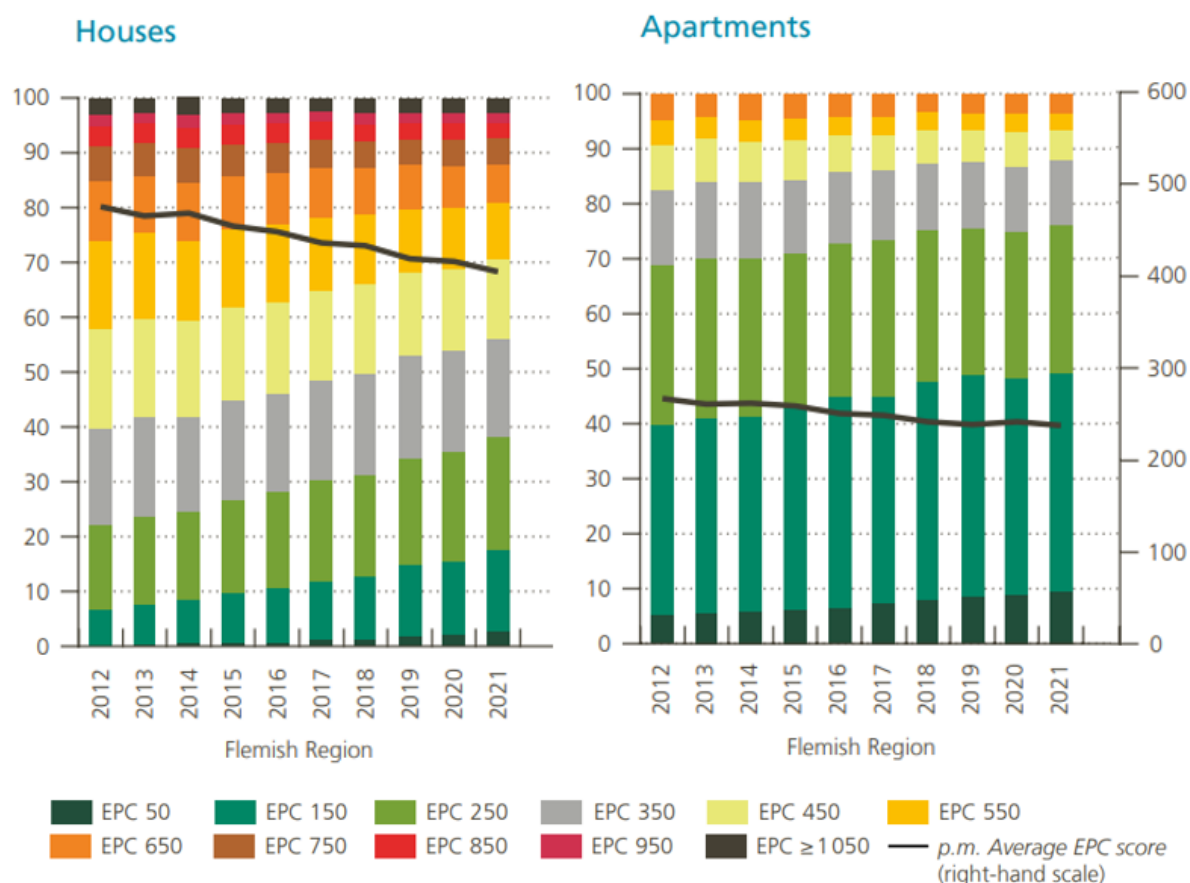
Bouwjaar	Eengezinswoningen		Appartementsgebouwen	
	Aantal	%	Aantal	%
< 1945	608 229	28,5%	20 322	15,43%
1946-1970	563 861	26,4%	34 486	26,19%
1971-1991	516 045	24,1%	26 959	20,47%
1992-2011	357 476	16,7%	35 083	26,64%
>2011	91 988	4,3%	12 338	9,37%
Onbekend	229	0,0%	2 505	1,90%
Totaal	2 137 828		131 693	

Graph 1^{iv} shows the distribution of the energy performance certificate (EPC), specifically the energy scores of houses and apartments sold as well as their average, by year of sale. It should be noted that the dwellings sold are only a small sub-set of the entire housing stock and that the dwelling characteristics of the latter and their change over time can be very different.

The average EPC score of houses sold has come down in the Flemish Region, by 70 kWh/m². But in levels, the current overall score of about 400 kWh/m² is still a very long way from the 2050 target of an EPC score of no more than 100 kWh/m².

The average EPC score of the apartments sold of about 250 kWh/m² is lower than that of houses, thanks to their building structure, but it has declined to a lesser extent, by about 30 kWh/m². Also, when we look at the distribution of the EPC scores, we see that only a small minority of the flats sold are already compliant with the 2050 target.

Graph 1: Distribution of the energy efficiency EPC scores of homes sold, by year of sale¹ (in % (left-hand scale); average EPC in kWh/m² (right-hand scale))



Source: Reusens, Vastmans and Damen (2022)

¹ The years are shifted backwards by two quarters (e.g. “2021” corresponds to the period 2020Q3-2021Q2).

2 Home finance in Belgium

Few people are in the position to purchase a home outright, so they will need access to credit, typically a mortgage loan. If you want to borrow for a renovation, you have the choice between a classic home loan (mortgage loan) or an instalment loan. Both have their pros and cons.

2.1 Mortgages

The most common way to finance a purchase and/or renovation is via a mortgage loan. A mortgage loan has a number of clear advantages. You benefit from an advantageous interest rate and you can spread the repayment over a longer period. This means you have to pay less each month. In some cases you may also be entitled to a number of tax benefits. A disadvantage is that it can take a while before you have the borrowed money. In addition, you usually have to pay handling and notary fees, since a mortgage loan is recorded in a notarial deed.

The importance of the mortgage industry for the housing market cannot be overstated. More than 3 million Belgians (33%) have at least one mortgage loan and in Flanders this rate is even higher (36%). The availability of affordable mortgages is one of the main drivers of house price development and has a huge impact on housing affordability. When mortgages are not readily available or too expensive for specific target groups, people are being excluded from homeownership and are compelled to turn to an already overpriced rental market with a limited offer of comfortable and energy efficient dwellings.

