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HANDBOOK FOR THE DEVELOPMENT OF A LOCAL LONG-TERM RENOVATION STRATEGY 2050 FOR THE PRIVATE HOUSING MARKET

LIFE IP CA 2016 BE-REEL!
BE REEL! Action C5 Innovative Business Models for renovation

Handbook for the development of a Local Long-term Renovation Strategy for the private housing market

Associated Partners: VEKA, Kenniscentrum Vlaamse Steden

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LIFE IP CA 2016 BE-REEL!
With the contribution of the LIFE financial instrument of the European Union

COLOPHON

Handbook for the development of a Local Long-Term Renovation Strategy 2050 for the private housing market

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Depot number

D/2024/3241/413

Partners

Document information

Project title	Belgium Renovates for Energy Efficient Living
Project Acronym	LIFE IP CA 2016 BE-REEL!
Project Number	LIFE16 IPC/BE/000005
Action Code	Action E9
Action Title	Upscaling best practices and innovative business cases for renovation
Deliverable Code	[E9D1] Guidelines best practices and innovative business cases
Title of delivery	Handbook for the development of a Local Long-term Renovation Strategy 2050 for the private housing market
Actual Date of Completion	01 October 2024 - V1.0
Specification Number	VEKA - LIFE IP CA 2016 BE REEL! – E9.1_2023.1

Short description of the delivery

This report addresses the challenges faced by cities and municipalities in renovating private housing to meet the climate goals set for 2050. It presents a comprehensive framework that guides local authorities through the development of a Local Long-Term Renovation Strategy for the private housing market. The framework outlines the essential data and tools available for conducting a thorough screening of the current housing situation. Furthermore, it emphasizes a backcasting methodology to create a monitoring framework for tracking progress towards the objectives for 2050.

Local authorities are encouraged to translate the targets from the backcasting into local policies, selecting appropriate measures from a detailed table of possible actions. By embedding the renovation strategy within a robust renovation policy plan, municipalities can effectively address their specific renovation challenges and integrate them into local policies. This report serves as a practical guide for local governments aiming to foster sustainable housing renovations, ensuring compliance with future climate requirements while enhancing community resilience and livability.

This report is realized on behalf of

VLAAMS ENERGIE- & KLIMAATAGENTSCHAP

Kenniscentrum Vlaamse Steden

VEKA Flemish Energy and Climate Agency and Kenniscentrum Vlaamse Steden in the framework of:

This report was produced by the contractor

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INTRODUCTION

European and Flemish climate targets and the commitments of local governments in the Covenants of Mayors call for a local, integrated approach to renovating our residential buildings. The proximity between local government and citizens and the already accumulated local expertise make the local level of government an important link to helping achieve the 2050 goals. Flanders aims to support local governments in translating the Flemish Long-Term Renovation Strategy into a Local Long-Term Renovation Strategy (LLTRS). Flanders provides information, tools and data and strengthens the functioning of the Energiehuizen (Energy Houses). Flanders will listen to the needs and help find solutions to this enormous challenge one step at a time. This publication is therefore a stepping stone towards a structural approach for cities and municipalities.

The EU LIFE BE REEL! project[1] supports the Flemish and Walloon 2050 renovation strategy and is coordinated by VEKA (the Flemish Energy and Climate Agency). The project is a European project funded by the LIFE programme. Both the Flemish Region (VEKA) and the Walloon Region are partners, along with the WTCB and the Kenniscentrum Vlaamse Steden and a number of cities such as Antwerpen, Gent, Mechelen, Mouscron and La Louvière. BE REEL! is the initiator of this support process. This handbook is the result of an extensive research process to which many partners contributed. The whole process was followed up by a guidance committee including representatives from VEKA, the Kenniscentrum Vlaamse Steden and the VVSG. A first version of the handbook was prepared in 2021 after a participatory process with nine cities and municipalities (Antwerpen, Eeklo, Genk, Gent, Harelbeke, Heist-op-den-Berg, Hoogstraten, Oud-Heverlee and Mechelen). In 2023, this handbook was further supplemented by a 'backcasting' methodology, which was again tested among local actors: the cities and municipalities of Antwerpen, Leuven, Hoogstraten, Mechelen and Vilvoorde, and intercommunal Leiedal. Moreover, in 2024, the team behind this handbook organised a six-session masterclass for local governments and other actors concerned with local renovation policies and support for these policies. Some 20 local and regional authorities and government organisations participated in this masterclass. Additional insights from the masterclass have also been incorporated into this final handbook.

[1] *The endnotes are compiled on page 64*

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1. POSITIONING OF THE PROJECT

Reducing the energy consumption of the private building stock is one of the main tasks to fulfil the Flemish climate goals. This translates into a hugely challenging renovation task. Back in 2014, the Flemish Government drew up the Renovation Pact for this purpose, in order to develop a coherent action plan together with a broad group of stakeholders. This plan is intended to lead to greatly increased renovation rates and energy performance in line with European energy and climate targets. With regard to residential buildings, it was stipulated that, by 2050 at the latest, they must achieve a similar energy performance level to new-build homes with permit applications made in 2015.

The LIFE integrated project BE REEL! ran from 2018 to 2024 to ensure that Belgium remains on track to meet its renovation targets. As part of this project, in close cooperation with the project partners VEKA and the Kenniscentrum Vlaamse Steden, this handbook was drawn up to also support cities and municipalities in developing a local, long-term renovation strategy for the housing stock on their territory.

1.1 European targets

The goal of a climate-neutral Europe by 2050 is central to the European climate policy shaped by the European Green Deal. This ambition is in line with the efforts to be made according to the Paris climate agreement.[2] More concretely, the European Climate and Energy Framework 2030[3] puts forward the following key targets:

- Minimum 40% reduction in greenhouse gas emissions compared to 1990;
- A minimum 32% share of renewable energy in the European energy mix;
- A minimum 32.5% improvement in energy efficiency.

Greenhouse gas emission reduction targets are being reviewed by the Commission and proposals to increase the emission reduction target to 50-55% are in the pipeline.[4] For non-ETS sectors, including buildings, European Member States are asked to draw up an Energy and Climate Plan every 10-year period, as well as a long-term 2050 strategy.

Buildings account for 36% of total European greenhouse gas emissions. Eighty per cent of final energy consumption for heating and cooling comes from residential buildings.[5] Residential renovations will therefore contribute greatly to meeting European targets. The European Buildings Directive requires European Member States to develop a long-term strategy focusing on the renovation of buildings (previously contained in the Energy Efficiency Directive).[6] Moreover, in 2020, the European Union launched a new strategy titled 'A Renovation Wave for Europe'.[7] The strategy builds on existing European measures on energy and climate and aims to double annual energy renovations with a focus on energy poverty and the creation of economic added value in the construction sector.

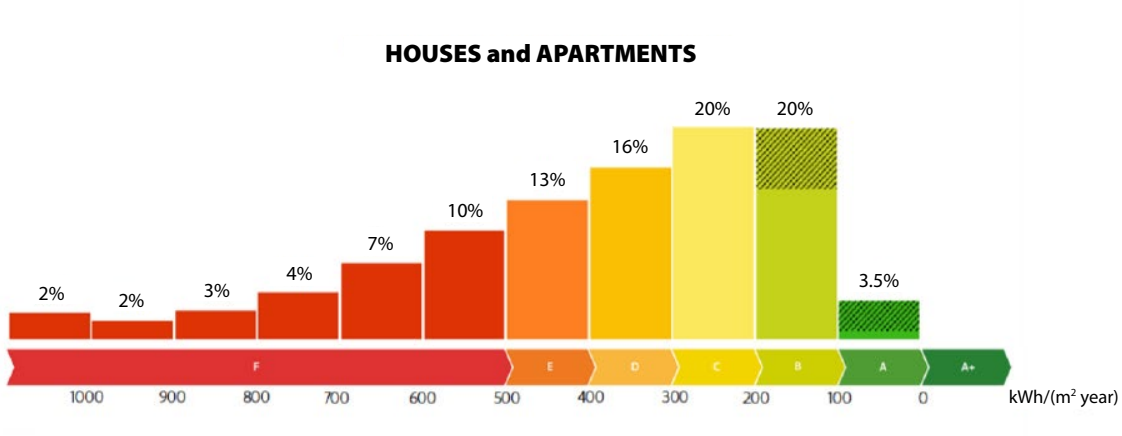
1.2 Flemish long-term renovation strategy

In Flanders, the European targets are being translated into the Climate Strategy 2050[8] and the Flemish Energy and Climate Plan with a horizon of 2030.[9] The buildings sector is responsible for 30% of Flemish non-ETS greenhouse gas emissions (2016), about three quarters of which are from residential buildings.[10] The Flemish Climate Strategy aims to reduce emissions from the Flemish public and private building stock to 2.3 MT $CO_{2,eq}$. The key building block to achieving this is improving the energy performance of the building envelope.

The Flemish Long-Term Renovation Strategy 2050 (LTRS)[11] frames the challenges of renovating residential and non-residential buildings and offers some strategic handles to increase renovation rates. For residential buildings, the central focus of the strategy is that by 2050, all homes must have a similar energy performance to new-build homes built in 2015. In terms of EPC, this is equivalent to achieving an A label.

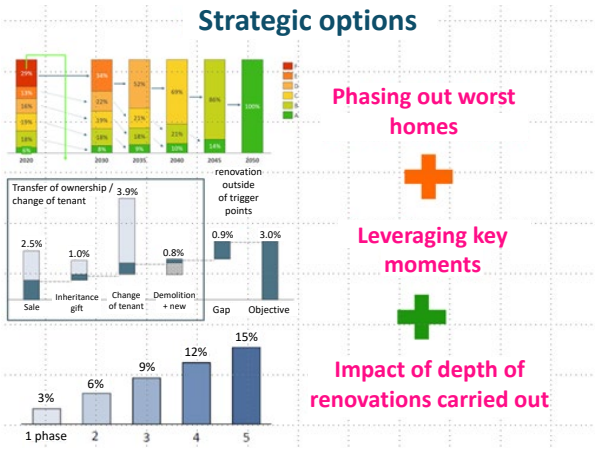
Getting all homes in Flanders to the desired EPC score of 100 kWh/m2 (label A) is a major challenge:

> **'Since currently, according to the data from the EPC database, about 3.5% of the existing housing stock of almost 3 million homes (houses and apartments) meets the target, 2.9 million homes still need to evolve towards the 2050 target (rounded up, 96.5% of the housing stock). This means that, if efforts are spread uniformly, an average of over 3% of the housing stock or over 95,000 housing units per year over the next 30 years must evolve towards the 2050 targets.'**
> *(Flemish Government, 2020)*



The renovation challenge in Flanders: Distribution of homes across labels. From Flemish long-term strategy for the renovation of Flemish buildings (2020)

Furthermore, the Flemish strategy identifies some strategic options to achieve the targets. Initial efforts can be made to **phase out the worst-performing homes**. These are the homes with the lowest energy performance, which need to be addressed most urgently not only from a climate perspective, but also from a comfort and living conditions perspective. For a strategic approach, this could involve leveraging **key moments**. These are times when owners often renovate: transfer of ownership, change of tenants and other renovations requiring planning permission. Lastly, the strategy is complemented by measures that **encourage thorough renovation independent of key moments**. This means convincing owners to renovate, and encouraging them to renovate as extensively as possible.



Strategic options for accelerating residential renovations. From Flemish Long-term Strategy for the renovation of Flemish buildings (2020)

1.3 Translation to local level

Flemish cities and municipalities also subscribe to the Flemish and European goals. In Flanders, 269 out of 300 municipalities signed the Covenant of Mayors.[12] This is a clear response to the European climate goals and a promise to take action. Flemish cities and municipalities are committed to emitting 40% less greenhouse gases by 2030 and to establishing a joint approach that combats climate change and takes measures to adapt to its consequences. The actions a municipality or city will take are included in a Sustainable Energy and Climate Action Plan ('SECAP').[13] These plans include measures to encourage energy-efficient residential renovations, but there is a need for a more structural approach.

This handbook meets that need. It helps local governments to map out the current situation, create a vision for 2050 and project this onto the situation today via backcasting. This clarifies where local tasks are and how they can be addressed over time. Thanks to references to other handbooks and tools, it provides handles to tackle these concrete tasks and monitor the progress of the renovation strategy.

2. RENOVATION STRATEGY AS A DYNAMIC PROCESS

A local long-term renovation strategy must be a dynamic and multi-layered document, anchored in local policy and supported by a multitude of actors. The challenges are great and there are no obvious solutions up for grabs. For this reason, we propose a process that starts with data and monitoring, is flexible enough to allow for quick adjustments and addresses both top-down policies and the systemic barriers therein, as well as possible levers to persuade individual building owners to take action themselves.

2.1 Why a local renovation strategy?

In the route to a climate-neutral society, there are many hurdles to overcome, ranging from increasing the supply of renewable energy, achieving greater energy efficiency to more economical fuel use and more. The Local Long-Term Renovation Strategy is just one of many strategies to be drawn up to achieve this transition. It must therefore fit in with the long line of other climate and sustainability visions.

Unlike policy themes on mobility or greening the public domain, for example, residential renovation has far less direct support available at local policy level. Renovation typically concerns **supralocal** (Flemish, Belgian, European) level, where the overarching objectives are set and most regulations and financial support measures are defined. On the other hand, it is also a very **individual** story, with property owners themselves having to take action to tackle and renovate their property. At first glance, local policy level mainly has a mediating role in familiarising residents with the supralocal obligations and support mechanisms and, through information and organisational support, giving that final push to actually renovate, and to do so with sufficient ambition. But there is more. There are a lot of barriers to visibly increasing renovation rates, in very different areas. **Socio-economically** (financially), there are many owners with not enough of their own funds that can be used for renovation. In **organisational terms**, collective renovations of apartments, for example, call for cooperation between owners with very different backgrounds and motivations, while in the case of rental properties there is a split incentive between an owner who makes the investments and the tenant who enjoys the extra living comfort. But it is not always obvious **from a technical point of view** either: which renovation scenario best suits the property in question, taking into account the economic situation of the owners and occupants, but also the spatial context of the building? Local policy level is best placed to identify such challenges and formulate solutions tailored to their own city or municipality.

The aim of a Local Long-Term Renovation Strategy is therefore firstly to identify the **local renovation challenges** (what is the state of the building stock and what changes are needed by 2050?) and the **renovation tasks** (where and with whom are the biggest challenges?). The measures that a local government then includes in the renovation strategy are measures that the government itself can take to encourage energy renovations among its residents. The measures aim not only to inform and raise awareness, but also to advise and guide, provide a carefree solution and certainly to follow up. The next page looks in more detail at the **customer journey** that citizens go through throughout a renovation process and why it is important to use policy measures to engage with all the barriers they may encounter through this process.

Of course, collective heating solutions and energy strategies also have an impact on renovation strategy. **Local heat, energy and renovation strategies must therefore support each other and there must be mutual information exchange.** Interaction between these strategies is necessary and must also happen at local level, where they are being developed. Finally, individual and collective renovations can also be embedded in an **area-based strategy**, linked to other measures that can be worked out locally to a large extent, such as mobility and public works.

2.2 Success factors

For a local renovation strategy to succeed, there are many things to consider. In chapter 4, we will go into depth on the process towards the renovation strategy and all its components, but let us start by defining some key success factors that will be necessary for the final strategy to really deliver visible change.

The main advantage of a renovation strategy at local level is that it can devote maximum focus on the specific tasks of a city or municipality. Often these are intuitively known by the Dienst Woonbeleid (Housing Policy Department) for example, but it is important to back up these assumptions with accurate data in order to arrive at a **good understanding of the specific characteristics of the city's or municipality's housing stock** and where they match or differ from other cities and municipalities. Therefore, we start the development of the renovation strategy with a comprehensive **data analysis**.

The local renovation strategy is also called 'long-term' and is thus by definition highly **time-related** and looks to the distant future (certainly where local policy level is concerned). We are talking about a global task to be tackled over the course of the next 25 years (or roughly 4 local legislatures), but at the same time so vast that major steps must be taken today if it is ever to succeed. So it is obvious that this must be done **incrementally**. But it also obvious that we must examine today whether what is planned for the next legislature is sufficient to reach the final goal by 2050. Therefore, the local renovation strategy is largely based on **backcasting the 2050 target to today's situation**.

Perhaps the most important success factor for an effective renovation strategy is the need for it to be **motivational**. All in all, it is not that complex to calculate the local task and translate it into sub-targets. The big question really is how to tackle this huge challenge and what concrete actions a local government can take to start increasing renovation rates. Therefore, the renovation strategy must first of all **identify concrete measures** and **put them into practice**.

Putting those measures into practice immediately involves two other essential success factors: the renovation strategy must be **embedded** in local policy and **supported** by local government. The development of a renovation strategy is often a task for the administration, but it will only be successful if it has political support and the actions included in it are also **translated into concrete policies**. This means translation into legislation, reserving budgets, releasing or hiring additional staff, and so on. It is a big task, so a renovation strategy is never non-committal and will always require far-reaching actions that require maximum support from all stakeholders. Lastly, work also needs to be done on an anchoring that **cuts across legislatures** so that sufficient continuity can be guaranteed over the 25 years the strategy will run.

As with all long-term strategies (just think of all the climate plans), it is almost impossible to estimate today what real impact a particular measure will have over a 25-year period. This is of course due to the long timescale and the fact that measures sometimes do not lead to real changes until much later - and often not directly but only in secondary order. It is therefore very important that both the measures and the local renovation rate are regularly **monitored and frequently adjusted**, based on the lessons that can be learned from one's own experience.

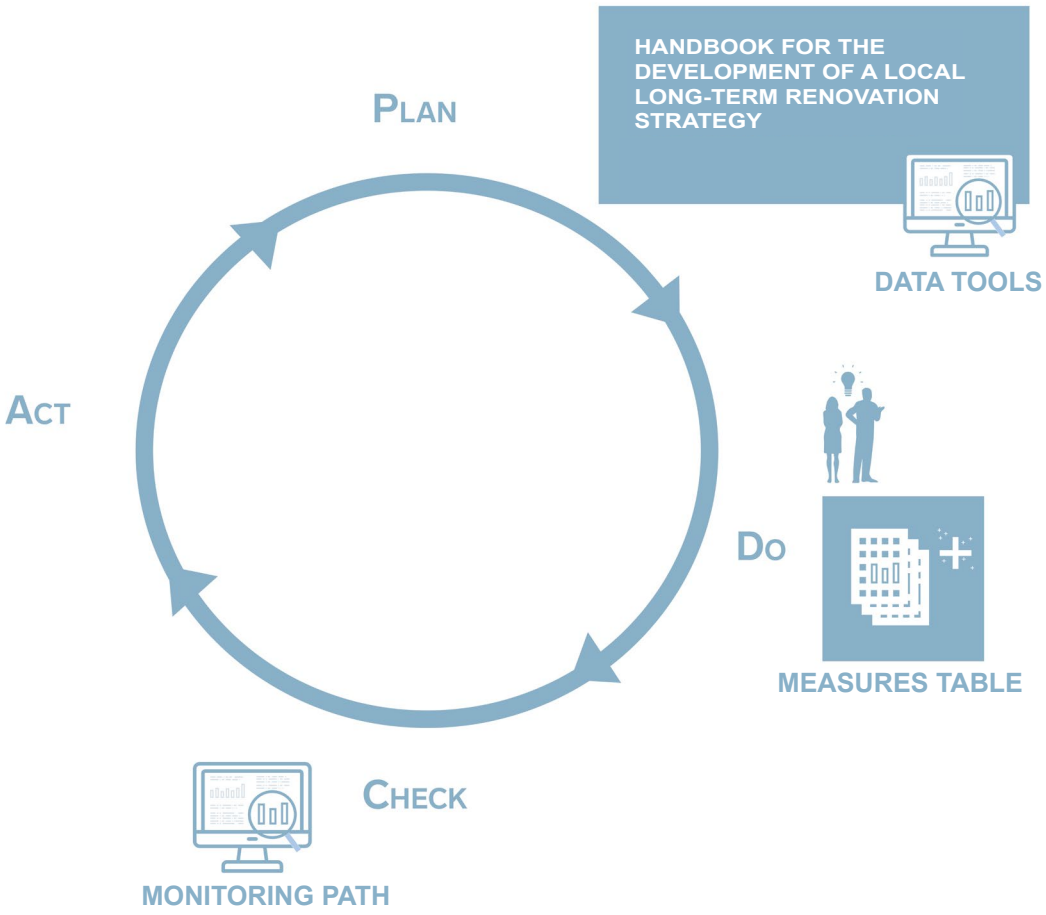
The focus of this Handbook is on individual cities and municipalities. Smaller municipalities, however, are certainly best seeking **regional aid**, from an intercommunal group, a province or an Energiehuis (Energy House) for example. We think it is important for each municipality to develop an individual renovation strategy so that this can be anchored in its own policies. But **intercommunal consultation and coordination** can help with the development.