Recent years, there has been a clear increase in the volume of new mortgages, particularly from 2015 onwards. This is not only due to the increase in the number of loans granted but also to the rise in the average size of loans, which is itself linked to the growth in property prices. Indeed, the average amount borrowed² rose from € 130 000 in 2006 to € 186 000 in 2021, i.e. an increase of 44 %. This is, however, less than the 55 % rise in the average dwelling price over the same period. Price growth noticeably outpaced the rise in the average amount borrowed since 2007.^v

The estimated average personal contribution has significantly increased since 2019, especially for first-time buyers. If we also take account of transaction costs, estimations point to a rise from about € 36 000 in 2016 to € 57 000 in 2021.

This means that even if (younger) households still have access to the mortgage market, the aforementioned strong price increases mean that access to home ownership requires a much larger upfront personal input. In addition, the sharp rise in property prices may force young people without significant assets to take out loans with higher repayment costs, or to buy lower quality or less well-located housing, or to turn to the rental market.

The amount of mortgage lending per capita of the adult population is increasing.

² Excluding loans up to 50.000€

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.

Renovation mortgages 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 have caused an upsurge in the last quarter of 2019 in terms of renovation credits.

The outstanding amount of residential mortgages reached about EUR 292 bn at the end of 2021 (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%).

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.

2.2 Instalment/consumer loans

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%.

For a regular instalment loan, the interest rate is usually less favourable than that of a mortgage loan. But you do not have to pay any extra costs, because there is no notary involved. The guarantee requirements are also less specific than with a mortgage loan and you usually have the borrowed money faster. In principle, an instalment loan is especially interesting for rather small amounts that you want to repay in a short period.

As soon as half of the renovations consist of energy-saving investments, certain banks offer a renovation loan with an extra attractive interest rate, a so called green renovation loan.

2.3 Loans for Associations of Co-Owners (ACO's)

The association of co-owners is in charge of the common area of the building the co-owners live in. Ideally, ACOs should have adequate operating funds for day-to-day expenses. They should also have a reserve fund allocated for improvement projects, anticipated repairs and renovations, and unexpected expenses that may come up in the future.

Very often ACO's don't have enough capital in their accounts for large-scale projects. In many cases this prohibits a deep renovation, not only of the common area but indeed of the private apartments of the members of the association. For instance projects of wall or roof insulation are rarely manageable by an individual co-owner.

If an ACO has insufficient capital, it may decide in a general meeting to secure a loan, so a lender provides them with the money they need for the project(s). The ACO then repays the amount of the loan over a certain period of time. However, they will end up paying more due to the added interest. Apart from a loan, the ACO can pursue other sources of funding such as special assessments. This is a one-time fee that puts (most of) the financial burden up-front on the homeowners. And even if the ACO has adequate reserve funds, one will not always want to deplete it. A reserve fund is crucial in case there are unexpected expenses or emergencies.

With an ACO loan, homeowners will still experience an increase in their monthly dues, but it will be a slight increase compared to a special assessment. Also, since HOA loans are paid over time, homeowners will only need to contribute for as long as they are living in the community. For example, if an ACO took out a 10-year loan, a family that only lives in their home for 5 years will only have to pay for those years. Payments for the remaining 5 years will then be passed on to the new owners.

In Belgium some financial institutions have created ACO-specific loans. For the moment they are far from successful. We can mention a couple of reasons for this.

- Lenders are rather reluctant to offer this type of loan, even at a relatively high interest rate, since it has a very high administrative load. The offer is only open for specific cases (rather high amounts) and the repayment period is typically relatively short (10 years).
- Most ACO's will have their fair share of delinquent homeowners. These are the members who are not paying their monthly association dues. This will put a bigger burden on the other homeowners. In some cases, the ACO may need to tap its reserve funds or even ask the co-owners for an extra contribution to be able to timely pay the monthly loan payments.
- The risk of delinquent home owners can be covered by a special ACO-insurance. In fact all lenders impose taking out such an insurance as a requirement for a loan. Disadvantage: the insurance seems to be rather expensive and increases the overall cost of the financing extensively.

Policy Recommendation: *Make it possible for ACO's to spread the loan over a longer period of time, fifteen years is (in most cases) an absolute minimum.*

Update 7/7/2022: The 'Mijn VerbouwLening (mentioned below) makes it also for ACO's possible to spread the loan over a period of no less than 25 years.

Policy Recommendation: Offer the individual homeowners a guarantee to cover the risk of delinquent co-owners, if the ACO takes out a loan to make the building more energy efficient.

2.4 Legislative and regulatory framework

In Belgium, the NBB (National Bank of Belgium) is the licensing authority for the financial institutions which fall under its prudential supervision (banks and insurance companies). As the central bank of Belgium, the NBB conducts monetary policy for Belgium and contributes to the stability of its financial system. The NBB has to ensure that the financial institutions are properly organized and maintain appropriate levels of solvency, liquidity and profitability. In that capacity and since the mortgage market in Belgium is in fact lead by financial institutions under its supervision, the NBB is the principal regulator of the mortgage industry in Belgium.

Alongside the NBB, the FSMA (Financial Services and Markets Authority) supervises Belgian financial markets and financial service providers. Its tasks include oversight of the financial information that companies disseminate and the products they offer to consumers and their compliance with the rules of business conduct. The FSMA is the licensing authority for all "non-bank" financial institutions (e.g. social lenders).

The federal public service (FPS) Economy creates and upholds the conditions required for the competitive, sustainable and balanced operation of the goods and services market in Belgium. To achieve this aim, this FPS plays an active part in controlling the overall standards framework e.g. in the financial sector. At the heart of this approach is consumer protection. Therefore, all lenders are required to submit their model contracts to the FPS for approval.

Since the financial crisis of 2009 rules are adapted and strengthened to avoid such a crisis in the future. On top of strict regulation, the NBB formulated in 2019 supervisory expectations regarding the internal management of lending standards applied to Belgian mortgage loans.

For several years now, the National Bank of Belgium (NBB) urges financial institutions to exercise more restraint in granting mortgage loans with very high loan-to-value ratios, and to take greater account of households' indebtedness and their monthly repayment burden. To allow young households to enter the housing market, the NBB applies some tolerance. This is borne out, for instance, by the discretion that banks and insurance companies can grant first-time buyers a mortgage with a loan to value above 90 %, which they can do for 35 % of the total mortgage loan volume in this segment. So, this leaves financial institutions operating in this (expanding) mortgage market with a certain margin for manoeuvre.

Although every financial institution can apply its own acceptance criteria within this framework of regulation and expectations, mortgage lenders typically now ask for higher down payments .

2.5 The role of mortgage lenders in improving energy performance

Mortgage lenders could play a vital role in driving the home energy performance improvements required to meet climate goals. They are uniquely placed to influence borrowers at critical trigger points, such as home purchase, renovation or re-mortgage. The existing relationships lenders have with their customers, often supported by a strong regional focus, provide a platform for lenders to develop green products that will encourage action from borrowers by removing financial barriers and offering additional services and thereby help to unlock the value of improved energy performance.

Aside from the environmental and social benefits of improved home energy performance, there are risks associated with inaction in the face of climate change. The ECB identified the energy performance of homes as one of the major climate ‘transition risks’ for banks. There is a risk of stranded assets as governments will doubtlessly introduce stricter regulation on homes in the years to come.

Furthermore, there is evidence^{vi} that residential mortgages against energy-efficient properties are less likely to be in arrears than those against energy-inefficient properties. While this may not mean there is a causal relationship between the two factors, it is clear that the upside of improved energy performance, assuming consumer behavior does not change as a result, is that owner-occupiers or tenants in mortgaged properties pay lower energy bills and are then more able to pay their mortgage, therefore posing a lower credit risk.

3 Financial support measures of the Flanders government

3.1 Interest subsidy - “Vlaams Renteloos Renovatiekrediet”

In January 2021 the Flemish Government has launched the so called ‘Vlaams Renteloos Renovatiekrediet’, an interest-free renovation loan for which the interest is paid back to the borrower by the government, in the form of a subsidy. Customers can use this loan if they purchase a house in need of renovation (EPC-label E or F) and renovate it to EPC-label C, B or A. Customers can only use this loan if it is accompanied by a mortgage loan for financing the purchase. This is a big incentive the Flemish government offers because this type of loan helps to decrease the monthly burden and therefore increases the total budget a customer can spend on purchase and renovation.

Concretely, one could lend up to:

- 60 000 euro if a dwelling is transformed to label A
- 45 000 euro to label B
- 30 000 euro to label C

The ‘Vlaams Renteloos Renovatiekrediet’ does not apply for the Existing Mortgage Clients, nor for Associations of Co-Owners (ACO’s)

3.2 Energy loans

In addition to mortgage loans, customers (Buyers as well as existing mortgage clients and ACO’s) can also apply for the so-called energy loans. These loans aren’t mortgage loans but are consumer credits without mortgages as a guarantee. Customers belonging to the priority

target group of the Flemish Government even can borrow at a 0% interest rate. An important disadvantage of the energy loans is that the payment term is rather short. One can only spread this kind of loans over a maximum period of 10 years. This means the monthly burden is often too high and therefore difficult to bear. Furthermore, the maximum amount that can be borrowed is limited to 15.000€, which is not sufficient for a thorough renovation.

These energy loans are offered by a network of Flemish Energy Houses. These Energy Houses, around twenty of them spread throughout Flanders, provide not only loans but also technical and financial support to assist households in improving their homes' energy performance. In recent years, the Energy Houses granted approximately 5.000 "Flemish Energy Loans" per year to households and assisted them in many different ways to achieve their energy renovation plans. The Energy Houses are key actors in the Flemish energy renovation arena. One can hope that they gradually transform into performing one-stop-shops, as envisaged in the C-REAL project for the Energy House operating in the province of Limburg.

Policy recommendation: *Try to make it possible to spread the energy loans over a longer period of time.*

Update 07/07/2022: *The Flemish Government has announced the launch of a new energy loan, the 'Mijn VerbouwLening', from the first of September 2022. This loan of up to 60.000€ with a 0% interest rate, can be spread over no less than 25 years. This new loan will be available for existing mortgage clients with houses of at least 15 years old but also for ACO's.*

3.3 Energy grants in Flanders

Belgium and its many government levels are supporting homeowners with different subsidies. Most are aimed at improving the energy efficiency of homes, others help make homes safer to live in (e.g. redoing an unsafe electricity installation) or more accessible to people with disabilities.

A rather complex set of factors must be taken into account for eligibility for these grants:

- Type of works: with specific, technical conditions for each works (for example, a certain level of roof insulation)
- Financial situation as shown on tax statement forms and depending on other relevant factors (e.g. people with a disability and people in a precarious financial situation have access to more subsidies)
- Owner/tenant status: some of the subsidies can be claimed by either or both the owners or the tenants of a dwelling
- Contractor: for most subsidies a registered contractor will need to do the work and a complete invoice is necessary. Some grants allow people to do their own work (e.g. roof insulation), however, one will still need to provide proof of purchase of the materials used.

Unfortunately, there is neither a central subsidies service nor a unique application process: people will need to check who to contact about needed forms and where to send them. The

deadlines for application also tend to differ. No wonder citizens claim the wonderful world of grants is extremely complex and daunting. This of course makes another case for a one-stop-shop, but it would certainly make more sense for the government(s) to make things a lot easier.

The importance of grants cannot be overestimated. As was to be expected, a C-REAL survey showed that in more than 50% of the cases the planned renovation budget is indeed exceeded. The payments of the grant can therefore be kept on hand for unexpected surprises. If there are no surprises and everything goes according to the planned budget, the customer can still decide to carry out additional renovation works, repay part of a loan early or just keep the amount as a savings reserve and thus lowering the risk of a default. All of these options not only benefit the customer, but also the lender.

4 Onesto mortgages “pre C-REAL”

Onesto is a social mortgage company, accredited by the Flemish Government. Until the first of January 2022 this meant that an extra guarantee from the Flemish Government applied to the Onesto mortgage loans. The customer had to pay (to the government) a percentage fee for this extra guarantee and so the risk for all parties was kept within limits. Since the first of January 2022 this is no longer true so Onesto has to keep its risks within limits using other means.

Nonetheless, Onesto in its capacity as a prudent, social lender remains focused on its traditional target group of first time buyers with a limited capacity to pay a substantial down payment. Onesto had a classic range of mortgage loans, with fixed and variable interest rates and offers relatively long maturities (up to 28 years, while most banks are limited to 25 years). The risks of relatively high LTV's, long maturities combined with a focus on dwellings in need of renovation evidently need to be offset.