2.3 LLTRS as a dynamic process

These success factors can be summarised in the following approach to the local long-term renovation strategy as a dynamic process following the PDCA cycle. It is composed of four interacting phases, which together form a cyclical process:

- **Plan**: measure and set targets
- **Do:** take action
- **Check:** assess results and progress
- **Act:** evaluate and adjust

This philosophy has been translated into the scenario we explain later in this report. In the Plan phase, everything revolves around mapping out the current situation and the goal (vision) for 2050, in order to define specific local renovation tasks. Then in the Do phase, we work with those insights to define measures to address those challenges. Using backcasting, we create a monitoring path that allows us to monitor the progress of the local renovation rate - this is the Check phase. This monitoring then ultimately leads, in the Act phase, to an honest evaluation, insights into how the local task is evolving and adjustments to the measures where necessary.

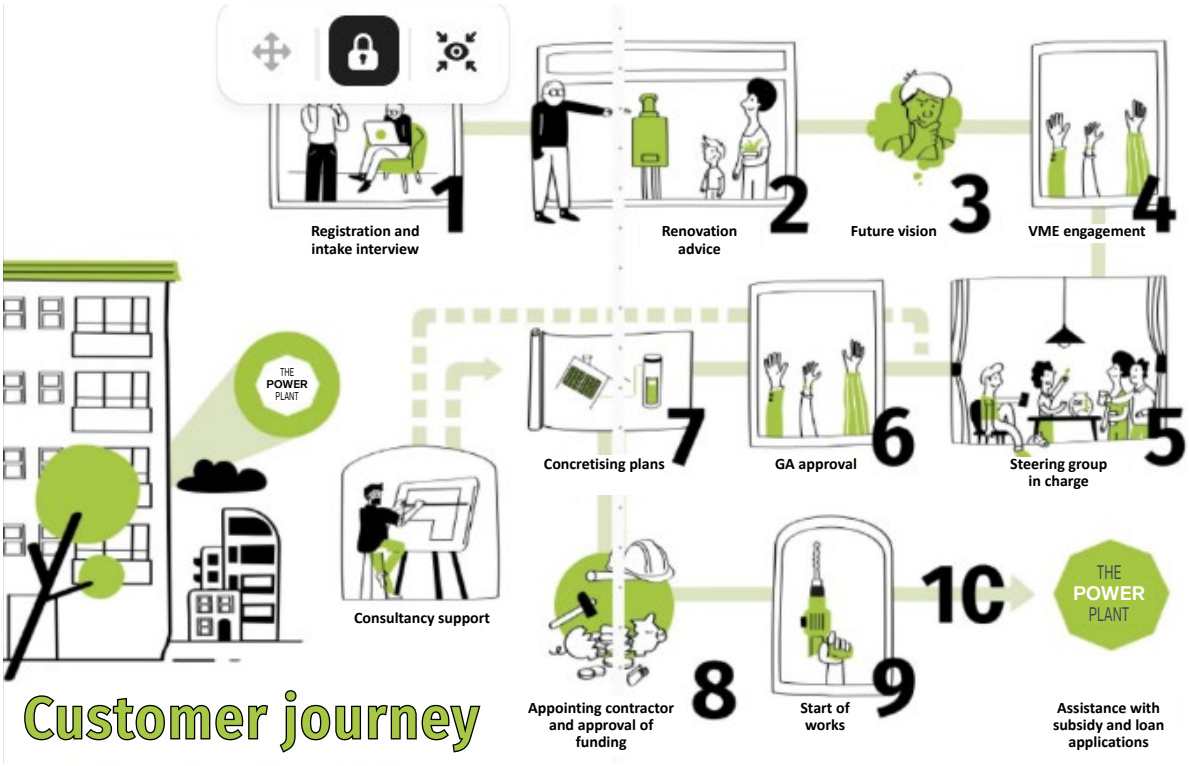


2.4 A person-centred renovation strategy: focus on the customer journey

One of the biggest difficulties in renovation policy is that what ultimately matters, renovating buildings, is almost always an individual action to be carried out, and usually financed, by the building owner. The government can only support, encourage, possibly partly finance this, but the implementation lies with the individual owner. Therefore, it is important to align policies aimed at increasing renovation rates with the individual customer journey each owner undertakes on the way to renovation.

Such a customer journey typically consists of a series of steps or phases, which each 'customer' goes through from the initial idea to renovate, and the search for technical solutions, financing and partners for construction, to the actual execution of the works. Each stage involves its own thought and decision-making process, and the 'customer' in question faces barriers to moving to the next step - but ideally also incentives to do so. A local renovation strategy therefore has the important goal of properly understanding this customer journey, removing barriers and creating additional levers to support as many homeowners as possible in completing the journey to the final stage.

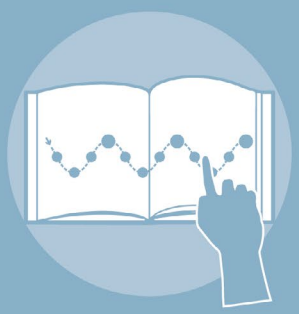
This is covered in detail in the 'One-Stop-Shop' scenario, which we explain in the next chapter. Such a One-Stop-Shop is designed to encourage owners to renovate and to act as an umbrella partner offering support at every stage of the journey. Below, we give as an example how De Energiecentrale (The Energy Centre) in Gent tackles this, from initial exploration and (technical) advice to help in choosing a contractor and applying for grants. However, this customer journey can also play an important role in the overarching local renovation strategy, as it can provide insight into where things currently go wrong for owners looking to renovate - pointing the way to barriers that need to be removed.



Ten steps to a collective renovation - customer journey from 'Draaiboek renovaties versnellen in appartementen', De Energiecentrale Gent (2023) (Handbook for accelerating renovations in apartments, by De Energiecentrale Gent) - see full report

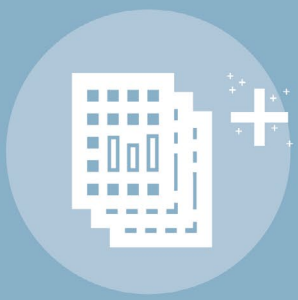
3. TOOLS THAT CAN BE USED IN THE DEVELOPMENT OF AN LLTRS

In this chapter, we discuss some tools and resources that can be used during the development of a Local Long-Term Renovation Strategy. These are documents and tools that can be found online and used at specific moments in the roadmap (see Chapter 4). We describe in that chapter how each of these tools can be used in a particular case.



1 Data sources for monitoring housing stock

2 Simulation tools for renovation policy



3 Handbooks on sub-tasks for in-depth study

3.1 Data sources for monitoring housing stock

To build a good picture of the local housing stock and its characteristics, there are several data sources that can be consulted. In many cases, local governments also have their own data, collected when developing a housing policy plan for example. Here, however, we discuss open source data that are publicly available and updated at least annually. In addition, historical data can also be accessed to evaluate the evolution in the recent past.

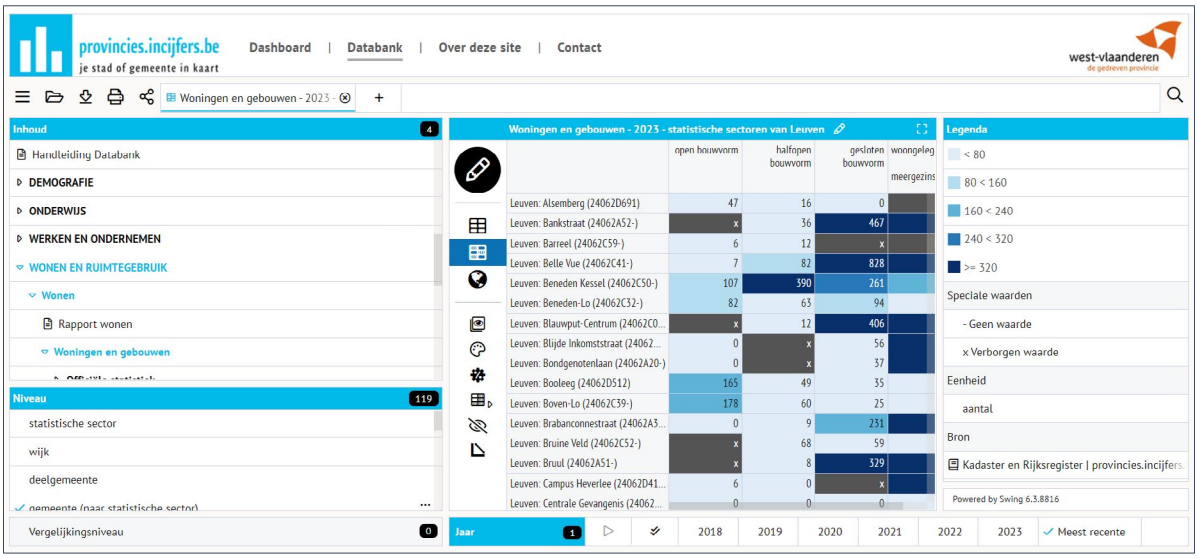
We only give a brief overview here of the two main sources and what data can definitely be found here to foster the local renovation strategy. However, we also wrote a note with more detailed explanations on the use of these sources, explaining more specifically how to search the data sources and giving our suggestions for ways of representing the data. A link to this note can be found on page 65. In part 4 of this report, we review how this can be used to build the renovation strategy.

Provincies in Cijfers (Provinces in Figures, 'PiC') is probably the best known and at the same time most versatile and richest Flemish database for social, economic and spatial data. The website is a collaboration between the five Flemish provinces and provides figures at Flemish, provincial and municipal level. Very often, it also provides figures at statistical sector level. Those figures often go back to 2012, so that the evolution over time can be shown, but the database also offers huge opportunities to make comparisons between municipalities and thus put the local data into the context of the rest of Flanders. Here is a list of some of the basic data needed to foster a renovation strategy, which can be found on PiC:

- the proportion of tenants (including social tenants) and owner-occupiers
- the proportion of apartments and ground-level houses, with a distinction being made between terraced, semi-detached and detached houses
- the year of construction of dwellings (and the ratio of historic to newer buildings)
- demographic and socio-economic data, such as the age, income class or family size of residents

These and other figures provide a quick initial picture of the characteristics of the housing stock in a municipality or neighbourhood. There are also a lot of data available in PiC on residential EPC labels. At the time of writing, these data are sometimes clustered (labels A, B and C combined, for example) so a complete picture is not possible. However, we note that already more detailed data are available in summer 2024 than were available six months earlier, so this could change quickly.

However, at present, for a complete and up-to-date picture of the renovation rate in the municipality, we recommend using the Energiesparen.be website, maintained by VEKA, which does show the EPC labels in detail. Here you can find how many labels A, B, C, D, E and F have been handed out per municipality in general, but also specifically per building type (apartments, terraced houses, detached/semi-detached houses). Historical data are also available, but these are not as interesting because EPC labels are a fairly recent phenomenon and also because, to date, not all homes have an EPC label (by mid-2024, in the whole of Flanders, around 31% of housing units had an EPC label). These can be extrapolated relatively easily to all housing units.



The website [Provincies in Cijfers] is the most complete, publicly available Flemish source for all demographic and socio-economic figures at local level

For information on EPC labels and an insight into renovation rates, the website [apps.energiesparen.be] is currently the most complete and up-to-date source

3.2 Simulation tools for renovation policy

The numerical databases cited above provide a good basis for mapping out the current situation in a city or municipality. However, there are other tools available that can be used to identify renovation challenges and also test out solutions. We highlight two important ones here.

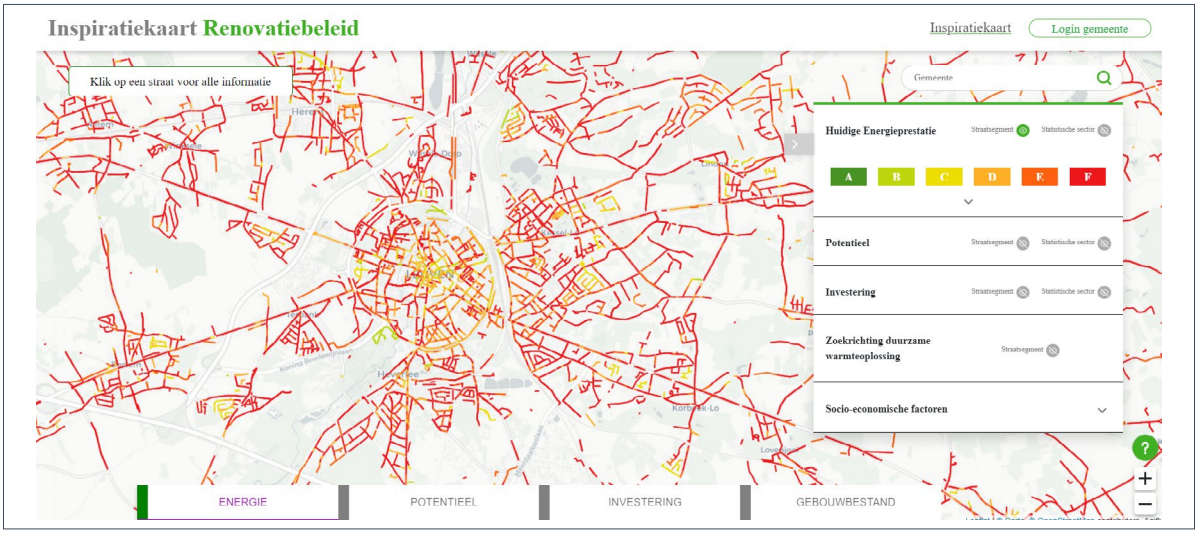
The Inspiratiekaart Renovatiebeleid (Renovation Policy Inspiration Map) is an online tool that can be accessed at www.inspiratiekaartrenovatiebeleid.be. Cities and municipalities can log in to the tool to unlock more functionalities. The Inspiration Map provides a detailed picture of energy consumption by buildings, down to street segment level (about five clustered dwellings). This energy consumption is translated into the same categories as the EPC labels, but concerns actual consumption, not the labels awarded. This usually means that the picture is more negative than that of the VEKA energy map cited above - more on this in part 4 (see pages 36-37). But there is more: those who log into the tool can test out different renovation scenarios for their own municipality and see what impact they have. Those scenarios are combinations of effective renovation interventions (e.g. roof insulation, replacement of windows, installation of PV panels or a heat pump), selected in such a way as to achieve a particular goal. Four scenarios are highlighted in additional detail:

- a 'maximum savings' scenario, with those interventions that together provide maximum savings after deduction of investment costs
- a 'not more than otherwise' scenario, where the savings on energy bills just repay the investment
- a 'label A' scenario, with those interventions required to achieve an EPC label A
- A 'maximum CO_2 savings' scenario, with those interventions providing the most energy savings

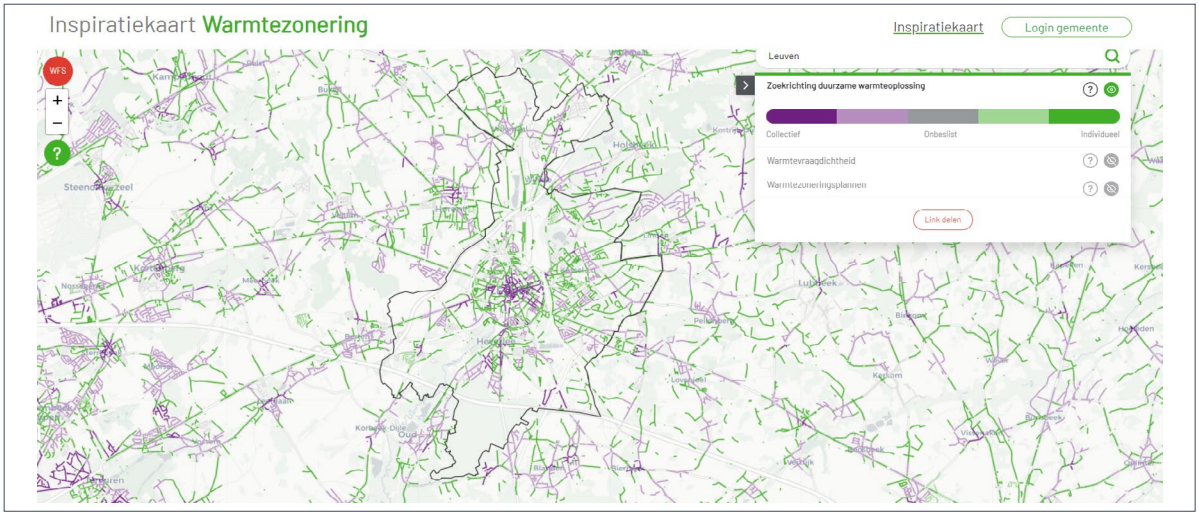
The Renovation Policy Inspiration Map is not intended to be used to determine which interventions must actually be carried out, but mainly to provide insight into what impact certain interventions have, on average, on energy consumption as well as owners' finances. At the same time, the tool can be used to map out local differences between different neighbourhoods and thus identify those neighbourhoods that are 'easier' to renovate because it is easier to find a business case for them, for example. Incidentally, the Renovation Policy Inspiration Map is a sister tool to the Heat Zoning Inspiration Map, which can be used to see in which streets or neighbourhoods a collective heat network might be feasible. Thus, a good link can be made between renovation policy and heat (zoning) policy. Both tools were developed on behalf of the VVSG Netwerk Klimaat (the Association of Flemish Cities and Municipalities Climate Network), with support from the Flemish government.

However, the Renovation Policy Inspiration Map approach also formed the basis for yet another tool, the Neighbourhood Renovation Tool. It was rolled out in the second half of 2024 and can also be accessed via a login for all municipalities. Where the Renovation Policy Inspiration Map gives a picture of an entire municipality, the Neighbourhood Renovation Tool allows you to demarcate a specific area yourself and apply renovation scenarios to it. Moreover, this tool possesses much more additional data (including demographic and socio-economic data) and there are many more possibilities to develop your own renovation scenarios, impose additional preconditions, etc. This tool is therefore ideal to start developing real renovation scenarios for a specific neighbourhood, to test out their impact on energy consumption and the associated costs and returns, what financial support might be needed to make them financially attractive, and so forth.

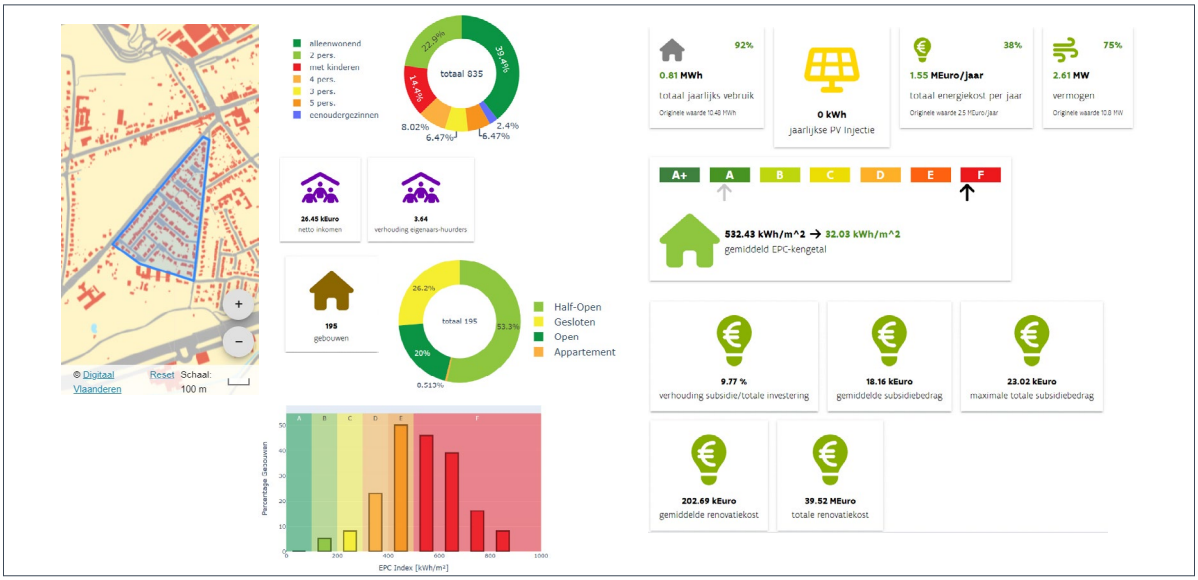
The Neighbourhood Renovation Tool also forms a duo with the Residential Renovation Tool, which can be used by Energy Houses, among others, to give homeowners personalised advice on renovation options for their property. Together, these tools feed a digital twin renovation database that will provide an increasingly detailed picture of renovation rates and challenges in Flanders.



The [Renovation Policy Inspiration Map] allows users to see, for the area of a city or municipality, not only what the current energy consumption is per building cluster, but also to test and compare different renovation scenarios.



In turn, the [Heat Zoning Inspiration Map] allows users to see, by street segment, whether this is suitable for a collective green heat supply.



The [Neighbourhood Renovation Tool] allows you to demarcate an area yourself, examine it in detail for energy and socio-economic characteristics, and also test and compare different renovation scenarios.

3.3 Handbooks on sub-tasks for in-depth study

Besides this handbook for the development of a local long-term renovation strategy, there are four other handbooks that can be used to shape local renovation policy. These focus on more specific tasks or solutions for residential renovation.