General approach

In a less coherent way, borrowers could already call upon advisory services that were provided. Onesto staff was available to help model the housing project. Not only at the time of purchase, but later on in the customer journey experienced Onesto advisors were readily available to give ad hoc tips: how to shape renovation plans and to prepare for execution. At the time of acceptance of the mortgage, the possible need for renovation of the house, as well as the budget that was available for this, was already taken into account to a certain extent. It was also emphasized that renovation needed to be done. Starting point was always the EPC, borrowers had to produce to be eligible for an Onesto mortgage.

A proposal was made in general terms as to how the project could be financed. Both Onesto's financial solutions and other options (e.g. soft loans) were taken into consideration. Borrowers could get assistance to find their way in the complex grant schemes the government offers for a renovation.

We often suggested people to contact an architect or an energy advisor for further technical assistance, though many of them declined and started the renovation process without professional help. Most of the times they just consulted a contractor.

The main intention was to grant a renovation loan together with the purchasing loan on the basis of a preliminary renovation plan, typically not more than a simple list of works to be done and roughly estimated costs.

The follow up was rather basic: people handed in invoices to take out the money they borrowed and Onesto checked if this complied with the initial scheme.

If, for some reason or another, borrowers later on decided not to execute the renovation, Onesto had little or no leverage to enforce this, regardless of earlier engagements.

A reliable scoring model

A credit scoring system allows lenders and other financial institutions to determine the creditworthiness of an individual, in light of the project the borrower wants to finance. Onesto has developed its own scoring system based on parameters such as family status, number of children, value of the house, present debt burden, credit history, income and income stability.

Depending on these parameters the potential application gets a score: a negative score means there is no possibility of financing the project. The level of a positive score determines the decision process to grant the loan or reject the application.

The score is not related to the rate of interest Onesto charges, which is quite unusual in the mortgage industry. This scoring is developed to reduce the risk of default in the future and turned out to be highly successful.

The success of the scoring system hinges on the fact that the monthly burden of any necessary renovation loan is already taken into account when the purchase loan is being considered. This approach prevents granting a loan to someone who has the means to buy a dwelling in need of renovation, but who doesn't have the necessary capacity to finance the renovation in a next stage of the housing project. Of course this only works well if we can adequately establish the renovation cost before granting the loan.

Timing is a tough challenge

Getting a mortgage can be a complex task. The mortgage process can be broken into a number of well-defined steps. Most people go through distinct stages when they are looking for a new home and the mortgage to finance the purchase: pre-approval, house shopping, purchase of a home, mortgage application, loan processing, underwriting, and closing. In practice, there is very little time between purchasing the home and credit approval. Typically buyers only have a few weeks before a conditional sale becomes binding. In that period of time, they have limited access to the dwelling they are buying. This means that estimating the renovation cost is extremely difficult.

In Flanders, since 2019 sellers are obliged to provide candidates with an elaborated Energy Performance Certificate (EPC). This EPC not only states the energy score of the housing unit in kWh/(m²/year) The EPC also contains recommendations on how the housing unit can be made more energy efficient and provides a cost estimate of the modifications recommended.

Although this gives the buyer a general idea of the cost range of a renovation, it turns out to be greatly insufficient to adequately determine the actual costs, let alone the exact need for financing to renovate. In practice this meant that the financing solution was primarily focused on the swift approval of the purchasing loan, rather than an optimized overall credit solution for the entire long term housing project.

Leveraging the existing mortgage portfolio

For years, encouraging existing mortgage clients to make their homes more energy efficient turned out to be quite a challenge. That is unfortunate, since it would not only improve the overall credit quality of the portfolio, and thus the creditworthiness of Onesto as a lender. Successfully encouraging - on a large scale – existing mortgage clients to renovate their homes could have an enormous impact on energy consumption of the housing stock in general.

When borrowers contacted us to ask for a supplementary renovation loan, in most cases renovating the kitchen, remodeling the bathroom, a new porch or comparable improvements were top of mind. It was often difficult to persuade them to focus the investment on energy efficiency, though in many cases we succeeded to a certain extent in a mild shift. As energy prices rise the success rate definitely increases.

Proactively triggering mortgage clients to renovate their homes to a higher energy-efficiency was far less successful. Firstly it was all but clear which clients to target. Having data on the state of the house at the time of purchase, the current level of energy efficiency of the dwelling remains often unclear. Lenders do not have access to the EPC-database the government controls. Furthermore owners are currently not obliged to have an EPC unless they plan to sell or rent out the house.

Once borrowers that own a house that needs to be renovated could be contacted, it is always very hard to engage them. They often conceive it isn't a convenient time for renovating. There are other plans in life, other financial engagements, etc. Objectively the main reason is undoubtedly that renovations provoke a great deal of anxiety because there are so many decisions to be made and unexpected problems to be solved.

5 Optimisation of the financial services

In the C-REAL project several new tools and methodologies were developed to encourage and facilitate swift and deep renovations, in case a less energy efficient dwelling is being bought or owned.

5.1 New approach while granting the loan

Renovation Reserve

With a renovation come risks. Unexpected renovation works, higher costs, longer timespan to complete the works, rising costs of materials, etc. Solving these problems doesn't result in a higher value of the dwelling. In fact, not solving them would decrease the value as initially estimated. An extra loan to cover this risk is therefore not a valuable option. To cover the extra risk, the borrower needs to have some financial reserve build in his financing scheme.

Onesto made it practical by linking the maximum LTV to the EPC value. If the EPC value is below 300 than a 100% mortgage is possible. If however, the EPC value is above 300, than the following formula applies to determine the maximum amount of the loan for financing the purchase: $\text{Purchase price} - (25 * \text{EPC value}) / 2$. For example, if the purchase price is 200 000 euros and the EPC value is 350 kWh: $200\,000 - (25 * 350) / 2 = 195\,625$. In this case one can borrow a maximum of 195.625 euro to finance the purchase. Of course, on top of

this, one can borrow also an extra amount to finance the renovation, depending on the available budget and on the renovation needs (preferably recorded in a renovation report).

During the autumn of 2022 we started experimenting with an other approach to cover this issue: if the EPC value is below 300 than a 100% mortgage stays possible. If the EPC value is above 300, than only a 95% mortgage is possible. The use of the, sometimes difficult to explain, formula of the renovation reserve is on hold for some time.

Renovation plan

One of our findings from the C-REAL project up till now is that a solid renovation plan is absolutely imperative to lower the risks for both borrowers and lender.

Once a qualitative plan is drawn up, using an accurate cost estimation within the budget of the customer, the risk of not renovating the house after the purchase becomes a lot smaller. People also tend to choose for deeper renovations, once they look at the project from a long term perspective.

The added value of the renovation is higher if there is a well thought out plan to start with. And what's more: the sooner the house becomes energy efficient the sooner monthly costs of the owner will start dropping (energy costs), so the chance of a default is also declining.

Onesto now only grants a mortgage to renovate a dwelling that is less energy efficient, when the client presents a comprehensive renovation plan. Evidently we need to support the client in the process of putting this plan together, often in a short period of time. This was exactly the main focus of the cooperation with the energy advisor in the C-REAL project and will be elaborated further in this and other project reports.

General Recommendation: Focus more on incentives for renovation advice and - supervision and make sure there is an obligation regarding the preparation of a long term renovation plan as a condition for obtaining financing.

5.2 Mortgage offering by Onesto

Applying an interest surcharge (Eco-toeslag) on the mortgage loan

To ensure that a house with a bad EPC score is transformed into an energy efficient house, Onesto introduced the so called 'eco-toeslag': an extra interest rate percentage on both the purchase loan and the renovation loan is paid by the customer if, and as long as, the EPC is above a certain threshold. This 'eco-toeslag' is used to trigger customers into (deep) renovation, immediately or closely after the purchase of the house. If the customer succeeds in bringing the EPC under the threshold - within a period of 5 years after the loan is closed - the supplementary 'eco-toeslag' will no longer be applicable and the monthly instalment will be reduced.

The initial idea was to offer borrowers an ECO-discount at the time of granting the loan, on the condition they would renovate the home to a certain EPC-level. If they would succeed, the discount would have continued and become permanent. If not – within a certain period of time – the discount would be revoked, and the monthly instalment would then increase. Unfortunately, the federal public service (FPS) Economy could not agree and deemed such an offer to be violating mortgage legislation. A temporary and conditional discount cannot be combined with a variable interest rate on mortgages.

It even took a hard bargain with the FPS to introduce the “ECO-toeslag” and the approval came with the explicit directive that the condition to grant the discount permanently needed to be checked before the first revision of the variable interest rate.

Conclusion: the borrowers now need to pay an higher interest rate at the start than was initially planned. Furthermore, the use of a conditional ECO-discount is nearly impossible for a mortgage that has a yearly variable interest rate.

Nevertheless we can conclude that the ‘Eco-toeslag’ meets the intent. It functions as a powerful trigger to renovate and Onesto can use it to better follow the renovation results, since borrowers are now obliged to produce an EPC, not only at the time of the loan application but also when the renovation is completed.

Policy Recommendation:

Screen where mortgage legislation creates barriers to introduce incentives aimed at making homes more energy efficient and remove them.

Placing an optimal mortgage lien on the property

A mortgage lien is a security a mortgage lender holds on the property in case the client no longer fulfils his/her contractual obligations or wants to sell the property. The lien permits the lender to sell the property when the client defaults in order to recoup the outstanding debt. A mortgage lien is recorded in a notarial deed and comes in Belgium with a cost, partly fixed and partly depending on the amount of the lien.

In case a client applies for a mortgage to finance a dwelling in need to be renovated, Onesto proposes a suitable mortgage lien, not only to serve as a security for the initial mortgage loan. In many cases the renovation process is rather unclear at the start. While it is being executed, the client is often confronted with supplementary renovation works, and thus unforeseen extra costs.

In other cases, the home-owner deliberately chooses to break up the renovation in several stages, adapted to his/her financial abilities. In both cases, there is an extra financing need and an additional mortgage loan is often the best way to finance the extra investment.

Despite the fact that the administrative work for the notary is not related to the amount of the lien, the variable costs the notary charges are linked to the amount. As are the taxes. A higher mortgage lien thus accounts for a higher cost, but is substantially cheaper than two separate liens for the same amount.

To avoid payment of a second fixed cost to create the necessary lien, Onesto proposes the client to choose an appropriate amount for the initial mortgage lien.

Policy Recommendation:

Work only with fixed costs (within certain limits) for establishing a mortgage loan for a (first) residential dwelling.

5.3 An optimized financing mix

While the technical aspect of a renovation is a hard challenge for most people, relating it to the necessary financing is almost a hopeless job. This becomes even more so when conditions to apply for government incentives (sponsored financing, grants to improve home quality and energy efficiency, ...) and building regulation change frequently. In Flanders that is exactly what we see.

Policy Recommendation: *Create a coherent framework of supporting and regulating tools for energy renovation on the basis of a clear vision. Put it into practise after consultation with parties who have to realize it in the field. Then stick to the plan, while leaving room for improvements as long as they do not create more complexity.*

The case for a one-stop-shop, and one of the main objectives of C-REAL, is to take this complexity away from the customer. It is the task of the advisor to propose a solid, comprehensive and intelligible financial plan. To achieve this, the Onesto advisor takes into account all sources of finance for the project at hand and combines them.

With this combination we are often confronted with very strict governmental guidelines which create extra uncertainty and barriers. We illustrate further how this results in extra complexity.

- One has to apply for the interest free “Vlaams Renteloos RenovatieKrediet” simultaneously with the application of the purchasing mortgage. Evidently, at the moment of the purchase and the search for a suitable financing solution, the customer isn’t yet ready to decide on the renovation (loan). At that point he/she has in fact no clue yet about the actual renovation costs. The buyer still hasn’t got the key and therefore no free access to the house! It becomes even more challenging because at the time of application, the borrower needs to declare up till which EPC level he or she will renovate. Evidently, it would be preferable that first a renovation report is developed and afterwards a customer can make a well-funded decision on the renovation loan.

Policy Recommendation: *Eliminate the need for simultaneity for both loans (purchase mortgage loan and Vlaams Renteloos RenovatieKrediet).*

- If a customer can benefit from energy and/or home quality grants, it is quite uncertain if and when the grant will actually be paid. As a grant is paid out post factum i.e. after the work is done and after the contractor is paid in full, there is a need of prefinancing. It is far from clear to what extend and how long the prefinancing will be necessary. Furthermore, applying for a grant remains a very challenging process since there are several authorities to handle them, each grant has its own specific characteristics, conditions, ... and the combinations are often not very obvious.