Development of a roadmap for renovations of properties in the private rental market

Link to the report

The first of these guides is the handbook for the development of a roadmap for renovating private rental properties. Rental properties constitute a very specific task in terms of renovation. Firstly, because the owners are not the residents here and therefore mixed interests are much more at play. But also because the private rental market is in many cases a very precarious housing market, where there are major challenges not only in terms of renovation but also in terms of living comfort or even habitability in general, without many investment opportunities in return. This handbook was also prepared as part of BE REEL!, in this case by a team led by the HIVA Research Institute for Work and Society at KU Leuven. It contains a comprehensive overview of the challenges of the rental market, a discussion of numerous measures from home and abroad that can increase the renovation rate of private rental properties, and a clear decision tree for local government to choose the appropriate measures for a specific task in this domain.

The study consists of three parts. The first reviews various measures and practices from home and abroad to increase renovation rates in the private rental sector. The discussion covers 17 domestic initiatives, including Pandschap (Pledge) or Wooncoop (Residential Co-op), and 15 foreign ones. The second part looks at 12 of these initiatives in more detail, including from the perspective of a social business model canvas. The initiatives are divided into 9 practices:

One-Stop-Shop with guidance
- from vacant properties to social housing with local (housing) actors
- from vacant or unfit housing to social housing through social management
- acquisition, renovation and (social) letting of poor-quality housing
- renovation tenancy agreements through SLAs
- renovation contracts through local authorities
- local subsidies
- pioneer model

The third section presents a guide to choosing between these practices, supplemented by these two:

- conformity certificate requirement
- facilitating energy communities

To this end, a decision tree is presented that takes into account, among other things, available budget, the focus of the local renovation policy (e.g. mainly energy performance or living conditions), the partners involved and the role the local government wants to take in all this.

Handleiding voor de renovatie van appartementsgebouwen (guide to renovating apartment buildings)

Link to the report

Besides rental properties, there is a second major challenge when it comes to renovating homes: apartments. Often the two overlap when it comes to rented apartments, but even owner-occupied apartments remain a complex issue. The main reason lies in the collective nature of apartment buildings, where a thorough renovation can almost never be done individually: it always requires cooperation between owners, often with very different profiles. Technically, renovation files for apartment buildings are also often more complex, while a traditional association of co-owners (VME) or property management agency has no real expertise in this. On top of that, apartment buildings often score slightly better in terms of EPC today, but certainly not well enough in slightly older buildings. This means that (often major) investments still have to be made to actually achieve a label A, while the savings are less if those investments are to be recouped within a reasonable space of time. In other words, there are fewer quick wins to be found and the business cases are more complex.

These and other barriers are discussed in detail in the 'Handleiding voor de renovatie van appartementsgebouwen', (guide to renovating apartment buildings), another study conducted as part of BE REEL!, this time by the team at Wattson. Besides barriers, the study also describes many measures at different policy levels that can encourage and facilitate the renovation of apartment buildings.

This guide begins by discussing in detail the pressure points that make renovating apartment buildings so difficult. Here, among other things, the comparison is made between the renovation of an apartment building and of a residential care centre. The difference in business case, actors involved and even energy profile make a residential care centre much easier to renovate. The report then looks at 14 Belgian benchmark projects involving the renovation processes for apartment buildings.

It includes both good examples and projects that did not really take off. It goes on to examine the renovation policies of the Flemish, Brussels and Walloon governments, focusing on policy goals, the One-Stop-Shops framework, the use of subsidies and the handling of taxation and financing options. Here, the differences between the three regions are striking.

The report concludes with 'What could be done better?', a comprehensive list of possible measures that could be taken at federal, regional or local level to facilitate the renovation of apartment buildings. At local policy level, these include:

- review of local regulations for possible impact on energy renovations
- vision for extension of apartment buildings
- linking local support to regional grants
- interest bonuses by local governments
- CLT (community land trust) approach
- developing a long-term vision

Guidelines for advice centres on residential renovation: an exploration of the One-Stop-Shop

Link to report

One of the important measures that can be taken at local level to increase renovation rates is the development of a One-Stop-Shop (OSS). This is an organisation or counter where owners with renovation plans can go for advice and support, based on the philosophy that you can go to one place for everything involved in such a process. This ranges from technical information and information on grants and loans, to carrying out home visits and working out initial technical concepts for the renovation itself, providing support in the search and appointment of contractors, etc.

At the same time, an OSS can also play a more active role by proactively communicating about the way they operate or even addressing owners personally and convincing them to take the step towards renovation. This can be done, for example, as part of an area-based project (collective neighbourhood renovation), when registering new owners after a sale, or by individuals actively looking for homes with high renovation needs or potential themselves.

The OSS guidelines study, again prepared as part of BE REEL! but this time by the Transition Stories team, provides an overview of dozens of OSS from home and abroad and the way they operate, with clear guidelines for setting up a local body of this kind.

The guidelines report begins with a description of what an OSS is (or can be, as there are numerous variants). The customer journey is always central, but there is a lot of variation in the type of service offered. This introduction is followed by a comprehensive sector analysis of 48 Belgian and 19 foreign OSS, including a fascinating comparison of practices in several areas: including the business model followed, the breadth of the offering throughout the customer journey, the mission (objectives) of each OSS, the type of organisation behind the

OSS, etc. Of the examples analysed, 10 are then examined in detail. This leads to a series of recommendations in terms of service delivery and providing a carefree solution, financing and operation, and reporting and monitoring:

- allow multiple energy scans per household
- target group-oriented communication
- professionalise housing and energy counters
- make link with living conditions
- cooperation with OCMW and Woonwijzer
- simplify administration of energy loans
- link data from the Flemish Government to application for energy loan
- focus on investment budgets rather than advisory processes
- create a unified access point
- build in automatic reporting
- set up CRM system

Getting started with the new Distress Purchase Fund (Noodkoopfonds)

We touched briefly on the private rental market and the precarious situation in which many rental properties and their occupants find themselves. However, a similar situation is also found among owners, although the properties are fewer in number, who fall under the heading of 'distress buyers'. These are people who buy a house with very poor living conditions, but have no funds left to invest in renovation. Specifically for this target group, the Distress Purchase Fund was set up several years ago, offering interest-free loans to these owners with conditions attached, as well as technical and practical support for the renovation process. In the first instance, this often involves making the building habitable, but of course it also includes energy renovation measures.

The Distress Purchase Fund is a Flemish measure that must, however, be introduced and supported by local government and the Public Centre for Social Welfare (OCMW). How that works is explained in detail in a clear handbook prepared by the VVSG. This handbook and a lot more information can be found on the VVSG website.

The handbook offers support and inspiration for local governments that want to get started with the Distress Purchase Fund, based on the experiences of Mechelen and the Province of Flemish Brabant, among others. The Distress Purchase Fund is a means of providing financial support to distress buyers, but always coupled with intensive technical, personal and practical guidance. Moreover, the Distress Purchase Fund is an opportunity where a great many areas of expertise can come together: social assistance, housing, energy, living conditions and combating poverty, energy poverty and child poverty. For this reason, it is a measure that requires great commitment from a local government and needs to be well prepared. Therefore, the handbook places strong emphasis on cooperation between partners and strong support within one's own local authority. An important point to consider is the role of the OCMW: they must be the formal coordinator who also submits the application, but in practice it may be a good idea to pass on

the practical direction to an organisation with more direct expertise of renovation guidance, such as the Energy House. In Mechelen, everything concerning the Distress Purchase Fund is followed up by the OCMW and the Energy House, in cooperation with SAAMO (formerly Samenlevingsopbouw), a renovation supervisor and specialists in technical screening.

Once the partners are known and the support is strong enough, the project application is ideally prepared together, a clear cooperation agreement is concluded and a process flow is agreed. Another key issue, of course, is funding. The handbook provides insight into the costs of each file (around €13,000 for construction advice, social assistance and coordination and administration), as well as how the funds can be found for the credit line itself.

In addition, the handbook also provides many practical tips on how to approach family recruitment and selection, among other things, and on the financial handling of the process. The Distress Purchase Fund requires a lot of commitment from a local government, but at the same time it is one of the best tools that currently exist to really increase the inclusiveness of renovation policies.

4. ROADMAP FOR THE DEVELOPMENT OF A LLTRS

In this chapter, we present a general roadmap for the development of an LLTRS. We go over the different stages and corresponding steps and how they can be developed.

READING GUIDE

This roadmap is the result of a participatory process undertaken with pilot cities and municipalities in two phases (in 2021 and 2023). In what follows, each step will be explained and - where possible - illustrated using cases in an accompanying boxed text that come from pilot municipalities from both phases.

The roadmap describes the planning process to arrive at a local long-term renovation strategy covering the period from now until 2050. To translate such a LLTRS into the local policy context, it is important to break down that long term into periods per legislature. At the transition between legislatures, there is then room for iteration and an update of the task. There will be four such iterations until 2050.

For each iteration, we envisage 5 steps:

1. a screening of the current situation and drawing up (or updating) the vision for 2050

2. a backcasting that projects the 2050 task onto the current situation and from which renovation targets are derived

3. a translation of the renovation targets into concrete policy tasks and targets for the current legislature

4. determining measures for the long term and for the current legislature

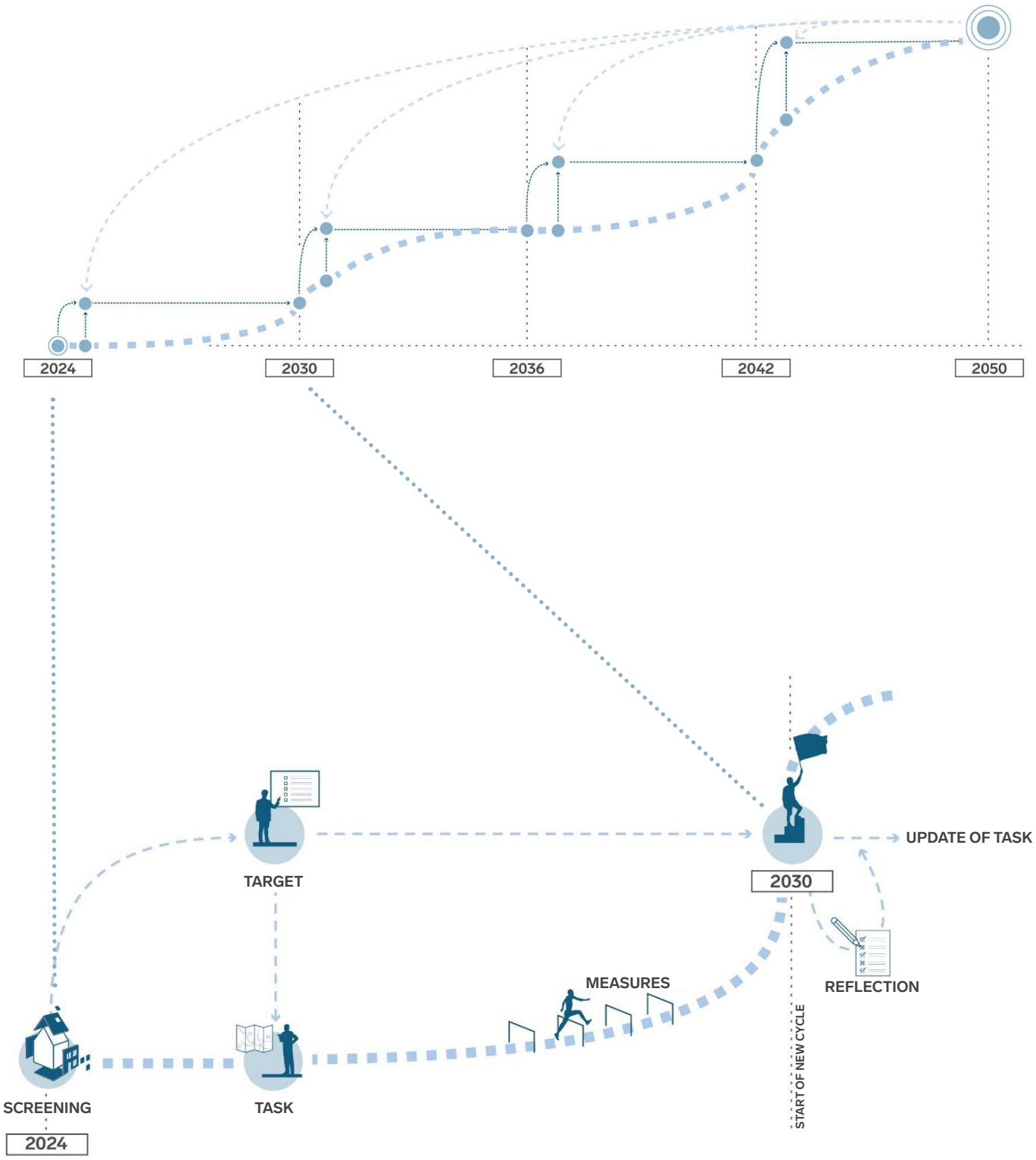
5. a reflection after each legislature as a minimum, updating of the task and new iteration of steps 1 to 4

The data used come from the public databases Provincies in Cijfers and the VEKA website Energiesparen (see Chapter 3), but can of course be supplemented with your own data or other sources. On page 65, you will find a link to a more comprehensive document explaining in more detail how both these databases work and how they can be used for an LLTRS.

To backcast with these data and create your municipality's 'monitoring path', an Excel tool can be used, also accessible via a link on page 65.

In addition, we also regularly refer to the other handbooks drawn up as part of BE REEL! which have already been introduced in Chapter 3. These will give more detail on specific sub-tasks or measures, notably the private rental sector, apartment buildings, the One-Stop-Shop and the Distress Purchase Fund.

ROADMAP


2024
2030
2036
2042
2050
TARGET
2030
UPDATE OF TASK
MEASURES
REFLECTION
START OF NEW CYCLE
SCREENING
2024
TASK

STEP 1: SCREENING

The first step towards a LLTRS is a broad screening of the current status of the municipality's housing stock, complemented by some sociological data, an analysis of the policy context and the formulation of a vision for 2050. Based on this screening, the municipality will get a good picture of the situation today and the desired future situation, so that in the next step a backcasting can be made to see how to bridge the gap between today and 2050.

1.1 Current status

Spatial structure

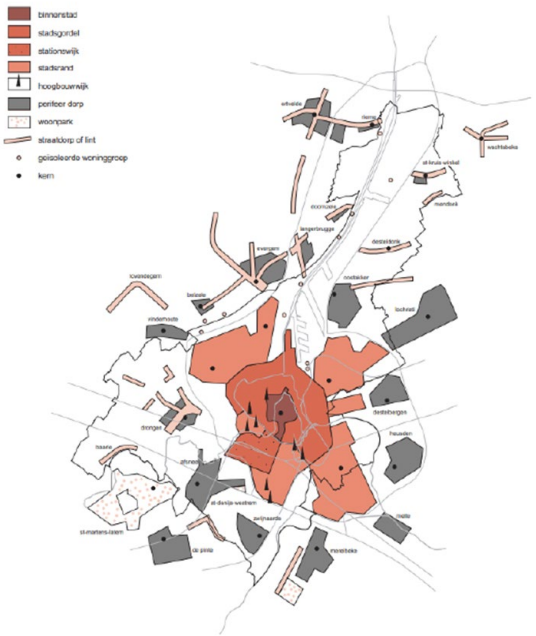
The spatial structure of a city or municipality can influence certain choices within the Local Long-Term Renovation Strategy. For example, different solutions may be needed for very dispersed rural housing versus housing within a highly densified neighbourhood. This not only has to do with (for example) the possible future vision of collective heating facilities; certain existing neighbourhood dynamics or planned works in the public domain within highly densified residential areas can also have an impact on the strategy. Here, it is not only important to visualise the current spatial structure but also the future desired spatial structure. Indeed, as a local government, it may be important to think about the desired future picture for outdated homes in the outlying area before deciding whether sharply ramping up renovation efforts of these homes must be a first priority.

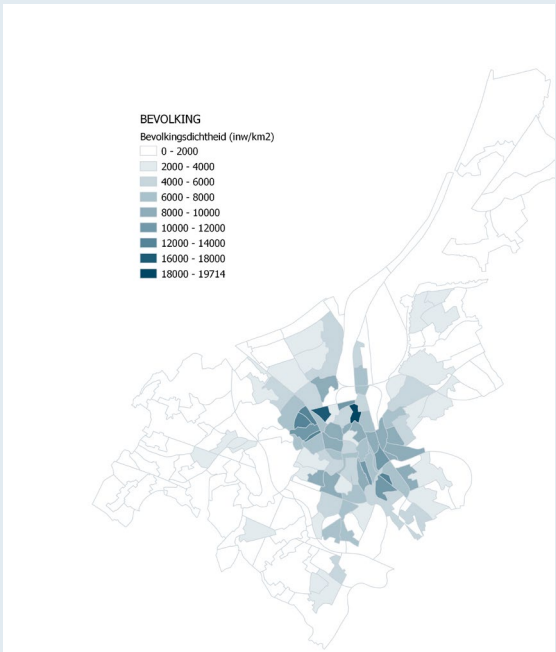
Map materials that can be collected for this purpose include:

- aerial photographs
- existing spatial structure
- desired spatial structure (structure plan, spatial policy plan, etc.)
- population density
- etc.

Spatial context in Gent

Most of Gent's population lives in the urban area. Besides the historic city centre, the station neighbourhood and the city belt, the urban area contains a number of neighbourhoods: Mariakerke, Wondelgem, Sint-Amandsberg, Gentbrugge and Ledeberg. There are also a number of population centres in the outlying area, where a certain population density can also be seen: Drongen, Sint-Denijs-Westrem and Zwijnaarde to the south-west, and Oostakker and Sint-Kruis-Winkel to the north.





To analyse the spatial context, we use data from the municipal spatial structure plan, orthophotos and population density by statistical sector (available via Provincie in Cijfers).

Housing stock overview

A second step in screening is an analysis of the existing housing stock in the municipality. These data can be found in the Provincie In Cijfers online database. On page 65, you will find a link to a note with more information on how to best use this database. The following information is important to get a good picture of the housing stock today, from a renovation perspective:

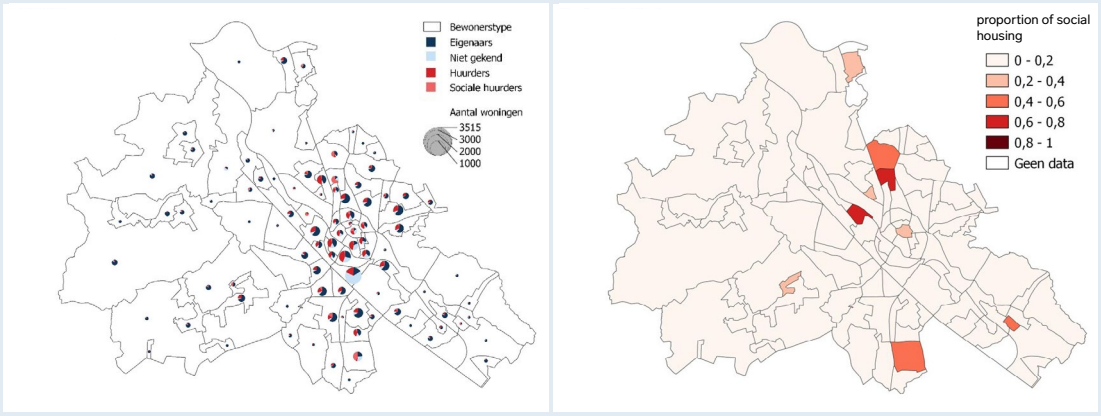
- Building type
- Year of construction of the property
- Occupant type

For **building type**, first and foremost the proportion of apartments compared to ground-level houses is important, as this requires a completely different approach from a renovation perspective. In the case of ground-level housing, the inter-relationship between terraced, semi-detached and detached houses is also of interest, as it gives an initial insight into the compactness of the buildings and thus their energy efficiency.

The **year of construction** gives an insight into the age of the buildings. Two things can be inferred from this. On the one hand, a neighbourhood with many new buildings will have relatively lower energy consumption. But the average age of buildings also indicates how much heritage can be expected in a particular neighbourhood. This could be supplemented by real figures on the heritage effectively protected or inventoried. However, it is important to note that the year of construction only gives information about the age of a building, and not about any more recent (energy) renovations. At present, it is not possible to retrieve structured information on renovation activities in a neighbourhood because these data are not kept in a coherent manner. With the permit register, this can possibly be remedied, but this requires an additional data exercise for each municipality. The way the permit register is structured determines the complexity of this exercise.

The **occupant type** is a determining factor in the renovation process, as rental properties require a fundamentally different approach than owner-occupied properties. These data can also be retrieved by statistical sector, although they are usually incomplete and there is a relatively large residual category where the occupant type is 'unknown'.

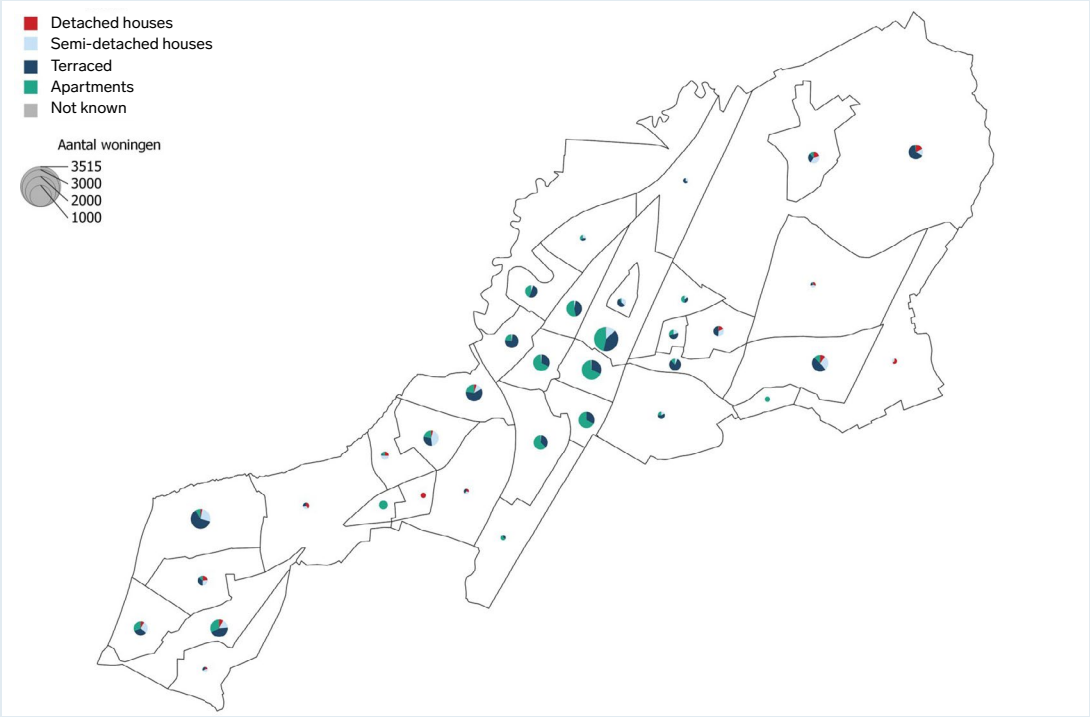
Occupant type in Mechelen

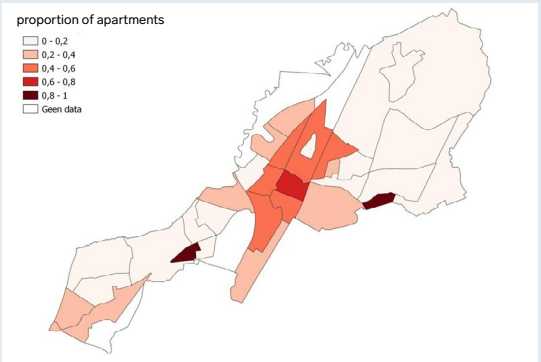


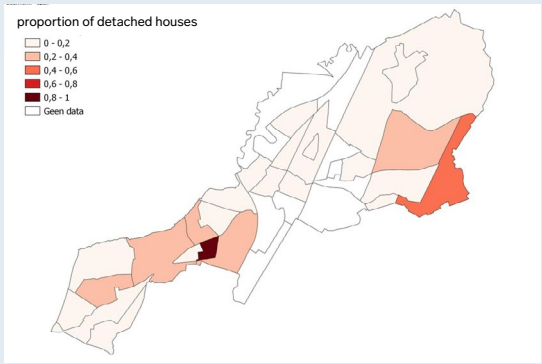
The map on the left shows the proportion of homes occupied by owners or by tenants as a pie chart, with the size of the chart showing the total number of houses. The map shows that there are lots of rental properties, mainly in the city centre, while the outlying neighbourhoods and villages are more likely to consist of owner-occupied properties. However, there is often also a significant proportion of 'not known'. The map on the right shows the share of social rental housing by statistical sector. Here, some specific neighbourhoods with 50% or more social rental housing are immediately recognisable.

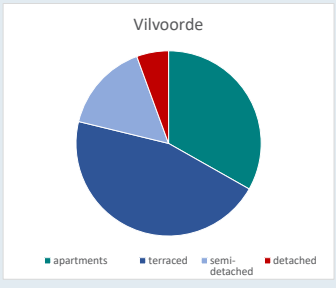
All data via Provincies in Cijfers, in-house processing in QGIS.

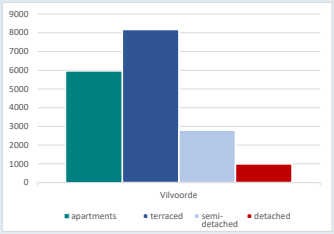
Building type in Vilvoorde







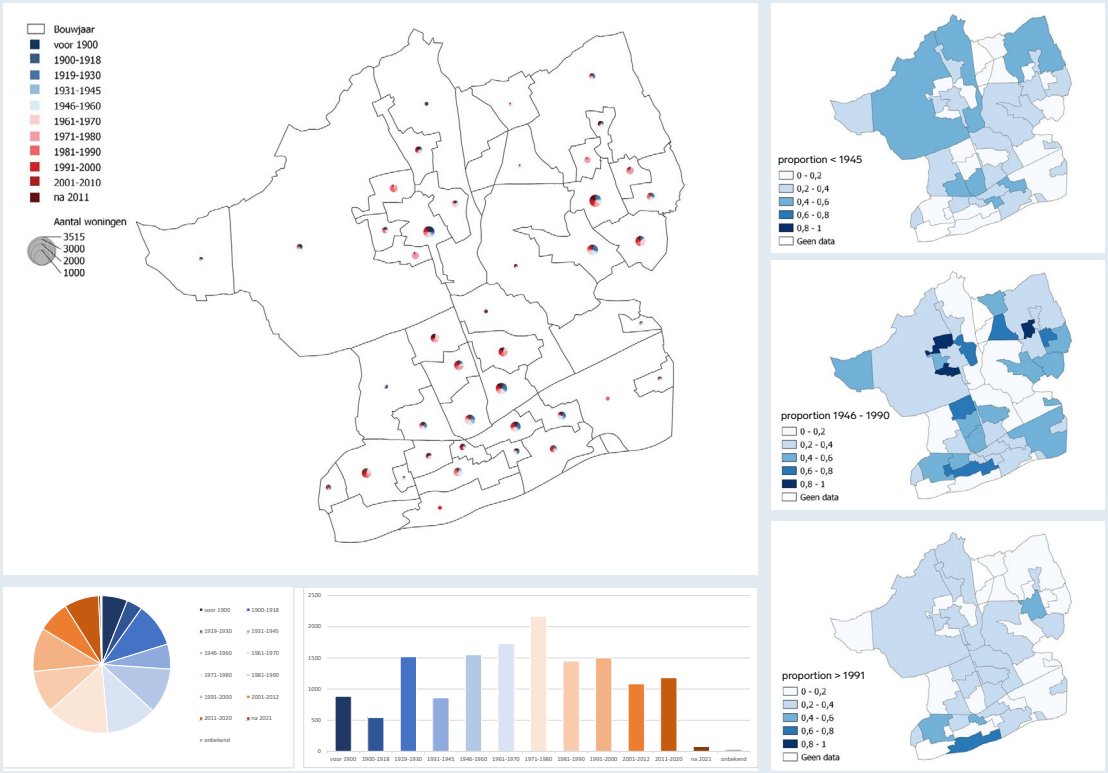




The map above shows the proportion of apartments, terraced houses and detached and semi-detached houses by statistical sector. Below them are maps showing the specific proportion of apartments (left) and detached houses (right), two building types that are found, in Vilvoorde, only in a few specific neighbourhoods. Apartments are mainly in the city centre and two specific 'high-rise' neighbourhoods. The number of detached houses is very limited anyway, concentrated in one specific district and in smaller proportion in some peripheral neighbourhoods. The charts to the side show the overall ratio for Vilvoorde, revealing that the city is mainly characterised by apartments and terraced houses.

All data via Provincies in Cijfers, in-house processing in QGIS and MS Excel.

Year of construction in Wevelgem



These maps show the proportion of old or more recently built dwellings by statistical sector, according to the year of construction. Maps, particularly the ones on the right, give a good picture of the neighbourhoods with mainly old properties (in Wevelgem these tend to be on the outskirts, just outside the village centres) and those with a lot of new homes.

All data via Provincies in Cijfers, in-house processing in QGIS and MS Excel.

In the illustrations on these pages, we show some of the options for processing the data from Provincies in Cijfers. Additional tips can be found in the note found via the link on page 65. When it comes to the architectural data we have discussed here, the relationship between the data is particularly interesting. The proportion of apartments, rental properties and/or older homes helps determine the specific renovation task a municipality has and which measures are best taken. So we are interested in the share of each category for the municipality as a whole, but the distribution by statistical sector is also an important starting point for becoming more area-based. We therefore propose to display the data from Provincies in Cijfers in three ways:

- distribution across the municipality as a whole, to see where the main tasks are located and compare with other municipalities;
- the distribution by statistical sector in the form of pie charts, to see by neighbourhood which task predominates;
- maps showing by task in which statistical sector that task is most present, in order to see in which neighbourhoods specific measures (e.g. for rental properties) are best focused.

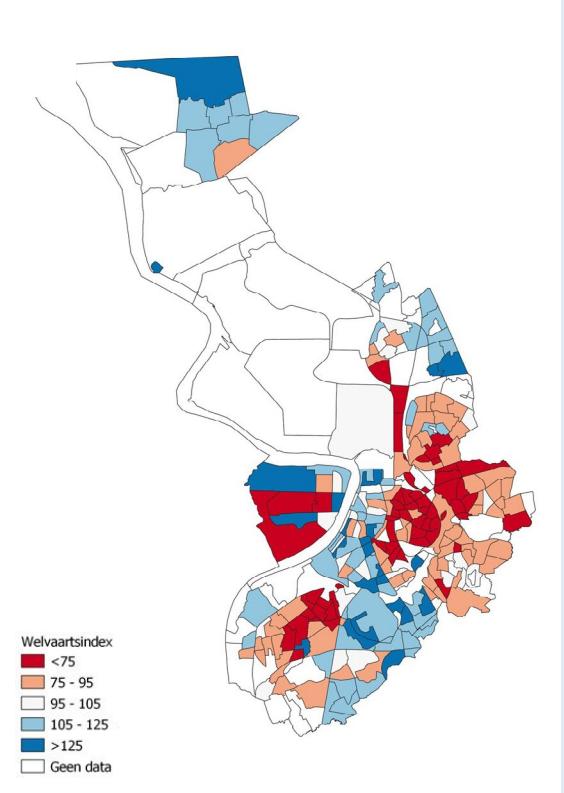
The boxes on this and previous pages illustrate these three views in more detail.

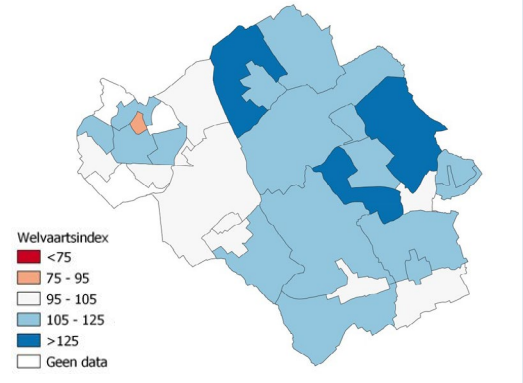
Socio-demographic factors

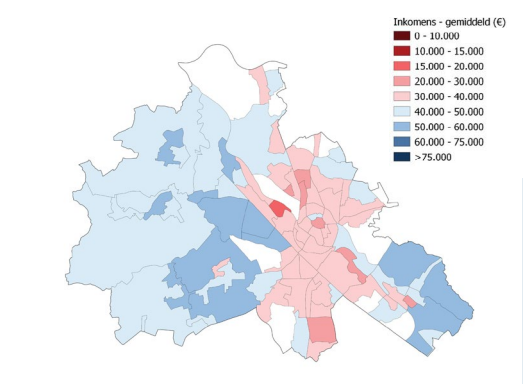
A final aspect of screening is socio-demographic factors. Age structure of the population, incomes, and the proportion of social (rental) housing are just some of the factors that can have an impact on the Local Long-Term Renovation Strategy.

This information can also be mapped out on the basis of Provincies in Cijfers, and is best done by statistical sector. Indicators that can be used for this purpose include the wealth index, which simply shows whether the average income of residents of a neighbourhood is above or below the national average. Other indicators include the number of residents over 65 (who are likely to be less easy to encourage to go ahead with thorough renovation) or family size (for large families, full renovation is more difficult to organise from a practical point of view).

Wealth index (Antwerpen and Anzegem) and average income (Mechelen)







To get an understanding of investment opportunities in a particular statistical sector, the wealth index or average annual income can be used. The wealth index provides a quick overview of economically weaker and stronger neighbourhoods, as the example of Antwerpen (map left) shows: socially weaker neighbourhoods such as Antwerpen Noord, Deurne and the Kiel immediately stand out, as do the financially stronger Wilrijk or Antwerpen Zuid. However, the wealth index is a rather crude indicator, as the example of Anzegem (above right) shows: many neighbourhoods fall into the same category. Therefore, one can also look at average income, as on the map of Mechelen (below right). Relative differences are visible here, but absolute values can also be read.

All data via Provincies in Cijfers, in-house processing in QGIS.

Energy performance

A key indicator to evaluate the current renovation rate of the housing stock is the energy consumption and energy performance of the properties. Two approaches are possible for this, which are best combined.

The energy performance certificate (EPC) is a document that shows how energy-efficient a building or residential unit is. All homes built or converted from 2006 onwards have an Energy Performance and Indoor Climate certificate (EPB), an energy certificate prepared for building projects, which counts as an EPC. In addition, since 2009, it has been mandatory to have an EPC drawn up when selling or signing a new tenancy agreement. Whereas an EPB contains detailed information on building materials and insulation values, an EPC is based on an energy reporter's visit to the property and will therefore contain more assumptions. Both certificates give an idea of the estimated energy consumption for heating the property. It is important to understand that this is a theoretical approach:

- the effective energy consumption of a home also depends on its use and the behaviour of its occupants;
- because assumptions are made in an EPC, inaccuracies or errors may be present in the calculation;
- An EPC is prepared by an energy reporter. Although they have to undergo compulsory training and a great deal of attention is paid to the objectivity and correctness of the methodology used to determine an EPC, in practice, different reporters sometimes produce different results. This is an issue that is high on the policy agenda and will hopefully be addressed in the near future, but even then, the EPCs issued in recent years must be looked at with caution.

EPCs are central to monitoring renovation rates, both in the Flemish government's approach and in following EU targets. They therefore play an essential role in the development of an LLTRS, and the method for monitoring we propose in step 2 (see page 45) is based mainly on this. To map out the EPC results for a municipality, the Energy Map on the VEKA website Energiesparen.be can be used. Here you can find the distribution of EPC labels by municipality, potentially broken down by building type. Since not all homes have an EPC yet, this is an incomplete picture, but the best currently available. Provincies in Cijfers also lists EPC labels by municipality, with an extrapolation of the effective labels to all homes in the municipality. However, this is only available in three categories: labels A to C, label D and labels E to F.

Besides EPC labels, there is another method to determine the renovation rate: the effective energy consumption of buildings can be looked at. The advantage of this method is that the three concerns for an EPC we set out above, do not then apply. The downside is that it requires more data processing and that even these data are not complete and often lack the right level of detail. Currently, only Fluvius data are available to understand energy consumption at municipality scale. These are only available for 'street segments' of 3-5 houses and still require a lot of editing to be reliably represented on maps. A good alternative is therefore the Renovation Policy Inspiration Map, which presents these data in edited form at street segment level for all of Flanders. This allows you to see the effective average annual energy consumption per m² for all residential street segments. Employees of local governments with a login can also download these data and process them themselves. Some points of interest are also needed here:

- unlike with an EPC, the Inspiration Map does not take into account the energy production by PV panels that is fed into the grid. This means the Inspiration Map gives a slightly higher energy consumption than an EPC calculation would;
- although because the Inspiration Map uses actual consumption data, it does show real usage and behaviour. In practice, this, too, tends to yield higher consumption than the estimated EPC results;
- a lot of assumptions and estimates are necessarily made when processing and aggregating the data. However, the final data are calibrated, so this should only have a minimal impact. Here, we refer to VITO for more information on the correct calculation method. They carried out the data processing.

Because the Inspiration Map displays data by street segment, it creates a very detailed map that can also be used for area-based work. However, we recommend downloading the data for this purpose and editing them yourself in GIS so that the legend can be refined to better represent the details.

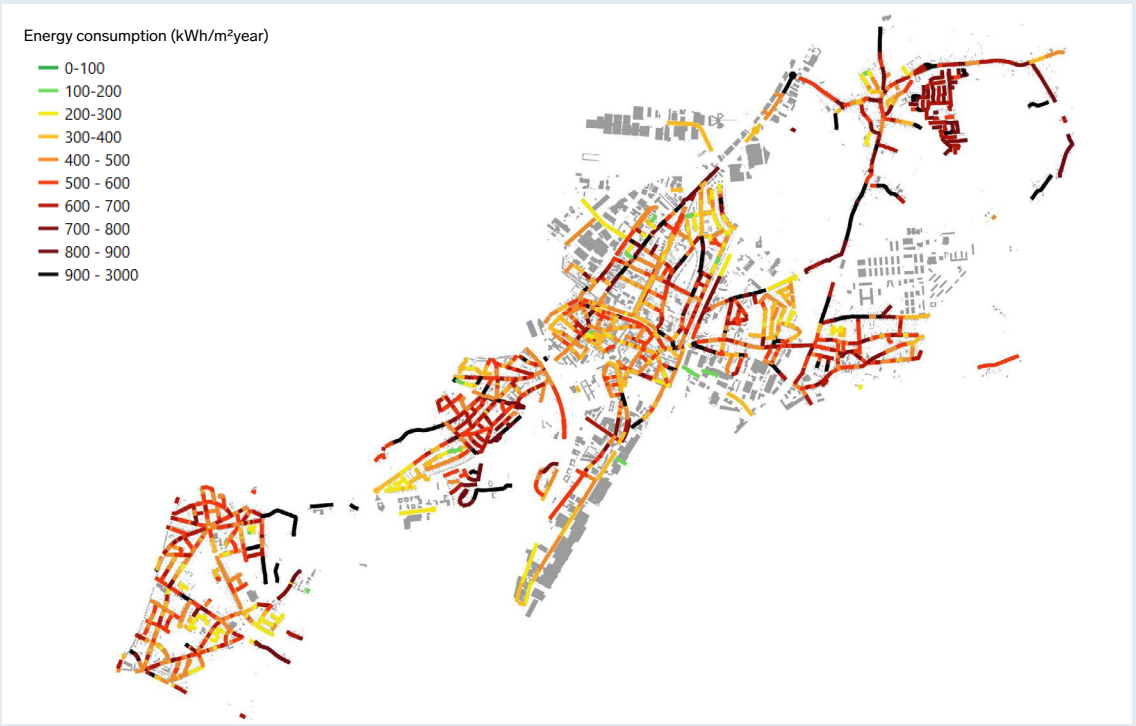
Anyone who puts the data from the Inspiration Map next to that of the Energy Map's EPC label distribution will see strikingly large differences between the two. We have already tried to indicate above the possible causes of this divergence. However, the most important seems to be in the distinction between the 'theoretical' approach to EPC and the 'real' consumption data. One constant is that the Inspiration Map fairly consistently paints a more negative picture of energy performance than the EPC labels suggest. This shows that even with high EPC labels, we still do not necessarily have an energy-neutral housing stock. Because Flemish and European climate and energy policies focus on the EPC labels, we will mainly focus on these labels later in this roadmap. However, it remains useful to include the data from the Inspiration Map in the exercise as well: firstly, because of the area-specific nuances and higher level of detail, but secondly as an additional test.

EPC labels in Leuven and Anzegem

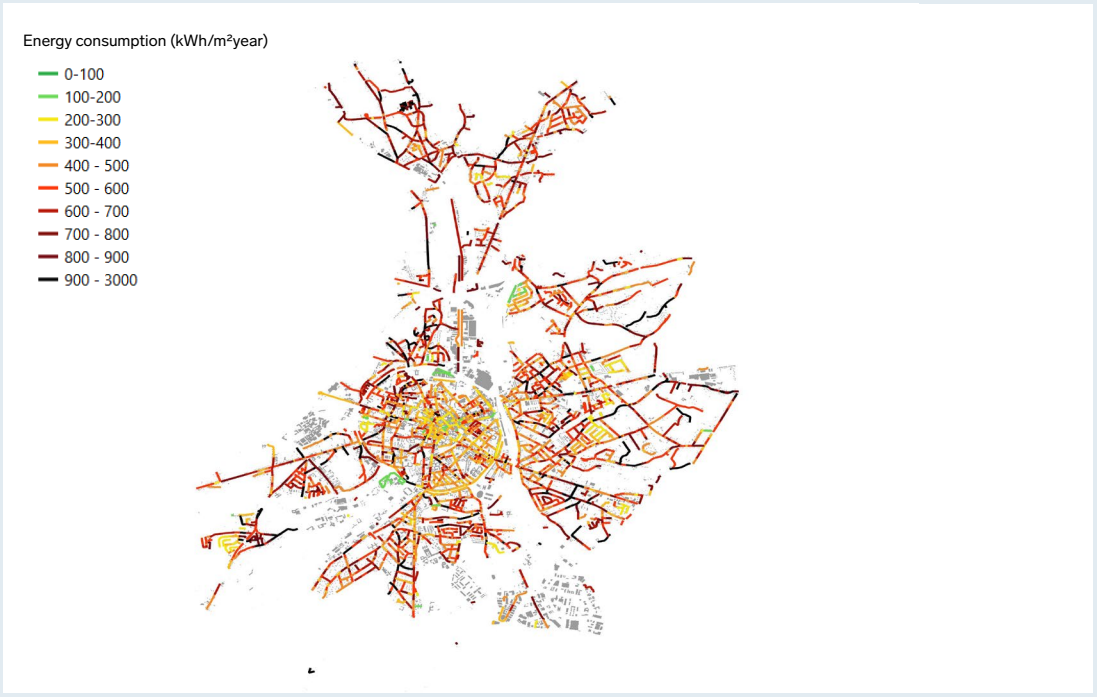
The graphs above show the distribution of EPC labels for city of Leuven and municipality of Anzegem. Left for all properties combined, right by building type. With the graphs on the right, it is important to combine them with the distribution of building types. Because although 45% of apartments in Anzegem achieve a label A or B, the municipality has only 13% apartments. And even though more than 45% of the detached and semi-detached houses in Leuven are labelled E or F, only 14% of homes belong to this category.