Policy Recommendation: *Make the conditions, the combinations and the application process for grants straightforward so people can rely on them from the start without hesitation.*

Update 07/07/2022: *The Flemish Government has announced the launch of a new platform that integrates the application of all (or at least most) grants for renovations.*

5.4 Additional services

Offering an EPC free of charge

An EPC is a very useful and relatively simple tool to get things moving. In a simple way, it is shown how energy-efficient the home is. In addition, the works that can be carried out to improve the score are listed, with an indication of the priority to be given to them.

However, EPCs are currently only available for part of the Flemish properties and they are only legally required when a house is built, sold, or rented. When borrowers don't have an EPC, we've found it difficult to get people up and running. In addition, it has been shown that offering an EPC is a good first step to talk to people about a renovation. It immediately sets the right tone: energy measures should be the main focus of a renovation. Thanks to extensive standardization and the availability of many EPC specialists, EPCs can be delivered very quickly and at a limited cost, as opposed to elaborated renovation reports.

It was decided that borrowers could have an EPC delivered at Onesto's expense if it is not mandatory and not yet available, as is the case for most existing mortgage clients.

Introducing a single point of contact (SPOC)

Renovation is a complex process involving many parties. In addition to the financial advisor, the energy advisor or the architect, a valuer and of course the contractors come into the picture. Especially when all this happens at the time of the purchase, and even more people are involved (e.g. the seller, the real estate agent and the notary) people get overwhelmed.

In the project, we try to assign Onesto's financial advisor the role of director of this complicated process. He or she then acts as a general source of information and first/single point of contact for the borrower. The SPOC makes clear - where possible - how and where other parties play their part.

6 The new tools plugged in the customer journey of target groups

6.1 Target group of Buyers

The usual approach of (most) lenders

At the time our C-REAL project started (September 2020) in general lenders looked at the financing of the purchase without thinking too much about the (costs for) renovation. Overall, lenders took little initiative with regard to the renovation and merely responded to questions from the borrowers.

Problem

As a result, during the processing of the first loan the need for later financing for the renovation was not taken into account. Once borrowers knew more or less what budget they needed for making the house more energy efficient or more comfortable it was already too late: the mortgage lien was set too low and consequently the budget for renovation was too limited. If the customer or the lender wanted to solve this problem, often additional costs were inevitable (to get a second mortgage or because customers needed to apply for an additional, more expensive loan).

Unnecessary to say that once the financing is structured this way, it creates rather a barrier for the new home owner, instead of an incentive to renovate.

Even worse problems could arise. If the costs of renovation are not adequately taken into account at the point of purchase, chances are that later on one has to conclude that the house cannot be renovated due to a lack of funds or borrowing capacity. This puts people in a difficult situation. They are stuck in a house without any perspective of making it energy efficient. Furthermore, this poses a big social problem. If houses are not renovated at the key moment of change of ownership, dwellings tend to remain in the same condition for many years to come.

And even if a renovation is taken into account at the time of purchase, the entire process is not at all inviting and creates many pitfalls. Time is lost because of all the stakeholders that pass by during the customer journey: the EPC reporter, the real estate broker, the mortgage broker, the lender, the valuer, ... Data often are not accessible nor shareable between these stakeholders. And that, of course, delays the process to decide whether or not to renovate, what budget is available to renovate and ultimately what kind of renovation to carry out.

Solutions tested within C-REAL

According to the C-REAL consortium it is key to immediately take into account the entire housing project, focused on making the dwelling more energy efficient. The very moment someone buys a house – and preferably even before buying it - the buyer has to become aware of renovation needs and possibilities and of course of the estimated cost to make the house more energy efficient, comfortable and according to the taste of the buyer. From that moment on, the renovation should be highlighted in any stage of the customer journey. To put this into practice and remove the most hindering barriers, we developed the following methodology.

When an application for a loan to buy a house with an EPC level D, E or F is received, Onesto immediately orders a renovation report to be delivered by the energy advisor. This report should contain the following important information:

- the necessary and recommended renovation works to improve the EPC, taking into account the priority of these works, as well as the wishes of the clients
- an accurate estimation of the costs of these works
- the result of these works and more specifically the new EPC score if the works were to be carried out, as advised
- the grants and subsidies that can be obtained.

The report is being reviewed internally and together with the borrower to decide on the scope and timing of the renovation project, taking into account the available budget (savings and monthly income).

The independent valuer is provided with the details of the project, so he or she can accurately estimate the value of the house after renovations.

Onesto develops a suitable and comprehensive financing proposal. If timing and deadlines allow for it, the proposal includes the renovation loan. If not, the purchasing loan is offered with an increased mortgage lien and the renovation loan can be processed shortly afterwards knowing that there will be no extra costs to place a second mortgage lien.

In all cases:

- We impose the principle of the renovation reserve (or the newest principle of the 95% mortgage loan), so clients need a certain amount of savings to mitigate the potential risks involved with the renovation.
- We apply the interest surcharge (“ECO-toeslag”) for the Onesto loan and explain to the client the surcharge will be dropped once the renovation is successfully completed.
- In the proposal we make maximum use of the government sponsored credit instruments, grants and subsidies. In principal, and as far as possible, the offer includes the “Vlaams Renteloos Renovatiekrediet”.

To decide whether or not a loan can be approved, the scoring model takes into account the extra payments on the loan necessary to renovate the house up to certain standards. Once the loan is approved, the borrowers can place the orders with the contractors. The ultimate goal of the C-REAL project is for the advisor to act as a liaison between the borrower and the contractor. Although certain aspects are already in place, the full trajectory of this part of the customer journey is still to be developed in the further course of the C-REAL project.

After the notarial deed is signed, the money of the renovation loan can be made available to pay the contractors upon submission of invoices. Since the advisor is closely involved in the preparation and the execution of the works, Onesto as a lender can adequately monitor the evolution of the value of the property.

Once the invoices are available, the borrower can also apply for the grants, if needed with the assistance of the advisor. Once the money is received he/she can - at his/her discretion – use the money either to lower the debt burden or to execute further renovations.

When the renovation is complete, borrowers are advised to get a new EPC. This is not only necessary to review the “ECO-toeslag” so to lower the monthly burden of the loan. Improving the EPC often entitles people to an extra grant, the Flemish “Label Premium”.

Conclusions after the first batch of pilots

In general, it is too early to draw final conclusions. After all, a renovation project extends over a fairly long period, especially now that contractors are hard to find and materials are rather scarce. In almost no pilot project has the renovation been fully completed.

In addition, we further developed our methodology during the pilots. While we were offering the services, small improvements were introduced and the approach was optimized step by step. We chose, and will continue to opt for, an agile approach in developing the service design. After all, this is the best way to respond to changing circumstances and it offers the best guarantee to achieve a valuable roll-out operation at the end of the project.

We feel safe to present some findings, though.

- Borrowers are very enthusiastic about their participation in the project and almost none declined the offer.
- People usually opt for a thorough renovation, probably helped by the advice and guidance.
- Timing remains a challenge. Onesto often has to decide on the purchase financing before the renovation has been fully mapped out. Luckily, the preliminary estimates that we can make with the energy adviser and on which the first credit decision is based, appear to be sufficiently accurate.
- The instrument of the renovation reserve is quite effective but appears to be too complicated for borrowers and mortgage brokers. We try to simplify it, while holding on to the principle, for the second batch of pilots.
- The introduction of the “ECO-toeslag” linked to the EPC before/after renovations ensures Onesto the renovation is executed as agreed and provides valuable extra information as a lender.
- The collaboration with contractors remains a blind spot. It will be further developed during the 2nd phase and will undoubtedly make the project more powerful.

6.2 Target group of Existing Mortgage Clients

The present situation - problem

For the Target Group of Existing Mortgage Clients the biggest challenge is to make them aware of the need to renovate their homes and stimulate people to start renovating to save energy. In general, existing clients are not aware of the energy consumption of their homes.

When they ask for a renovation loan, often it is because they want to change something aesthetically in their homes, instead of taking energy efficiency measures.

Of course, because of rising energy prices, owners become more aware of their energy use and particularly the energy costs of their homes. Since the beginning of 2022 more and more clients actively ask for information and renovation loans for energy sufficient measures.

Onesto and other lenders have taken some actions in the past to trigger clients to renovate, mostly with limited success. The first problem is to target the right borrowers, who would benefit most from a renovation. Secondly it is challenging to motivate people to renovate if they are approached by a lender.

Policy Recommendation: *Make sure lenders can collect a broad range of information from the EPC Register (such as the EPC score, recommended steps to improve energy efficiency, property age, ...), in order to gain an understanding of the potential to improve a specific property. This information could then be used to provide targeted*

offers of appropriate green finance products to fund improvement works, provided lenders only target their existing customer base.

Solutions tested within C-REAL

The starting point is evidently a targeted selection of borrowers. Personal data of borrowers are processed GDPR-compliantly. Onesto as a lender has legitimate interest when the processing is aimed at strengthening creditworthiness and safeguarding the value of the dwelling that is being mortgaged.

The selection focused on borrowers that had a poor EPC level (F, E or D) at the time the loan started or for which we had no EPC-data. Furthermore, mortgages granted for newly build homes were excluded.

Once the selection is completed, we have to make sure targeted clients have actively opted in for commercial propositions, before we can send them proposals via email. In the first pilots we opted for a mixed message. In order to get to know the situation, we offered our services to screen the current loan. In order to do so, we stated that we need to know the current EPC and invited clients to share it with us, or to let us know no EPC is available.

Once we got the reply we could go ahead. If there was no EPC available, we offered to get one for free. If clients agreed in writing, including a privacy agreement, we could contact an energy assessor. By means of a tender process, we have selected a list of energy assessors on the basis of cost price and the speed at which a report can be delivered (In Flanders all EPC assessors need to be credited by the government and are assumed to deliver identical services). The same offer was made if people stated that the EPC that was available was no longer accurate due to a prior renovation.

When an accurate EPC was available and clients signed the privacy agreement necessary to use data and possibly share it with the energy advisor, we could start working on a comprehensive proposal. Focus is always on long term benefits for the clients. If the house turned out to be already quite energy efficient – to our surprise this was often the case – the characteristics of the current loan in view of the (financial) situation of the clients could be reviewed. For instance the term of the loan, the variability or even the interest rate could be adjusted. In certain instances an outright refinancing of the current loan could be offered.

In case the current state of the house was suboptimal, people were invited to get – free of charge – an extensive renovation advice. Once this was delivered, in consultation with the clients, we worked out a comprehensive plan to make the house more energy efficient in an affordable way. We learned that it is most important to take the wishes of the borrowers seriously when it comes to the renovation works to include in the plan. If people wish to renovate the kitchen, the bathroom, tiles, etc. it is a bad idea to focus solely on energy efficiency since that would be the best way to come nowhere near an actual renovation.

In all cases, proposing a renovation meant that we had to offer supplementary financing, be it a second Onesto mortgage and/or a Flemish energy loan(s) provided by the energy house. The financing plan always came combined with grants and possibly the renegotiation of the current loan. If a supplementary mortgage is recommended, very often the existing mortgage lien could be used to avoid new notary costs and reduce overall costs.

Whichever financing option is chosen and which type of loan is taken out is actually of inferior importance. Focus must be on the monthly burden of the customer. We have to look at it in the short, medium and long term. It must remain affordable and comfortable at all times. And this is also where the energy bill comes into play, along with possible future taxes related to the energy performance of a home and the energy use of the customer.

A lot depends on the remaining debt and term of the current mortgage for this target group. In fact, at the time of applying for a new loan (in whatever form), the global financial picture must be re-mapped, otherwise it may become a major barrier for an affordable renovation solution.

Conclusions after the first batch of pilots

At this stage of the project it remains hard to come to final conclusions. Not only because of the limited number of pilots, but also in view of the major shift in economic and societal circumstances that occurred during the project. For instance, in less than a year we went from negative interest rates to rates that climbed to nearly 3%. What happened to energy prices during this short period was even more hallucinatory. They skyrocketed to levels that were 10 to 15-fold within one year.

As interest rates go up, it is evidently more challenging to renegotiate current mortgage loans. On the other hand, higher energy prices are a major driver for the motivation to renovate. In that way, circumstances at present can hardly be compared to these at the time the C-REAL project started. In the second half of the project we will undoubtedly learn much more about the best approach for this target group, but in addition to what we mentioned with respect to the target group of buyers, these lessons are already clear.