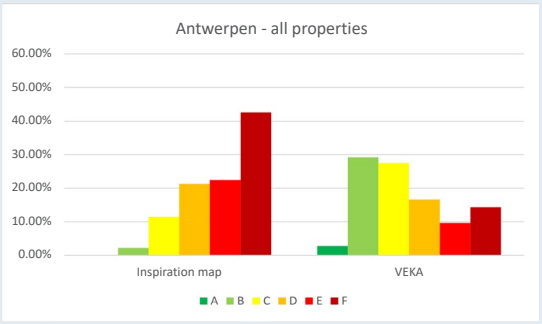
Data via Energiesparen.be, in-house processing in MS Excel.

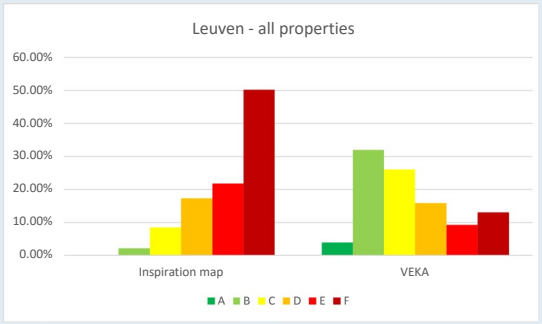
Energy consumption (Vilvoorde, Antwerpen, Leuven, Hoogstraten, Anzegem)

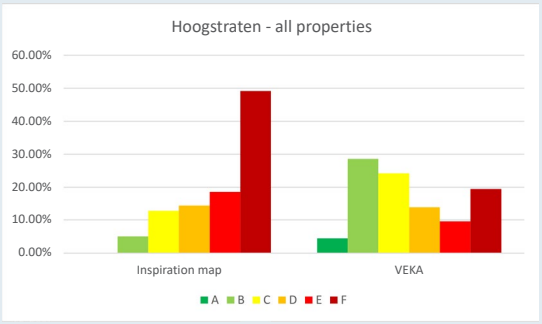


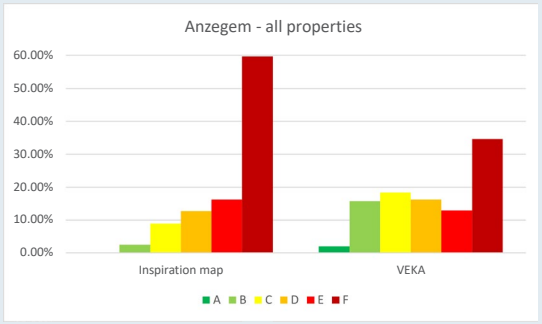
To properly reflect the energy consumption shown on the Renovation Policy Inspiration Map, we recommend you download the data and expand the colour legend to allow more nuance in the range between 500 and 1000 kWh/m²year. The maps above of Vilvoorde show the original colour legend above, and the modified one below. It is also important to always remember that these values cannot be directly compared with the EPC labels, as they refer to actual consumption, and not the estimated consumption calculated











according to the EPC methodology. Comparing the consumptions according to the Inspiration Map with the EPC label distribution on the VEKA website energiesparen.be makes this immediately clear: there is a huge discrepancy between the two when displayed according to the same scale. Therefore, we recommend working mainly with the 'official' EPC labels for the development of local renovation policies, and using the Inspiration Map to look at local differences in an area-specific way and start identifying 'strong' and 'weak' neighbourhoods - as in the Leuven map above.

Data via Inspiratiekaart Renovatiebeleid and Energiesparen.be, in-house processing in QGIS and MS Excel.

1.2 Context & policy

Achieving a Local Long-Term Renovation Strategy is related to various policy areas and must be approached that way from the start. Besides energy and heat policy, aspects concerning spatial planning (densification, core consolidation, vision of demolition, etc.), housing policy, target group policy, and so on, are also important.

At the same time, this is an occasion to also identify stakeholders. Which local government departments can and must be involved, with which external parties are there already collaborations and who is already active on topics such as renovation advice, (collective) green heat, housing and poverty policy, and so on?

Finding synergies between existing policy initiatives and policy initiatives under development on the one hand and the renovation strategy on the other can bring benefits. This connection is necessary, especially as far as heat policy is concerned. However, transitions within other policy domains can also provide starting points for implementing the LLTRS, for example, in plans to upgrade a particular neighbourhood or a link between plans related to poverty and energy poverty.

Hoogstraten's policy context

Hoogstraten identified several aspects on the policy context that are or may be relevant for developing the LLTRS. Initially, they cited the main themes from the Covenant of Mayors, supplemented by the initial insights from the heat plan being developed, the points of interest to be taken into account from the Spatial Policy Plan (in development), as well as the housing policy and the target group policy.

1.4 Policy context

Achieving a local long-term renovation strategy is related to various policy areas and must be approached that way from the start. Besides energy and heat policy, aspects concerning spatial planning (densification, core consolidation, vision of demolition, etc.), housing policy, target group policy, and so on, are also important.

For Hoogstraten, the aspects below are important in expanding its long-term renovation strategy:

1.4.1 **Renovation strategy and energy and heat policy**

- *Covenant of Mayors: city's climate policy*

The city renewed its commitment in the Covenant of Mayors in 2019. Together with all the other Kempen municipalities, the city is part of the Kempen 2030 partnership, under the coordination of IOK.

The total share of household emissions compared to total CO2 emissions in the territory of Hoogstraten is rather limited compared to the share of industry and agriculture and horticulture. The latter two economic sectors in particular have seen an increase in CO2 emissions. However, given the government's higher governing role on housing policy, the climate impact of existing housing does constitute an important pillar within local climate policy. From the climate policy perspective, a number of important actions have been launched and anchored in the city's services, such as the housing counter, the home visitor and neighbourhood visits. The city is currently working on a new climate action plan, ready in summer 2021.

CO, emissions in tonnes - Hoogstraten			
	2011	2018	2018 share
Households	36,247	28,290	14%
Total CO2 emissions	172,065	203,909	

Table 3: Household CO2 emissions from housing and total CO2 emissions in Hoogstraten

(source data: Hoogstraten climate report, Provincie in Cijfers)

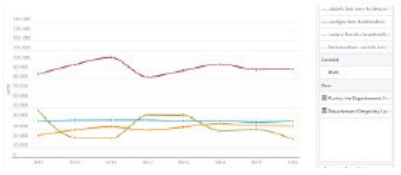


Figure 1.9 Energy consumption by households by energy source in Hoogstraten (2011-2018)

(source data: Hoogstraten climate report, Provincie in Cijfers)

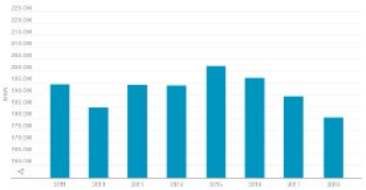


Figure 1.10 Evolution of total energy consumption by households in Hoogstraten (2011-2018)

(source data: Hoogstraten climate report, Provincie in Cijfers)

Between 2011 and 2018, total energy consumption by households in Hoogstraten fell by 7.1%. In comparison, in Antwerpen (Prov.) and the Flemish Region, we see the figures evolving by -8.6% and -10.3% respectively.

In 2018, electricity consumption accounted for 20.9% of total energy consumption in Hoogstraten homes. Fossil fuels accounted for 60.9% of energy consumption. **A major challenge, besides additional production of green power, is switching to green heat**.

- *Hoogstraten heat plan*

The heat plan sets out a future vision for the transition from fossil to renewable heat in the city's territory. It starts from the assumption that there will still be residual heat demand in 2050 and indicates how we can meet that heat demand in the most cost-optimal way. Both individual and collective heat concepts are represented.

Heat and renovation policies influence each other mutually:

- On the one hand, the expected renovation rate of residential and tertiary buildings has an effect on the expected future heat demand;
- On the other hand, detected zones for collective or individual heat systems have an effect on the desired, cost-optimal renovation rate of the home. Where collective heating concepts are not feasible and/or desirable, the transition must be completed in another way, for example through extensive insulation with electric heating.

Hoogstraten's heat zoning has been mapped out but is obviously not an end in itself. It serves as an instrument with which the various policy areas (spatial planning, housing, public domain, etc.) can set to work shaping concrete policy and giving targeted and well-founded direction to investments, based on the new insights: and thus working towards an overall heat plan. Rolling out the heat policy and concrete research on clusters is planned for 2021 - 2022.

Heat zoning map of Hoogstraten in the event of an increase to 1,431 housing units in 2050 with a 3% renovation rate

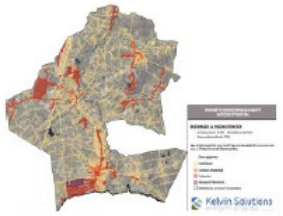


Figure 1.11 Heat zoning map of Hoogstraten

in the event of an increase to 1,431 housing units in 2050 with a renovation rate of 3%

1.4.2 **Other policies that are or must be related to the renovation strategy**

- **Urban development:** Interplay between spatial policy plan population forecast and how and where additional housing will be provided.
- **Housing policy:** The city's housing policy focuses on two goals: ensuring basic living conditions for all and an increased rate of renovation of the existing housing stock. The city's measures for basic living conditions also have an indirect (albeit small) effect on the renovation rate.

Basic living conditions measures

FINANCIAL	- Municipal grant for basic living conditions for works in the home aimed at achieving a minimum level of basic living conditions - Municipal grant for adaptation for minor adaptations aimed at increasing the comfort of elderly people in their own homes
TECHNICAL	- Mediating and following up on applications for conformity certificates and housing checks
COMMUNICATION	- Information evenings on renovation and obligations, for tenants and landlords - Accessible housing counter for first-line help and mediation (hygiene rules, overcrowding, domicile fraud, etc.)
POLICY AND REGULATION	- Levy rules on vacant and neglected houses - Levy on second homes - Mandatory certificate of conformity for properties on the private rental market phased in from 2022.

- **Target group policy:** In Hoogstraten, we like to tailor our work wherever possible to our residents' housing needs. Therefore, new forms of housing or customised housing for residents are often a solution. Pending a Flemish and in-house framework, we are currently responding to residents' needs and implementing pilot projects.

Measures:

FINANCIAL	- Energievreetbonnen (energy guzzler vouchers) to tackle the biggest energy wasters in the home, aimed at target groups (see also target group policy above)
TECHNICAL	- Care home pilot project: effective setting up of two care homes, provision of a carefree solution and development of a framework for temporary care homes - Pilot project start-ups and restarts: housing forms tailored to target group
COMMUNICATION	- Information sessions and personal advice on energy conservation for residents of emergency and transitional housing
POLICY AND REGULATION	- Study on unadapted housing among the elderly: mapping out + detecting measures - Private rental market discrimination hotline

1.4.3 **Existing stakeholders**

Departments involved:

- Dienst wonen (Housing Department): home visitor (housing) and administrative assistant
- Dienst Samenleving (Community Department)
- Staff member sustainable development
- Dienst stadsontwikkeling (Urban Development Department)
- Social services

Partnerships:

- Camp C: projects, citizen's planning advice and training
- **Intercommunity Development Company for the Kempen (IOK): on a project basis: joint procurement, campaigns, etc.**
- WEB asbl: energy savers
- local professional construction sector installers and contractors participate as experts in neighbourhood visits with Fabrik Elentrik: they provide independent technical advice
- Community development: on a project basis
- Kempen housing platform (almost exclusively concerning basic living conditions)
- Kempen Energy House - possible future partner

Dwelling on the most relevant aspects from the policy context avoids the renovation strategy being drawn up from too one-sided an approach.

Identifying existing and potential stakeholders (both local services to be involved and collaborations with external private and public partners) is also best done from the start. These can play an important role in the feasibility of realising an LLTRS. Added to this, in area-based projects the citizens are also important actors who need to be involved through citizen participation.

ENERGIEhuis KEMPEN

IOK

Kempens Woonplatform

2050 CHALLENGES

Central to the Local Long-Term Renovation Strategy is the 2050 challenge, i.e. the ambition that local government must aim to renovate the housing stock in line with the Flemish targets. That renovation task is key, but planning for 2050 is of course about much more. To make the future vision of the renovation strategy more compelling, we therefore propose to develop a broader 'vision' for 2050.

1.3 Vision

In itself, the 2050 target is simple: an EPC label A for all homes and completely fossil-free heating. This is Flanders' transposition of the European energy and climate targets and the version on which our entire renovation policy is currently focused. This target is therefore central to the development of a local long-term renovation strategy. As we briefly touched on above, some questions can be raised about EPC labels as a central factor in renovation policy. They are not (yet) always reliable as a measure of actual energy consumption. For apartments, it also appears unfortunate that an individual renovation target is being imposed on them, when it would be better to look at solutions collectively. But questions can also be raised as to whether a far-reaching renovation to label A is the best solution for all homes. Anyone who experiments for a while with the tools of the Renovation Policy Inspiration Map and the Neighbourhood Renovation Tool (see Chapter 3) will notice that the investments required for an EPC label A are actually disproportionate to the energy gains on a regular basis.

This is no secret and the debate on the matter is still in full swing - but the choice has also been made, rightly, not to wait for definitive answers, as the need for solutions is great and time is short. So, for now, we are sticking to this key target and focusing our renovation strategies on it. But it seems essential to be prepared at this point for any shifts in approach in the future.

That is why we advocate starting from a vision that is broader than this single objective during the development of the local renovation strategy. It pays to focus sufficiently on what we really want to aim for in housing, energy and spatial policy in 2050. Energy conservation and climate neutrality - yes. But perhaps maximum living comfort, sustainable and green neighbourhoods and an inclusive society that leaves no one behind? Starting to define the 2050 targets more broadly creates a lot of gains:

- a broad, inspiring vision can enthuse more people and has greater support than one that focuses purely on renovation and EPC labels;
- linking renovation policy to target group and spatial policies, among other things, creates collaborations that can help in implementing the strategy, to free up capacity in planning or find funding for certain initiatives for example;
- should major changes happen in the future in the way Flemish renovation policy is pursued, a broad vision guarantees that the measures already taken will have delivered great added value anyway, as they target a wider range of gains.

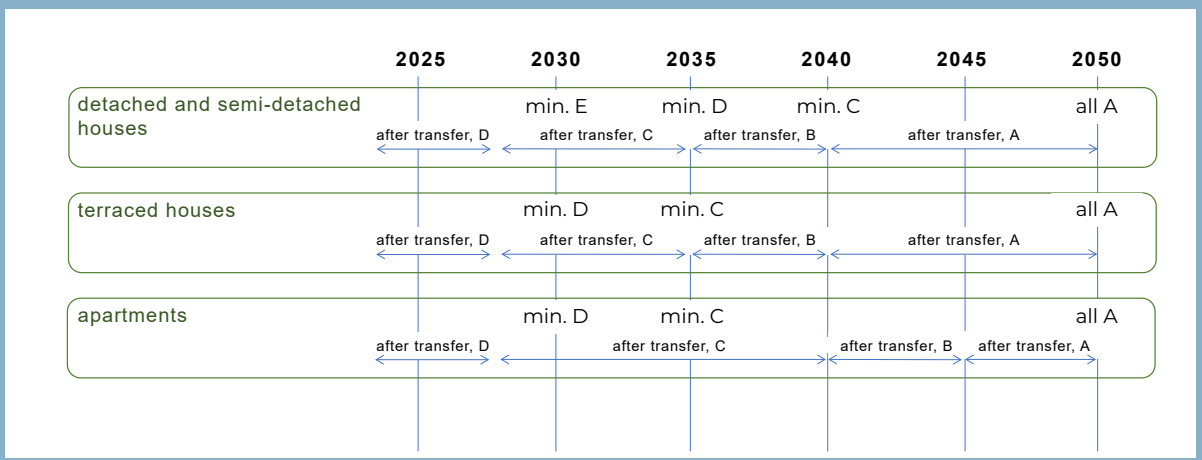
We therefore propose to conclude the screening phase of the renovation strategy with the development of one such broad vision for 2050 - based on the renovation goals of 'all homes label A with fossil-free heating', but also with attention to living conditions, vulnerable groups, liveable, green and pleasant neighbourhoods, etc. The development of this vision is being done collectively, as a joint exercise between the administration's various departments together with policy. As it is about a long-term vision, it is best if it is supported as unanimously as possible. There is no need to go into too much detail at this stage: work towards a broad vision with clear but general guiding principles and ambitions that can be translated later into more concrete goals for the shorter term.

We describe it here mainly as an administrative exercise, but it is advisable to also open up the whole process towards the vision towards the public and approach it as a participatory process, with a prior municipal survey, discussion evenings, and so on.

Anyway, Vision 2050 is best transposed into an inspiring text and widely shared among all stakeholders and among all residents of the city or municipality.

STEP 2: BACKCASTING

The main aim of the local long-term renovation strategy is to increase the local renovation rate, in line with the Flemish renovation policy. This not only sets targets for 2050, but also maps out a path from the situation today to those 2050 targets. This Flemish monitoring path shows year after year how the EPC distribution must evolve in order to end up with an almost complete housing stock with label A in 2050. When drawing up a local renovation strategy, the second step is therefore to transpose this Flemish path to the local situation in order to have a 'backcasting' of the long-term objective. At the same time, this path is the framework within which the renovation strategy ideally moves, and it can be used to monitor the progress of the renovation rate.

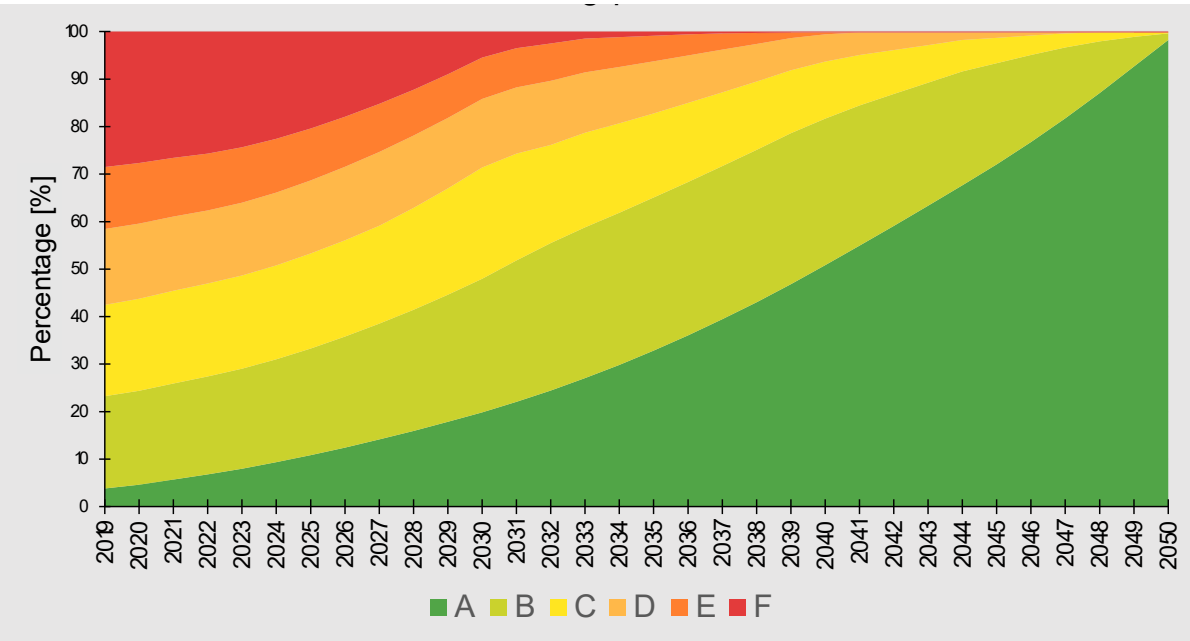


2.1 Monitoring path

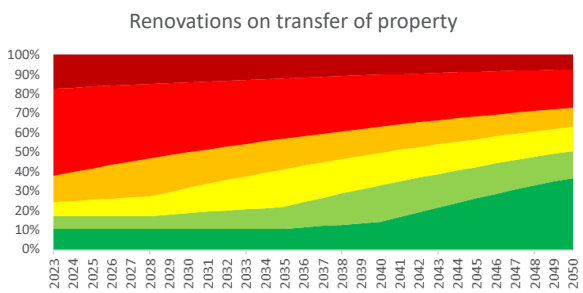
The Flemish monitoring path, shown below, is the result of a long study process and is based on a complex calculation. This takes into account the policy choices already made during the development of the Flemish renovation strategy, which we have summarised in the figure on the previous page.