- There is a substantial potential in systematically addressing existing mortgage clients to renovate their homes and people are more than willing to participate.
- The availability of the EPC is a strong driver of success, especially at the start of the process.
- Offering comprehensive solutions is crucial. A broad range of services should result in a comprehensive offer (renovation and investment plan as well as a financial offer within the budgetary limits of the monthly income) disclosed by a single point of contact, preferably the financial advisor.
- The existing mortgage can act as a major barrier to renovate, but in many cases there is potential to transform the obstacle into an opportunity when a renegotiation of the current loan is considered.
- Any approach should take into account economic and societal circumstances and at best show some robustness as to harness drastic changes.

Recommendation for financial stakeholders: *To cover the monthly burden and to make a qualitative renovation a real option for customers, dare to re-map the global financial picture of a customer, including options to renegotiate the existing loan. This will have positive consequences for the available budget for renovation needs and wishes of the customer in many cases.*

6.3 Target Group of associations of co-owners (ACO's)

The challenge

For the Target Group of ACO's there are several options to finance renovation works as described in chapter 2.3. Currently none of them are very attractive neither for borrowers (and co-owners) nor for lenders.

After having interviewed many stakeholders during one-on-one sessions and during the group sessions the conclusions were straightforward.

- The limited duration of the loans that are offered is prohibitive for extensive renovations.
- Loans are perceived to be rather expensive, not only because of high interest rates but also due to the cost of the insurance all commercial lenders require.
- The energy loans distributed by the Energy Houses in Flanders (cfr. 3.2) that are open to ACO's are gravely insufficient. Loan amounts are limited to 15.000 EUR + 7.500 EUR for every residential entity. Furthermore most Energy Houses are not familiar with the service.
- The role of the syndic, who, in addition to implementing the decisions made by the general meeting of co-owners is also responsible for the day-to-day management of the co-ownership is crucial. Unfortunately he is seldom well informed when it comes to financing.
- Procedures to prepare and analyse a loan application and to process the loan afterwards are extremely complex and time consuming.

Actions taken in the course of the C-REAL project

At this moment financial services offered to syndic's and ACO's of the pilot cases are limited to providing information on the financing that is available, loans as well as grants.

Since the renovation of apartment buildings typically takes a long preparation, no specific questions for finance offers for the ACO-pilots were into play at this time.

In preparation, the consortium focused on supporting the Flemish government to develop real and adequate financing solutions for ACO's. The introduction of the "MijnVerbouwLening" since July 1 2022 is a major breakthrough in that respect. ACO's can now borrow up to 60.000 EUR + 25.000 EUR extra for every residential entity. These loans are available to finance works on the common parts of the apartment building to improve energy efficiency and allow for durations up to 25 years. At this stage we consider them as a major step forward in the renovation of small to medium large buildings.

Together with the Flemish government agency VEKA (Vlaams Energie- en Klimaat Agentschap) and in collaboration with the Limburg's Energy House (Energiehuis Limburg), actions are taken to bring this offer to the market. Energiehuis Limburg is up till now the only Energy House that has granted – albeit smaller - loans to ACO's and C-REAL supports the platform to gather and share knowledge and experiences between Energy Houses. To make sure actual financing can be offered to the pilot-ACO's, we prepare for the roll out of the "MijnVerbouwLening" in the second half of the project, together with Energiehuis Limburg.

Policy recommendation: Assist Energy Houses to gain knowledge about the way ACO's function and loans can be offered to them, e.g. by capacity building, by offering facilitating specialised services and reducing possible risks and losses.

Furthermore, the consortium closely watches developments regarding the research of the start-up of a public-private rolling fund for the renovation of apartments, announced by the Flemish government^{vii}. The goal is that the duration of loans to the Association of Co-owners can be extended to 30 years, while provision for a government guarantee can act as a lever to attract private capital. This could be a real game-changer when it comes to the renovation of large buildings.

Policy recommendation: Follow through on the research regarding a public-private rolling fund for the renovation of apartments.

7 Conclusion

Lenders definitely can have a significant impact on renovations when financial services are offered in a way they take away barriers and act as incentives. This needs to be custom work, not only for specific target groups, but also on a client by client basis.

Everything starts with the awareness of the (soon to be) owners of a house that is not energy efficient, that a renovation is not only necessary, but offers positive prospects. To go forward a logical and structured long-term renovation plan without lock-ins is crucial. This renovation plan needs to be backed up with a comprehensive financial offer, in line with income and savings of the borrower. Specific features of the mortgage loan can be introduced as incentives for landlords to start a (deep) renovation.

Lenders should not limit the proposition to their own products. The combination with government sponsored loans and grants can really make the difference. Time is of the essence, specifically for new owners. If they decide on the purchase and the loan without a clear view of the whole picture, they often are gridlocked for many years.

For existing mortgage clients the renegotiation of the original loan is often necessary in order to arrive at an affordable, comfortable and energy-efficient housing solution.

Recommendation for financial stakeholders: Dare to look at possible partners (such as the energy houses of Flanders) that have a complementary offer to that of your own financial institution. Collaboration is the best way to an optimal financial solution.

Policy recommendation: Increase the operating resources of the energy houses so that they can guide as much customers as possible, as guidance before, during and after the renovation is a key factor for successfully increasing the energy efficiency of houses.

ⁱ NBB Economic Review – 2022/#12, Is home ownership still affordable in Belgium? By Ch. Warisse

ⁱⁱ NBB Economic Review – 2022/#02, The impact of changes in dwelling characteristics and housing preferences on house price indices, By Reusens P., F. Vastmans and S. Damen

ⁱⁱⁱ Long-term strategy for the renovation of Flemish buildings -

https://energy.ec.europa.eu/system/files/2020-07/beflanders_ltrs_2020_en_0.pdf

^{iv} Reusens, P. / Vastmans, F. / Damen, S. Working Papers · The impact of changes in dwelling characteristics and housing preferences on house price indices.

^v NBB Economic Review – 2022/#12, Is home ownership still affordable in Belgium? By Ch. Warisse

^{vi} Improving home energy performance through lenders, Department for Business, Energy & Industrial Strategy (UK) -

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936276/improving-home-energy-performance-through-lenders-consultation.pdf

^{vii} Long-term strategy for the renovation of Flemish buildings -

https://energy.ec.europa.eu/system/files/2020-07/beflanders_ltrs_2020_en_0.pdf