These mid-term targets are based on two different pathways. On the one hand, general targets have been set on the minimum EPC label that homes must have. Here, a distinction is made between apartments and terraced houses on the one hand, and detached and semi-detached houses on the other. In 2030, all homes in the first category should have at least label D, and those in the second category should have at least label E. In 2035, this increases to label C and label D respectively, and in 2040 to label C for detached and semi-detached houses. In 2050 all dwelling types should have at least label A. These are general targets that are also identified in the monitoring path, but to which no concrete regulation is linked as yet: no obligation has been laid down for the actual imposition of these minimum labels. That legislation does exist for the second pathway, which focuses only on homes that change ownership, after sale or in the event of a gift or inheritance. Such a transfer imposes a deadline of up to 5 years, within which homes must also achieve a minimum EPC label. Currently (since January 2024), this is at least label D, which therefore implies a renovation obligation for homes with a label E or F that are being sold. Here, too, a tightening is planned, but not yet legally enshrined: from 2028, the renovation obligation would also apply to homes with label D. For ground-level houses it will also apply from 2035 to label C, and from 2040 to label B. In the case of apartments, things are moving a bit more slowly, with a renovation obligation for label C from 2040 and for label B from 2045.

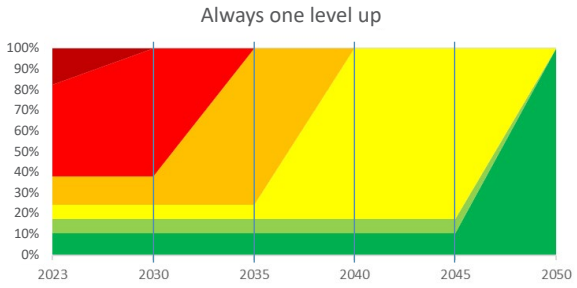
Flemish Monitoring Path 2050



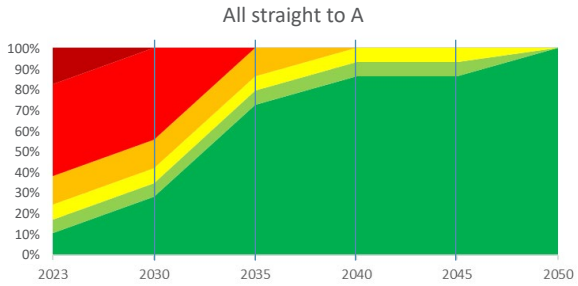
Monitoring path for all of Flanders, from the Flemish Long-Term Renovation Strategy



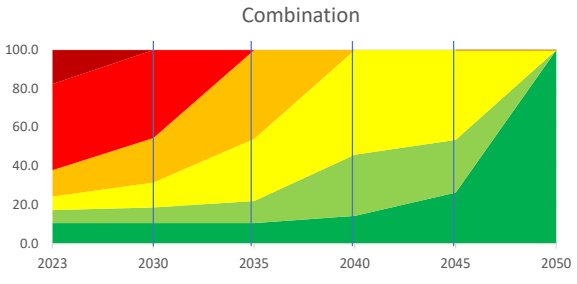
Example of a monitoring path for a random municipality, with renovations only if a property changes ownership



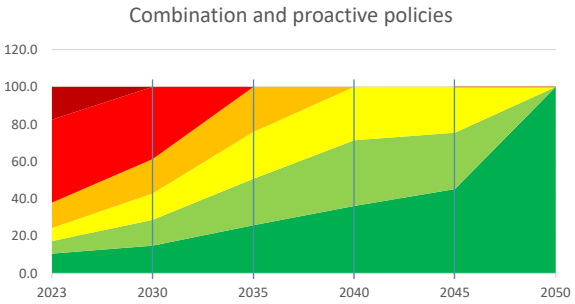
Example of a monitoring path for a random municipality, following the 'phasing out' scenario of the Flemish LTRS, but with homes only being renovated to one label higher each time



Example of a monitoring path for a random municipality, following the 'phasing out' scenario of the Flemish LTRS, but with homes being renovated straight to label A in each case

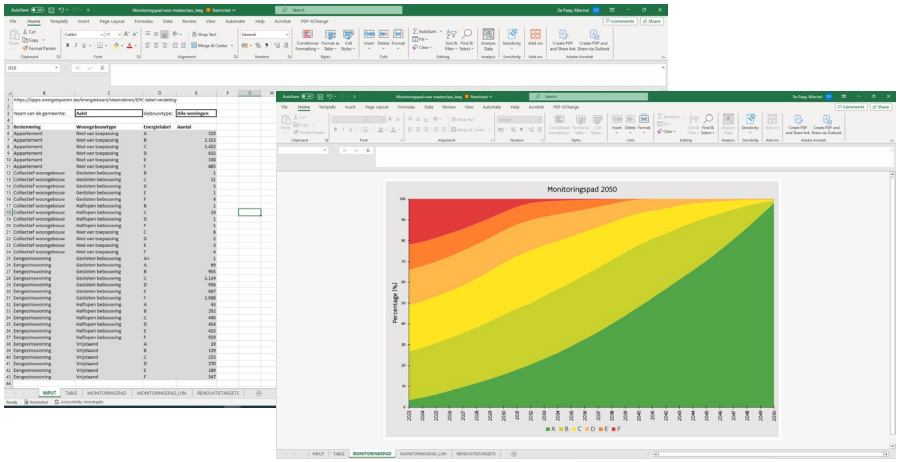


Example of a monitoring path for a random municipality, with a combination of renovations at handover and the 'phasing out' scenario, with a conservative distribution of labels after renovation



Example of a monitoring path for any municipality, with a combination of renovations at transfer and the 'phasing out' scenario, with an ambitious distribution of labels after renovation thanks to proactive policies

MONITORING PATH BY MUNICIPALITY: GET STARTED YOURSELF



See page 65 at the end of this Handbook for a link to the Excel tool to create your own monitoring path for your municipality, following the same principles as the Flemish monitoring path from page 45

However, even with these clear mid-term targets, a full monitoring path like the Flemish one is not yet unambiguously defined. After all, just because there is a renovation requirement or a phase-out policy for the worst-insulated homes does not mean that it is clear how these homes will be renovated. To illustrate this, we have drawn some simple charts to the side.

The first graph shows a renovation path if renovation is only carried out when a home is transferred, evenly distributed among the labels still allowed. So of all homes sold today with label E, a quarter will be renovated to label D, a quarter to label C, and so on. However, since on average about 3% of homes change ownership every year, we can see from the graph that it moves up only very slowly. By 2050, although there are significantly more homes with label A, there are still only 30% instead of the hoped-for 100%.

The second and third graphs ('always one level up' and 'all straight to A') show the other pathway, with another low EPC label being 'phased out' every five years. Leaving aside the question of how such a target can be solidified, this of course ensures that only label A will exist by 2050. The question, however, is what happens along the way. If all label E homes disappear, what will happen to them? Will they be renovated to label D, or suddenly to label A? Those two extremes are depicted here and obviously produce a totally different graph. The first takes a lot of time and is very incremental, but does mean that every home has to be renovated again every 5-10 years, and also postpones the most difficult to finance leap, that from C to A, to the last. The other graph goes much faster and has actually almost reached the end goal around 2040. However, this is only possible thanks to hugely extensive and thorough renovations at very short notice, which is virtually impossible financially and logistically. So the reality will have to be somewhere between these two extremes.

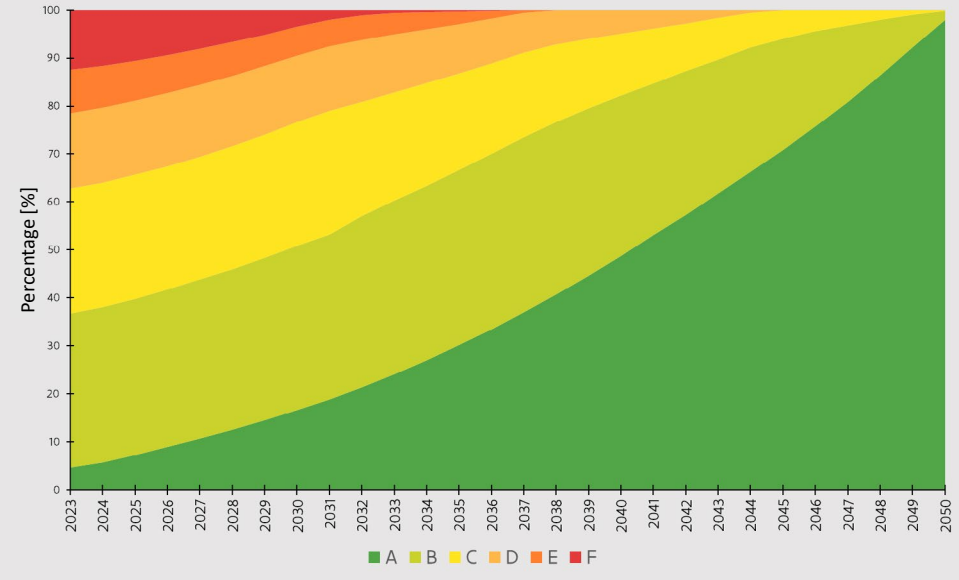
The last two charts show a combination of the two pathways. The 'combination' path shows the situation if post-transfer renovation (following the same principle as in the first graph) is combined with the complete phasing out of the worst homes according to the second pathway. Here, we have chosen a middle ground between 'one level up' and 'all to A', by again opting for a proportional distribution across the labels allowed at the time. This produces a graph that evolves slightly more gradually than that of 'always one level up', but still strongly defers the growth of labels B and A to the last decade.

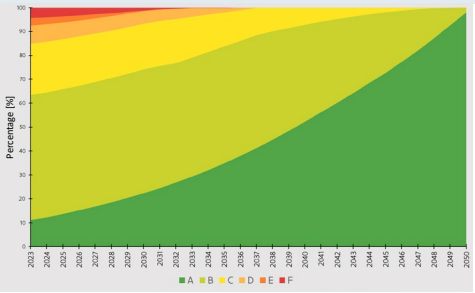
We therefore explored one last path, named 'combination and proactive policies'. This path assumes maintenance of the approach of the previous path, but actively encouraging owners to renovate (much) more ambitiously than is strictly required. This means no more proportional distribution with deferred growth of B and A, but gradual growth of these labels thanks to more thorough renovations from the first phase. The last monitoring path clearly gives the 'finest' result - but also places high demands on renovation policies to live up to it!

We conducted these exercises to get a better understanding of just how these monitoring paths work and what impact certain assumptions have on the result. However, to create a monitoring path yourself for your own city or municipality, we suggest starting from the same assumptions made by the Flemish monitoring path. These are much less explicit than the ones we explained above, and the underlying calculations are also much more complex, but the result is not that vastly different from the last path shown. So again, there is the integration of both renovation pathways as well as a proactive policy to start encouraging thorough renovations.

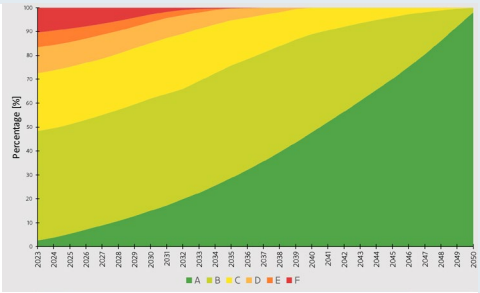
To create such a monitoring path yourself, please refer to the Excel file found via the link on page 65 of this report.

Monitoring path Leuven

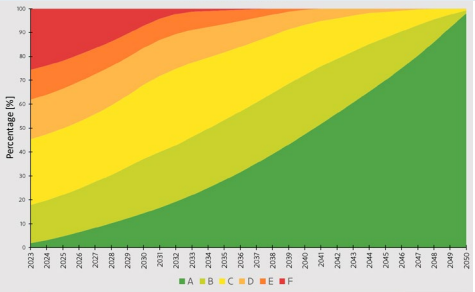




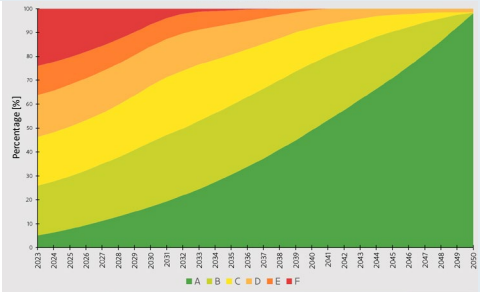
Apartments



Terraced houses



Semi-detached houses



Detached houses

Leuven is a town with a relatively well-insulated building stock, due to the high proportion of terraced houses and apartments, but also due to the relatively high proportion of new buildings. This translates into a monitoring path with a fairly gradual gradient. Looking at dwelling types separately, we do see a big task for the next 5-10 years for semi-detached and detached houses, to almost completely eliminate the higher proportion of label F here.

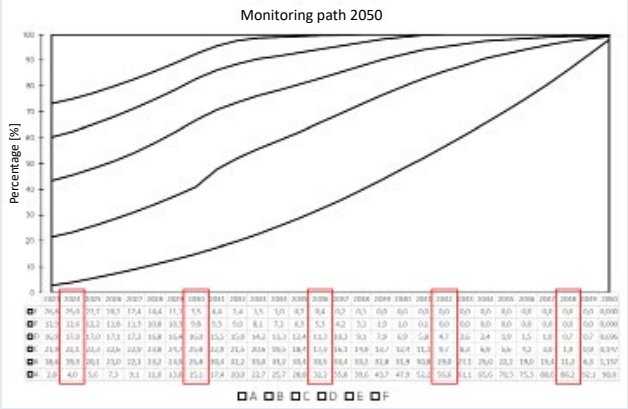
Graphs prepared via our Excel tool (see page 65), data via Energiesparen.be

2.2 Setting targets

The Excel tool (see page 65) allows the creation of a general monitoring path for the municipality, but also by dwelling type (distinguishing between apartments, terraced houses, semi-detached and detached houses). A further breakdown is currently not possible due to a lack of data, but could be in the future as more and more EPC certificates are issued (currently, some 31% of homes in Flanders have an EPC label). Until then, we will have to make do with these more general overviews. Because the path contains values by year, we can now set annual targets for renovation policy. We propose to do this at least for each legislature. As the graph below left shows, there are just over four more legislatures until 2050, so we can set a total of five targets for each transition between two legislatures. We can do this with the general chart as illustrated below, but of course also with the charts by dwelling type. This gives an initial insight into what the concrete renovation task is for the next legislature, if we want to adhere to this monitoring path.

During the preparations for this roadmap, we tested this method extensively with pilot municipalities and the participants of the masterclass organised in the first half of 2024. This showed that the exercise in question almost always produces hard-hitting results, as the example below also illustrates: there needs to be a huge acceleration in terms of renovations if we are to have any chance at all of achieving this path and the final target. This is yet another underpinning of the urgency in renovation policy, but also contains the risk that the task may seem impossible and paralysing.

Targets for Wevelgem



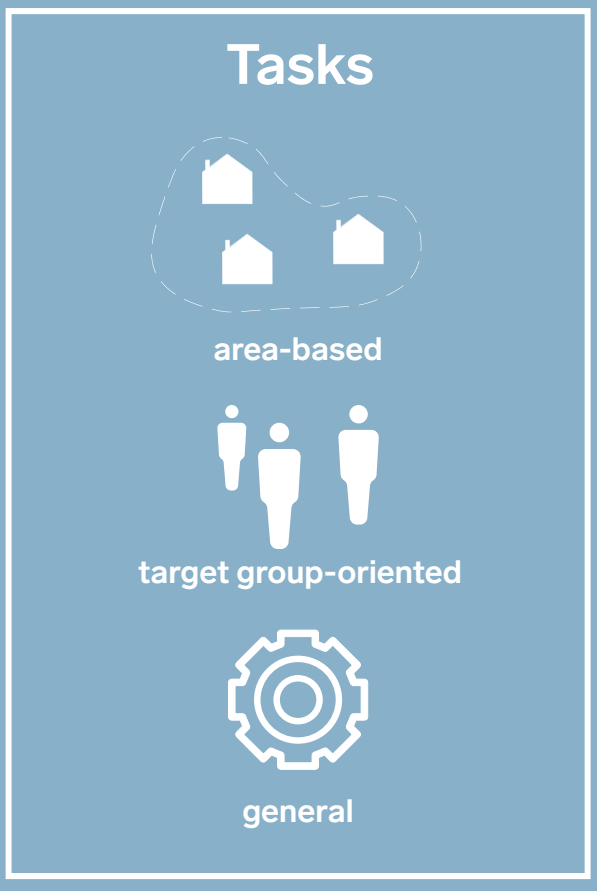
	2023	2030	difference
Label A	302	2,175	+ 1,873
Label B	2,605	3,720	+ 1,115
Label C	3,130	3,716	+ 585
Label D	2,429	2,303	- 126
Label E	1,881	1,413	- 468
Label F	4,057	1,077	- 2,980

Wevelgem is a municipality where some 40 per cent of homes are poorly insulated and have an EPC label of E or F. The short-term task here is therefore all the greater, although this situation is not that exceptional but rather typical of rural medium-sized municipalities with a significant proportion of older buildings, with Wevelgem being one such municipality. This translates into very high targets for the first legislature, with seven times more labels A in 2030 than in 2023, and only a quarter of the number of labels F (see table above). To follow those targets, some 4,300 homes need to be tackled by 2030, i.e. 30% of the entire housing stock. That is about 600 per year, at least triple the current number of renovations (this is an estimate, as there are no data on how many energy renovations a municipality has per year). Moreover, 80% of those renovations involve thorough renovations that make more than 3 labels' difference - 16% or some 550 renovations even involve 5 labels' difference, or a renovation from F directly to A.

Graph and figures via our Excel tool (see page 65)

STEP 3: LOCAL TASKS

The monitoring path and associated targets give a good insight into what is at stake in renovation policy, but real policy is, of course, about more than graphs and tables. Therefore, we think it is important for the targets of the monitoring path to be further translated into concrete policy tasks defined by the local government itself, in each legislature. We propose to work on three tracks: general tasks, target group-oriented tasks and area-based tasks. These tasks form the framework within which measures are determined in step 4. Tasks and measures together then form the basis for the renovation policy plan written out in step 5.



3.1 Defining local tasks

The local tasks determine where the focus will be in developing the local renovation strategy. Thanks to backcasting, it is clear what the targets are for the next legislature and beyond. However, that does not say anything about how and where those targets can be met. Therefore, target setting must be followed by an exercise to translate these targets into local tasks or policy goals. We propose to repeat this every legislature and use these tasks as a basis for drawing up a renovation policy plan (see step 5).

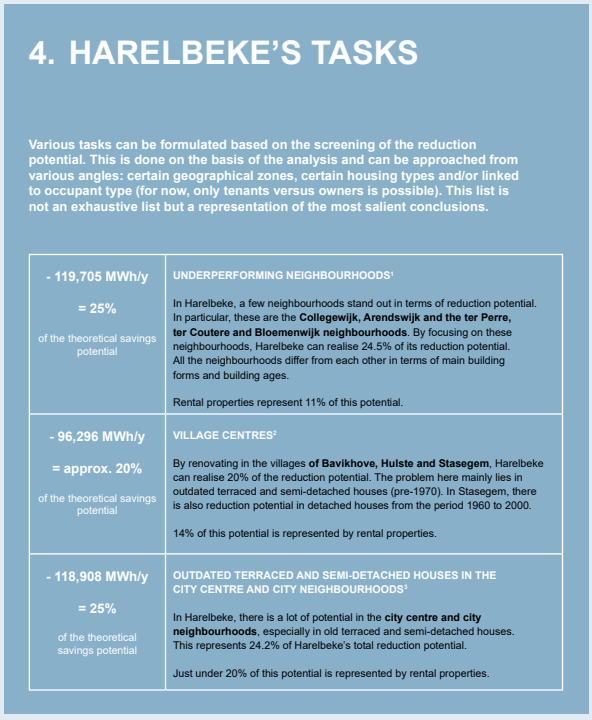
Defining these tasks is a political process, but is of course informed by the insights from steps 1 and 2, which must give the debate around them the necessary urgency. In Step 2, it became clear that the targets to be met by 2050 are so extensive that a concrete difference needs to be made with actions and measures in the short term. However, to give those measures a clear framework and direction, we first set the effective targets to be achieved by these measures. As with the vision, this can be widened beyond purely renovation targets, in order to work towards an inspiring project and not just stick to crippling targets that seem unachievable. But that does not mean that a clear renovation task should not also be defined.

We propose to approach local tasks from three sides. Those three sides can be complementary, but may also overlap partly or completely.

- **General task.** In step 2, clear figures for the overall renovation target per year and legislature emerged from the backcasting and monitoring path. Depending on the context of the municipality, those figures are difficult or impossible to achieve. It is therefore important to translate this theoretical, top-down exercise into what is realistically achievable in an ambitious local renovation policy. After all, a policy that is based around unachievable targets from the start will soon stall. It is therefore important to analyse the targets properly, compare them with your own, historical data on renovation activities in the municipality, and draw conclusions from that. If targets are clearly unachievable, they can be lowered by focusing on a specific target group or area, for example. One strategy that can be followed here is that of scaling up. In major transitions, such as in climate policy, the first

Local tasks for Harelbeke

The table to the side describes possible tasks for the city of Harelbeke. The underlying figures here were calculated using a Climact monitoring tool, but a similar exercise can also be carried out using the Neighbourhood Renovation Tool(see Chapter 3.2, page 20). The tasks to the side are not by legislature, but up to 2050. In Harelbeke, for instance, there are five neighbourhoods with a very low renovation rate, accounting for 25% of the total urban renovation potential. Big strides can therefore be made by tackling these neighbourhoods as a priority. Another 25% is in the terraced and semi-detached houses in the city centre and adjoining city neighbourhoods. This is a very different task, but deserves equal attention.



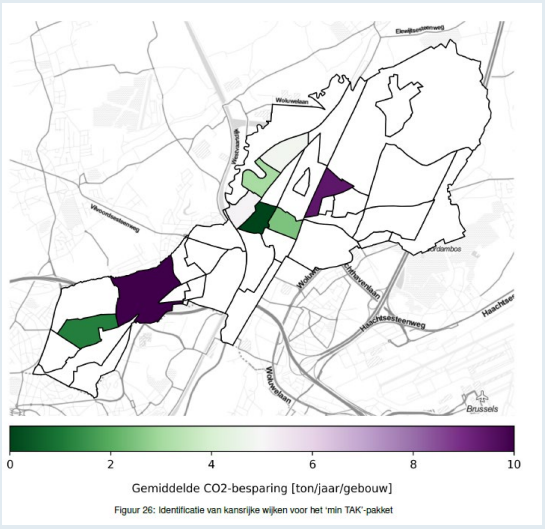
4. HARELBEKE'S TASKS

Various tasks can be formulated based on the screening of the reduction potential. This is done on the basis of the analysis and can be approached from various angles: certain geographical zones, certain housing types and/or linked to occupant type (for now, only tenants versus owners is possible). This list is not an exhaustive list but a representation of the most salient conclusions.

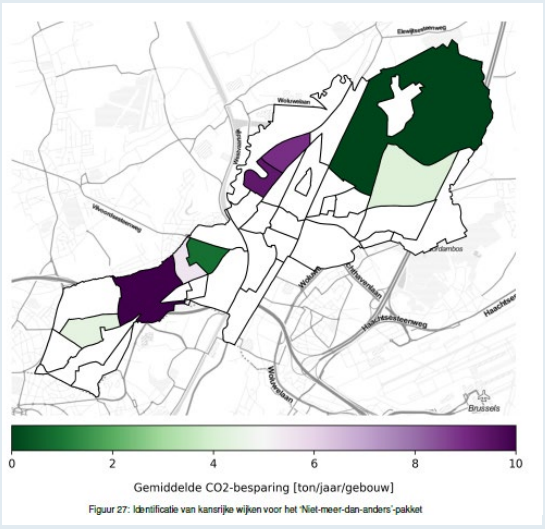
- 119,705 MWh/y **= 25%** of the theoretical savings potential	**UNDERPERFORMING NEIGHBOURHOODS[1]** In Harelbeke, a few neighbourhoods stand out in terms of reduction potential. In particular, these are the **Collegewijk, Arendswijk and the ter Perre, ter Coutere and Bloemenwijk neighbourhoods**. By focusing on these neighbourhoods, Harelbeke can realise 24.5% of its reduction potential. All the neighbourhoods differ from each other in terms of main building forms and building ages. Rental properties represent 11% of this potential.
- 96,296 MWh/y **= approx. 20%** of the theoretical savings potential	**VILLAGE CENTRES[2]** By renovating in the villages **of Bavikhove, Hulste and Stasegem**, Harelbeke can realise 20% of the reduction potential. The problem here mainly lies in outdated terraced and semi-detached houses (pre-1970). In Stasegem, there is also reduction potential in detached houses from the period 1960 to 2000. 14% of this potential is represented by rental properties.
- 118,908 MWh/y **= 25%** of the theoretical savings potential	**OUTDATED TERRACED AND SEMI-DETACHED HOUSES IN THE CITY CENTRE AND CITY NEIGHBOURHOODS[3]** In Harelbeke, there is a lot of potential in the **city centre and city neighbourhoods**, especially in old terraced and semi-detached houses. This represents 24.2% of Harelbeke's total reduction potential. Just under 20% of this potential is represented by rental properties.

step is often working on breakthrough projects specifically aimed at removing barriers or realising key innovations. A breakthrough project of this kind does not in itself deliver the big win towards the end goal, but it paves the way for upscaling and replication so the big leap can be taken later. Such an approach can also be taken in the renovation strategy.

- **Target group-oriented task**. It is advisable to divide the general task into specific tasks aimed at particular target groups. This way, not only do the big numbers become more manageable, but renovation policies can also be more targeted. The idea of target groups can be interpreted very broadly: focus on a particular dwelling type (apartments, heritage buildings, older villas, and so on), a particular income bracket (vulnerable groups for example, although the choice can also be made to specifically target higher-income owners) or other specific groups (new owners who have just bought a property, private landlords, young families or parents whose children have just left home, and so on). Of course, it depends on the specific challenges a municipality faces, but focusing on more complex target groups or making gains with quick wins first is also a strategic choice. It is important that the target

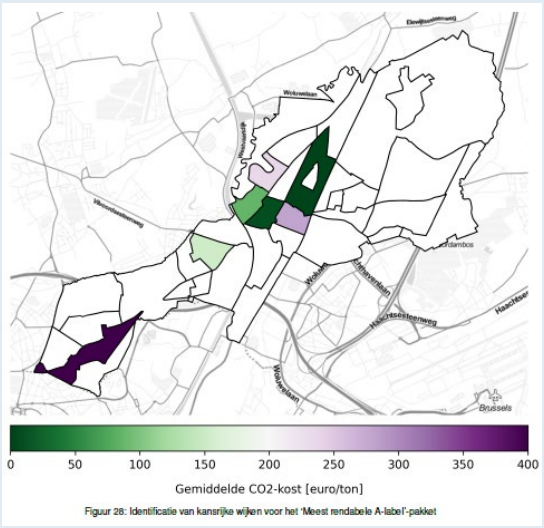


Figuur 26: Identificatie van kansrijke wijken voor het 'min TAK'-pakket

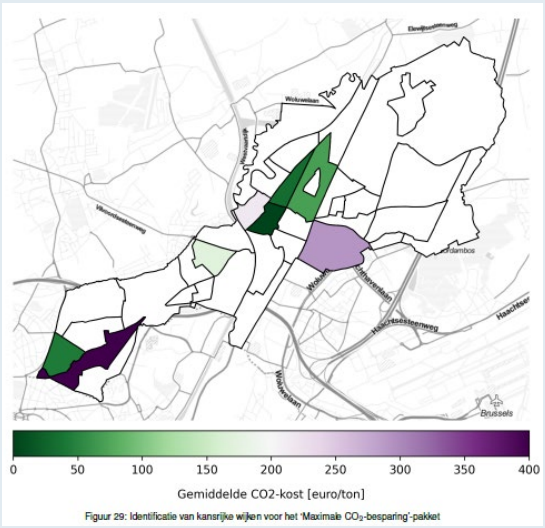


Figuur 27: Identificatie van kansrijke wijken voor het 'Niet-meer-dan-anders'-pakket

Neighbourhoods where, with relatively little investment, high CO_2 savings can still be achieved (in purple) - via Renovation Policy Inspiration Map



Figuur 28: Identificatie van kansrijke wijken voor het 'Meest rendabele A-label'-pakket



Figuur 29: Identificatie van kansrijke wijken voor het 'Maximale CO_2-besparing'-pakket

Neighbourhoods where maximum energy savings, in comparison, cost the least in terms of investment (in green) - via Renovation Policy Inspiration Map

groups are well defined and characterised, with figures on the number and the size of the renovation task. Those data are not always readily available, so it might even be necessary to organise targeted searches to get a good understanding of the exact task. It is important to formulate this clearly as well, so that the target group-oriented task can also be used as an indicator for monitoring the success of the local long-term renovation strategy.

- **Area-based task.** Finally, the renovation task can also be approached from a spatial perspective, by starting to define specific neighbourhoods and tackling them collectively. In recent years, a lot of experience has been gained in collective neighbourhood renovations in Flanders, including the Climate Neighbourhoods project. That practice shows that there are still a lot of barriers to collectively tackling a neighbourhood and that the results are less comprehensive than hoped for when it comes to the number of homeowners actually taking the step of renovating. That said, an area-based approach also has many advantages. It is easier to work on site and with residents and owners. There are obvious opportunities for linking up with other policy areas and interventions, such as climate adaptation (greening, softening, water management) and mobility (parking and circulation). And there is an important link to be made with heat policy, which also starts from an area-based approach where there is a collective heat supply. If a neighbourhood is selected for a heat grid, a whole design and development process involving the entire neighbourhood begins anyway. Plus, those who want to connect to the heat grid have to make adjustments to the heating system anyway, which is a good opportunity to look further into other renovation interventions. This kind of pathway will become increasingly common in the future, after cities and towns draw up a heat policy plan and start trying to put it into practice.

It is important to have a broad debate to formulate, delineate and anchor these local tasks. Here, one can draw on the experience gained from the drafting of the vision for 2050 - the local task is the concrete and more detailed translation of this vision, for the short term of at least one legislature.

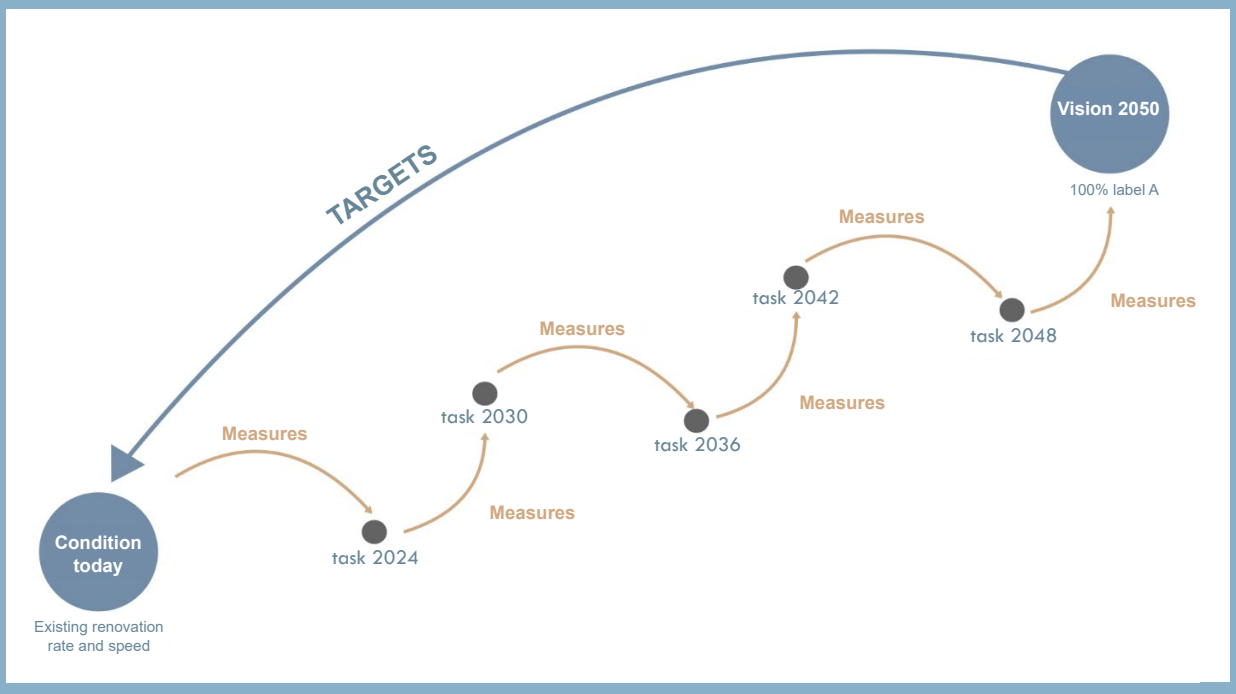
Area-based approach via Renovation Policy Inspiration Map

The maps on the previous page (from Vilvoorde) show how the Renovation Policy Inspiration Map can be used to identify interesting neighbourhoods for an area-based policy. The top maps show in purple the neighbourhoods where a limited investment (the 'maximum savings' and 'no more than today' scenarios) still yields relatively big CO_2 savings. So quick wins should be realisable here. The bottom maps show in green the neighbourhoods where maximum renovation (the scenarios 'all homes label A' and 'maximum CO_2 saving'), compared to the other neighbourhoods, costs the least (in euros per CO_2 saving, i.e. not in total investment). These neighbourhoods are also interesting because it should be easier to convince owners here to opt for thorough renovation. This screening can be the starting point to explore the possibilities for these neighbourhoods further via the Neighbourhood Renovation Tool on the one hand, and to start a study process to investigate the characteristics of these neighbourhoods on the spot on the other. Based on this, it can then be decided whether or not to link an area-specific task to this and start a neighbourhood renovation process.

STEP 4: MEASURES

Once targets are set and local tasks defined, measures must be chosen to achieve them. We look at three approaches to start defining measures: overarching regulation, guidance and customer journey, and area-based measures. Finally, we present the measures table showing possible measures according to their impact and complexity.

The measures are best determined per legislature and incorporated in a renovation policy plan, which is updated every six years after the operation and impact have also been evaluated on the basis of the monitoring path and local tasks. We discuss this in step 5.



When we talk about measures in this handbook, we are referring to actions that local government can take itself to encourage (energy) renovations among its residents. So it is not about the actual renovation interventions, but about accompanying measures to inform, support or remove barriers. We present the possible measures below from three different perspectives: with a focus on overarching regulation and support measures, with a focus on personalised guidance and providing a carefree solution, and with a focus on collective, area-based action. The measures involved are diverse, but can be divided into a number of categories:

- financial
- technical
- communication / informing / providing a carefree solution
- regulation

4.1 Overarching regulation and support measures

Many measures can be taken in a coordinated manner. The same applies to all measures taken by the Flemish government: Mijn VerbouwPremie and Mijn VerbouwLening (renovation grant and loan products), all the EPC regulations, the renovation obligation after a change of owner, and so on. These are all overarching measures that affect the whole population or at least a key target group. However, these can be supplemented at local level. We give some examples.

- **Removing regulation that hinders renovation activities.** It is worth screening municipal regulation, such as the supralocal building code, for elements that could get in the way of renovation projects. A typical example is building line restrictions that prevent external wall insulation. Of course, those rules were originally introduced for a reason so it is important to evaluate carefully whether relaxing them will have other, negative effects. Consultations with industry players such as architects or contractors can help identify barriers. Naturally, the measures themselves usually involve regulatory changes (usually relaxed), subject to certain conditions. A specific theme here is also the 'extension' of apartment buildings. As the study on apartment renovation shows (see Chapter 3.3, page 23), adding an extra floor is often an important incentive to increase the financial feasibility of renovation interventions in apartment buildings. However, this is often made impossible by town planning regulations. Again, caution is needed, but it is certainly worth considering whether ambitious renovation projects can be exempted from such a requirement.
- **Regulation to encourage renovation.** Besides relaxing existing regulation to remove barriers to renovation, additional rules and regulations can of course be introduced to encourage renovation. Again, caution should be exercised and what is legally possible and socio-economically desirable must be carefully examined. One possibility is to impose a conformity certificate (see Chapter 3.3 page 22, on the study on the rental sector), to ensure minimum living conditions. It may also be required when applying for a permit to draw up a plan for energy renovation as well. In such a case, the municipality may also initiate an advisory process if necessary (see 4.2 below). This might also be possible when buying a home. It could also be explored whether certain renovation interventions could be imposed in a SIP or by-law, but we do not know of any municipalities where this has been done.
- **General and target group-oriented financial support measures.** Overarching measures can also be financial in nature. Of course, most financial support already comes from Flanders through Mijn VerbouwPremie and Mijn VerbouwLening, but a city or municipality can add targeted initiatives to this, to answer specific local challenges, for example. These could be additional local grants or loans, but initiatives could also take other forms. For example, a local government could provide financial support for drawing up a renovation plan. Specific group loans could also be offered for VMEs or neighbourhood renovations, or pre-financing

or an accelerated payment of Flemish grants could be considered. Particular attention must be paid to financial support measures aimed at vulnerable target groups. First and foremost comes the Distress Purchase Fund (see Chapter 3.3 p.25); local government also has to make efforts to introduce and further facilitate it. Other more specific funding measures include setting up a local rolling fund, looking at third-party payer systems or working with renovation contracts, as the Pandschap does in Antwerpen, Gent and Brugge - a local version of this could be set up in cooperation with the non-profit organisation Koepel Het Pandschap.

4.2 Personalised guidance and provision of a carefree solution (customer journey)

We have already stressed it several times: renovation is ultimately the homeowners' personal choice. Therefore, it is important to also look at the customer journey that such an owner goes through when he or she wants to renovate, and what barriers and awkward decision moments arise in the process. Through personal guidance and provision of a carefree solution, those barriers can be lowered or removed. Broadly speaking, this is what a One-Stop-Shop (OSS) does. The study on this (see Chapter 3.3 page 24) explains in detail what types of OSS there are. In Flanders, the Energy Houses play an important role in this, but there are also cities (Gent, Leuven, Antwerpen) that have set up their own OSSs that are more tailored to their own renovation policies. Regardless of the structure, however, the key question is what tasks the OSS can take on and how that can increase the renovation rate.

- **Advice and guidance on demand.** It is evident that an OSS offers advice and guidance to those who ask for it. Of course, that includes the necessary communication to adequately publicise what is on offer and what people can expect. We are taking about a clear website, but also about targeted campaigns (brochures, posters, presence at events, visibility in city hall or elsewhere in the municipality, and so on). Campaigns can also be target group-oriented, for example specifically towards VMEs or property management agencies, landlords, disadvantaged groups, new owners or permit applicants. Other actors can also be approached to take on a specific role, for example the construction industry, banks, notaries and brokers. Finally, an OSS can also play a central role in organising special events to promote renovation, such as information evenings, a municipal climate or energy day or even a special show home where renovation interventions are demonstrated and additional information is given. The advice and guidance itself can also take different forms and focus on different steps of the customer journey. Conducting home visits, working out concrete technical renovation advice, guidance or providing a carefree solution in finding the right partners for implementation, assistance in applying for grants or loans, are all part of the journey. For this, we refer again to the study on OSS (see Chapter 3.3 p.24).
- **Focused and proactive advice and guidance.** In the above, we have listed a whole range of measures, but each of these assumes that people will approach the OSS themselves, possibly after a targeted or target group-oriented campaign. However, there are other ways to proactively engage people. This can be done by making house-to-house visits or driving around with a mobile renovation unit. However, you can also use a heat scan to identify for yourself which homes have a lot of heat loss and start contacting the owners individually with a tailor-made offer. Another way is to look for owners with renovation plans via a general survey and then go and see them yourself. All this can also be done through an area-based process, as we explain below.
- **Broader actions to simplify the renovation process.** Apart from advice and guidance, there are other actions a local government, through its OSS or another body, can take to help renovators. A well-known example is organising periodic group purchases, of things like solar panels, insulation materials

and heat pumps. A group purchase can go beyond materials and offer an all-in service for common renovations, all costs included - for example, roof insulation, cavity insulation and window replacement. Another measure is to organise a contractor pool with verified quality partners that residents can call on. A final, somewhat more complex idea is the provision of replacement housing for those who opt for thorough renovation and have to temporarily leave their own homes while renovations are ongoing. Possibly together with other partners, an offer of affordable housing specifically for this purpose could be worked out here, to simplify this difficult step in the renovation process for residents.

4.3 Collective, area-based actions

If a municipality has also formulated area-specific tasks, there is of course a need for area-specific measures. Most of the measures already mentioned above can also be introduced at neighbourhood level or elaborated specifically so that they work on a tailor-made basis for neighbourhood renovation projects. The reasons for adopting an area-based approach are twofold.
On the one hand, the delineation of a specific area helps to target and appeal to a clear audience. Resources can be concentrated for a specific period, with things likes information campaigns, home visits, possibly a mobile renovation unit, and group purchases, all targeting a specific area. On the other hand, the neighbourhood approach helps in starting to organise things collectively. Homes within a single neighbourhood often have a similar character, a neighbourhood is often also more socio-economically homogenous, residents know each other and renovation interventions have a visible presence in the neighbourhood. Moreover, the renovation task can be framed within a broader neighbourhood master plan. At the same time, renovation remains an individual choice, so there is no guarantee of any simultaneity within a neighbourhood. An optimal offer often clashes with owners who won't join in anyway, because they have other plans, want to wait a few more years, etc. That said, neighbourhood-level measures can be clustered into two broad categories.

- **Area-based deployment of overarching measures.** Everything already mentioned above regarding funding, regulation and guidance, can be used area-wise to some extent. Usually, simply circulating information about the offer in the neighbourhood and starting to talk to people a bit more proactively about it will suffice. But regulation, for example, such as relaxing building regulations so as not to hamper renovation, can actually be done at neighbourhood level through a specific SIP. Group purchases also work well at neighbourhood level, especially if there is a certain homogeneity in the buildings in the neighbourhood, meaning that similar materials or techniques can often be used.
- **Specific neighbourhood approach with master plan and broader interventions than renovation alone.** To truly speak of a neighbourhood project and create sufficient momentum for action, the renovation task is best linked to other change projects: public domain, mobility, utilities (heat), social activities and neighbourhood cohesion, and so on. This will allow a clear translation locally of the broad vision developed in Step 1 of the renovation strategy.
This neighbourhood approach is best done co-productively together with residents and owners. This creates opportunities for communication and participation, but also partnerships that can lead to a collective approach to renovation or even the setting up of energy communities or other long-term collaborations.

4.4 Overview of all measures in measures table

To give a more convenient overview of possible measures, we have listed them and displayed them in a chart to the side. To do this, we evaluated the possible measures on two aspects: their effectiveness and their feasibility.

For this evaluation, we drew on input from the municipalities from the 2021 pilot process, in parallel with the drafting of the first version of this handbook, as well as from some of the participants in the masterclass organised in 2024. Their input was processed into an average score per measure, on the following aspects:

- **Impact on renovation rate:** to what extent does this measure help increase the number of effective renovations in the municipality?
- **Side effects:** what other positive effects can the measure have that are related to the renovation task? For example, supporting vulnerable target groups or reducing energy poverty and improving living conditions.
- **Cost:** how high is the cost for the municipality to implement the measure, in terms of budget and staffing?
- **Complexity:** how complex is it to get the measure implemented? For example, because it requires a lot of coordination with other policy levels or domains.

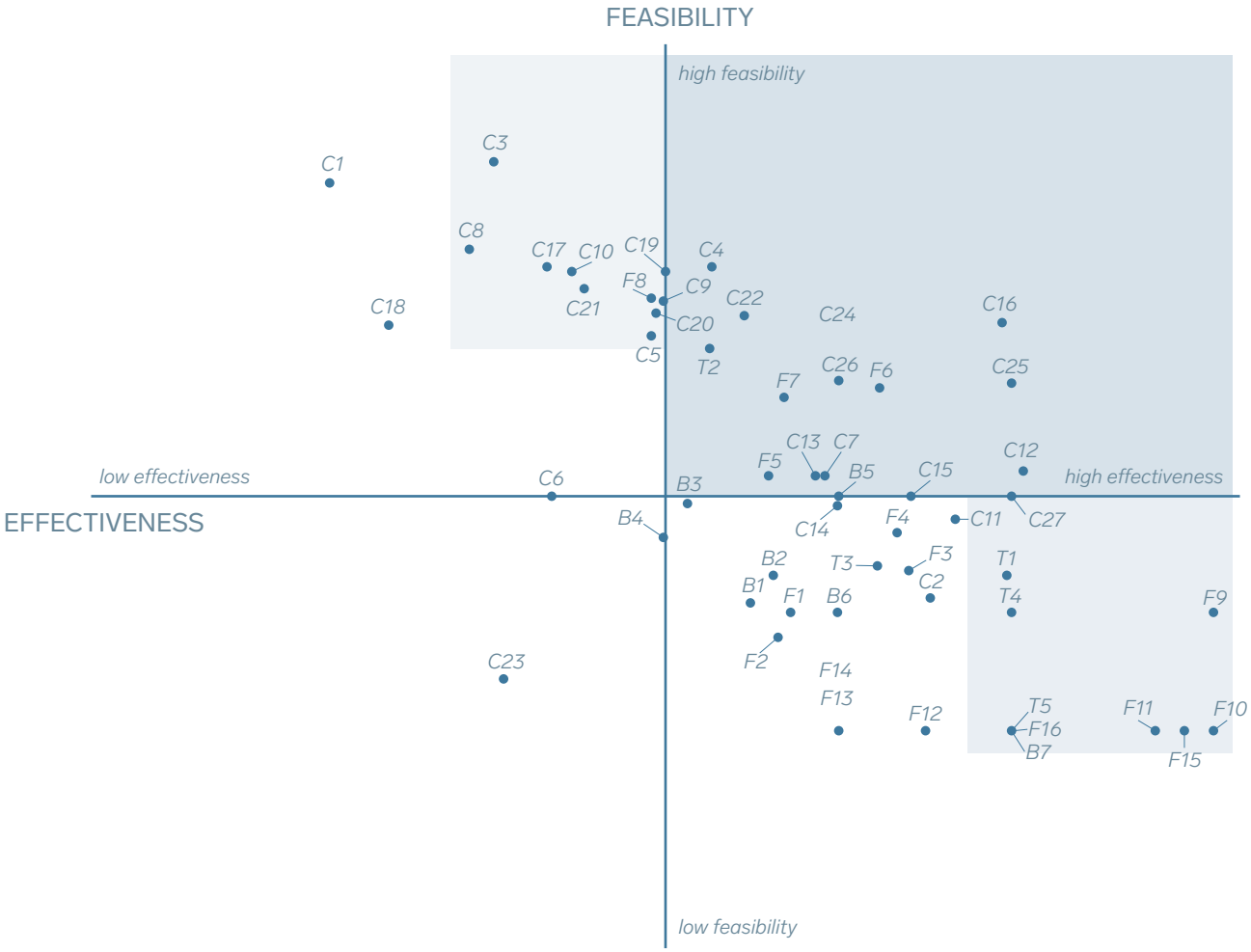
The different scores were added up to a score per measure for effectiveness (first two aspects) and feasibility (last two aspects), which are depicted in the graph.

In this exercise, we are primarily interested in the measures from the upper right quadrant (high effectiveness and high feasibility). In principle, these are relatively easy to implement and yet have a high impact. This is where we tend to see a lot of communication measures, especially the more motivating ones. But a number of financial and technical measures also appear here. These include deploying additional actors, coaching VMEs, supporting energy communities or offering a grant for a renovation plan for apartment buildings.

We also need to look at the lower-right quadrant, where feasibility is lower but effectiveness still remains high - or sometimes even higher. These are measures that must be chosen with care and will probably require a lot of preparation, but will be necessary if they are to have real long-term impact. This mainly covers financial measures and technical measures, which are admittedly more complex but can have a big impact. These include the use of a local Distress Purchase Fund, a rolling fund, renovation contracts such as those offered by Het Pandschap or a third-party payer system.

It is also worth taking a look at the measures on the top left, which have less impact but are easier to implement. In some cases, these can help as start-up measures or quick wins, especially if they go on to be followed by slightly more complex measures that focus on the long term. Here again we find many communication measures, but mostly overarching ones. These are a good starting point for more targeted work afterwards. Examples include information evenings and campaigns, as well as targeted communication towards landlords or notaries and estate agents.

Almost all the measures we present here are accompanying measures. Due to the nature of renovation policies (renovation itself is a task for homeowners), they are not measures that have a direct impact on renovation rates, but only in secondary or even third order. That in itself is not a problem, but it ensures that we cannot calculate in advance how much of the local task can be met by these measures - there are too many unknown factors for that. That is why it is so crucial that efforts are regularly assessed and progress precisely monitored. We discuss this further in step 5.



FINANCIAL
- F1 Local renovation loans
- F2 Local renovation grants
- F3 Loan for vulnerable groups
- F4 Group loan for VMEs
- F5 Group loan for neighbourhood renovations
- F6 Grant for drawing up an apartment building master plan
- F7 Grant for drawing up a neighbourhood renovation master plan
- F8 Group purchases
- F9 Local distress purchase fund
- F10 Rolling fund
- F11 Renovation contracts (cf. Het Pandschap)
- F12 Grant for landlords
- F13 Pre-financing
- F14 Area-based VAT reduction
- F15 Third-payer system for renovations
- F16 Deploy right of first refusal with housing association

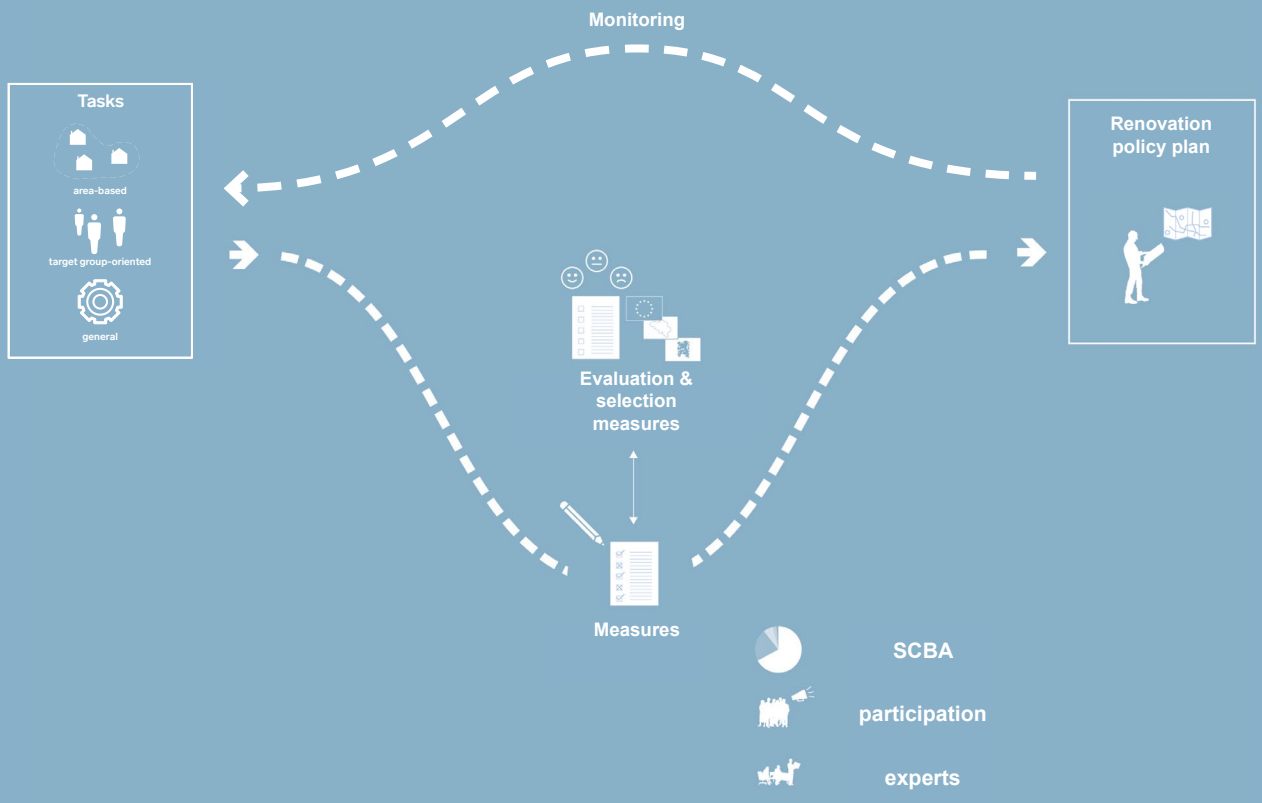
TECHNICAL
- T1 Renovation coaches
- T2 Contractors' collective
- T3 Training professionals
- T4 DIY technical support
- T5 Transitional or replacement housing

COMMUNICATION, INFORMATION & A CAREFREE SOLUTION
- C1 Information website
- C2 One-stop shop for individuals
- C3 Information campaigns, general
- C4 Information campaigns, target groups
- C5 Heat scan
- C6 Climate festival or energy day
- C7 Show home
- C8 Completed sample properties
- C9 Welcome event for new residents
- C10 Information evenings
- C11 Home visits with personal advice
- C12 Budget coach
- C13 Savings calculation
- C14 Mobile renovation unit or pop-up caravan
- C15 Neighbourhood ambassadors
- C16 Deployment of OCMW, housing association, AGB
- C17 Sample walks
- C18 Resident surveys
- C19 Targeted communication for notary, bank, estate agent
- C20 Targeted communication, construction sector
- C21 Targeted communication, landlords
- C22 Targeted communication, VMEs and property management agencies
- C23 One-stop shop for professionals
- C24 Coaching of VMEs
- C25 Supporting energy communities
- C26 Promoting Woningpas (Housing Pass)
- C27 Course on living conditions and energy in integration process

POLICY & REGULATION
- B1 Mandatory renovation plan with permit
- B2 Renovation advice with permit
- B3 Screening, building code
- B4 Reconstruction, public domain
- B5 Requirement for certificate of conformity
- B6 Mandatory renovation plan upon purchase
- B7 Facilitating extensions to apartment buildings

STEP 5: ANCHORING AND ITERATION

At this point in the roadmap, we have a good picture of the initial situation and the vision, and we have determined the specific targets for the municipality and translated them into a local task that also has political support. Measures were then defined for that local task. All this, but especially the local task and measures, must now be anchored in a renovation policy plan that sets the framework for local renovation policy at least for the next legislature. Periodically, for instance after each legislature, the progress of that policy must be monitored and the tasks, measures and the policy plan must all be adjusted.



THE DEVELOPMENT OF THE RENOVATION POLICY PLAN

5.1 Anchoring renovation strategy in renovation policy plan

Determining the measures in step 4 is more than an administrative exercise. To be sure that the measures will be implemented, they must be widely supported. This means an extensive evaluation and fine-tuning process is needed. This will consist of political alignment, debate on proposals and decision-making, preferably at the beginning of the new legislature. This debate is fuelled by the insights from the process described here: the characteristics of the municipality, the vision, the targets and the local tasks. In addition, it may be appropriate to carry out a social cost-benefit analysis (SCBA) for the promising measures so that the effects and costs are properly known. A benchmark and alignment with other cities or municipalities with similar tasks could also find a place here. A participatory process with the population could be initiated, through a survey or discussions. An expert panel could be set up to further evaluate the measures. Whatever steps are chosen, this must ultimately lead to a supported set of measures that are clearly defined with, among other things, a timeline, budgeting (financial and staffing), clear success factors and indicators to measure this.

For the renovation policy plan, we propose to follow the classic approach of policy planning, which involves successively defining overarching objectives (vision, overarching targets), operational objectives (local tasks) and strategic actions (measures). Those strategic actions are the basis for the key activities that must be carried out to make the policy plan a success, and can be translated into a project plan that also defines budgets, stakeholders, KPIs, etc.

We talk of a 'renovation policy plan' to indicate that it is a targeted plan that has sufficient status of its own among the other policy plans drawn up at the beginning of a legislature. The scale and urgency of the renovation task is such that major breakthroughs must be realised in the years to come, so the topic must be given a central position in any multi-year planning.

5.2 Monitoring and iteration

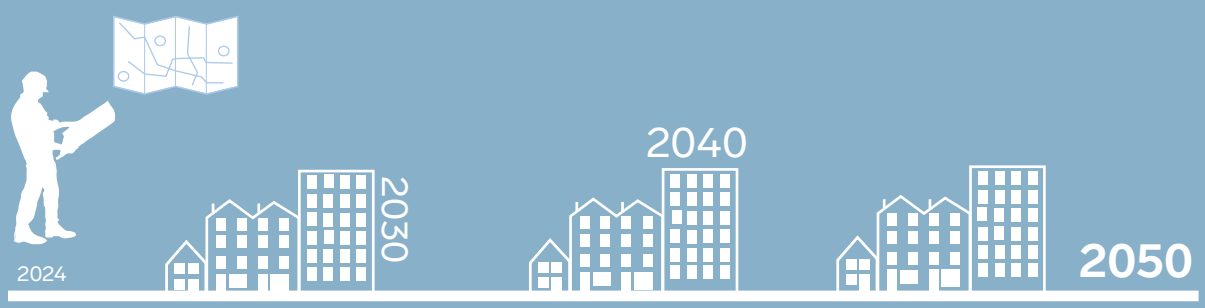
We have already stressed that there is still a lot of uncertainty associated with local renovation policies. We know the task, but the exact impact of the measures proposed here is still an unknown factor. We know they help to increase renovation rates and we can also estimate their effectiveness, but how big the final effect will be depends on a lot of unknown factors. That is why it is so important to monitor progress constantly, at different levels. In terms of the measures themselves: have they been successfully implemented and what reach do they have? Then we talk, for example, about the number of home visits made or amount of renovation advice given, the number of grants paid out or the number of effective realisations that made a relaxed regulation possible. But monitoring of tasks and overarching targets is also needed. For the latter, we use the monitoring path, which can be evaluated annually based on the effective evolution of EPC labels in the municipality. For local tasks, the municipality will have to collect the data itself. If, for example, the task is to tackle mainly outdated apartment buildings, the municipality must keep track of the effective realisations and the corresponding renovation profits and investigate for itself what impact the measures taken have had on these.

Of course, the insights from all these evaluations and monitoring activities must find their way into the updating of the local tasks and the renovation policy plan. We propose to review progress at least every three years and renew the policy plan at the beginning of each legislature.

AND NOW: LET'S GET TO WORK!

Going through the various steps allows us to draw up a Local Long-Term Renovation Strategy 2050 on the basis of the tasks and measures chosen, and to translate it into a renovation policy plan for the coming legislature. We repeat the main concrete steps here.

RENOVATION STRATEGY



Steps towards a local long-term renovation strategy

1. Make an analysis of the current situation in the municipality, focusing on the specific characteristics of the housing stock and residents and the current renovation rate.
2. Describe the vision for 2050: where the municipality needs to be in 26 years in terms of renovation, but also more broadly in terms of living comfort and quality of life. For this, organise a sufficiently broad debate and communicate openly about the objectives.
3. Draw up the monitoring path for the municipality, plotting over time how the current distribution of EPC labels needs to evolve up to 2050, taking into account the Flemish policy goals from the Flemish long-term renovation strategy.
4. Extract from the monitoring path: targets by legislature and by dwelling type. Compare these targets with historical data, if available, to estimate their feasibility.
5. Translate the targets for the next legislature into local tasks by further specifying and selecting them. Tasks can be general, target group-oriented or area-based. Again, ensure broad debate, political support and open communication about the results.
6. Look for measures to realise local tasks. For this, refer to the handbooks on apartments, rental properties, OSS or Distress Purchase Fund, if applicable. Use the measures table to identify additional measures.
7. Select final measures through further research and debate. Conduct a benchmark or contact other cities or municipalities with similar tasks. Examine the social costs and benefits of possible measures. Consult an expert panel. Consult all relevant stakeholders. Foster policymakers' conversations with the public about renovation challenges and possible solutions. Foster and prepare for political decision-making.
8. Incorporate all the above into a renovation policy plan, which includes overarching and operational objectives, strategic actions and key activities. For the strategic actions, prepare a project plan with budgeting, time allocation and staffing, as well as KPIs and indicators to monitor progress.
9. Implement the renovation policy plan. After three years, it is time for a mid-term review. Check whether strategic actions are on track and KPIs are being met. Check the monitoring path and compare with the effective EPC label distribution in the municipality: has progress been made and is it enough? Make adjustments where necessary and possible.
10. A more comprehensive review will follow at the end of the legislature, again covering both the strategic actions and the EPC label distribution and monitoring path. Have the local tasks been met? What lessons can be learned from the past six years and what does that mean for the next six? Prepare a clear policy paper for the next legislature, which will form the basis for updating the renovation policy plan and the next iteration of the renovation strategy.

ENDNOTES

[1] *More information on website https://www.be-reel.be/*

[2] *European Commission: A European Green Deal (December 2019), via https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en*

[3] *European Commission: 2030 Climate and Energy Framework (2014), at https://www.consilium.europa.eu/en/policies/climate-change/2030-climate-and-energy-framework/*

[4] *State of the Union: Commission tightens climate ambition and proposes 55% cut in emissions 2030 (September 2020), via https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1599*

[5] *Flemish Government, 2020. Long-term strategy for the renovation of Flemish buildings.*

[6] *Directive 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency*

[7] *Communication 2020/662 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on 'A renovation wave for Europe - greening our buildings, creating jobs, improving lives'.*

[8] *Flemish Government, 2019. Flemish Climate Strategy 2050*

[9] *Flemish Government, 2019. Flemish Energy and Climate Plan 2021-2030*

[10] *Flemish Government, 2018. Flemish Climate Policy Plan 2021-2030*

[11] *Flemish Government, 2020. Long-term strategy for the renovation of Flemish buildings.*

[12] *VVSG, Covenant of Mayors 2030 (July 2021), https://www.vvsg.be/kennisitem/vvsg/269-gemeenten-onderschreven-burgemeestersconvenant*

[13] *Covenant of Mayors for Climate and Energy Europe, via https://eu-mayors.ec.europa.eu/en/about/objectives-and-key-pillars*

TOOLS

In parallel with the drafting of this Handbook, a number of tools were also developed and deployed in the process with pilot municipalities and during the masterclass organised in spring 2024. We are also making these tools available to those who want to get started with this Handbook.

Monitoring path Excel tool

This is primarily an Excel tool that allows you to create your own monitoring path for your own municipality. Using up-to-date data from Energiesparen.be, the tool shows how the label distribution needs to evolve up to 2050 to meet the Flemish targets. This allows you to see what renovation targets there are by year, in general but also by dwelling type.

This tool can be downloaded here.

Note on data processing

In addition to the information in this Handbook in Chapter 3.1 (pages 18-19) and in Step 1 of the Roadmap (pages 32-39), we have drawn up a somewhat more extensive note explaining the use of Provincies in Cijfers and the Energiesparen.be website. In this note, we explain exactly which data can be retrieved where and give tips for (graphical) processing.

The note can be downloaded here.

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