



# Boosting energy retrofits in condominiums

Approaches for local authorities  
to facilitate change

# About the ACE- Retrofitting project

Through this guide, partners from the EU-funded ACE Retrofitting project share their learnings on how to act as facilitators between co-owners and building experts. ACE-Retrofitting was a three and a half-year project, running from 2017 until mid-2020. A multi-disciplinary project team was formed comprising the European city network Energy Cities, six local authorities from five different countries, along with Maastricht University and the environmental charity Changeworks. Together they have tested a set of methods to overcome the legal, human and financial barriers that are currently hindering energy retrofitting of condominiums.

## **ACE-Retrofitting partners: test beds for new condominium approaches**

### **6 pilot cities represented by:**

- Paris Climate Agency (France)
- Energy House Antwerp (Belgium)
- City of Liège (Belgium)
- City of Maastricht (The Netherlands)
- Aberdeen City Council (United Kingdom)
- Frankfurt Energy Agency (Germany)

### **3 organisations:**

- ▲ Energy Cities, the European network of local authorities in energy transition (leader)
- ▲ University of Maastricht (The Netherlands)
- ▲ Changeworks (United Kingdom)



[www.nweurope.eu/ace-retrofitting](http://www.nweurope.eu/ace-retrofitting)

# Contents

<b>Introduction</b>	p.4
<b>Why is energy retrofitting in condominiums a challenge?</b>	p.5
<b>New facilitation methods: ways out of the condominium inertia</b>	p.6
<b>Caring for the homeowner side: support strategies</b>	p.8
<b>The private building sector: filling the skills gap and federating professionals</b>	p.14
<b>Linking homeowners and building professionals</b>	p.19
<b>The way forward</b>	p.23

# Introduction

Condominiums or private apartment blocks are a complex building segment for retrofit projects. This guide describes how to overcome barriers in order to speed up the retrofit process. Municipalities and regions play a key role, providing a dynamic framework that encourages co-owners and professionals to tackle the energy performance of multi-apartment buildings with more self-confidence and audacity. It is their role to raise awareness of the demand side (co-owners, building manager, in-house project team, retrofitting coach etc.), improve skills of the supply side (building professionals, financial experts) and facilitate the interaction between all partners.

This guide is based on the experience gathered via the ACE-Retrofitting project. The core conclusion by all partners is that there is no one blueprint for success and this guide presents the different approaches chosen and tested by each organisation. However, there are still common success factors and the guide provides an overview of them, illustrated by very practical examples from the six pilot cities. It also describes pitfalls that other beginner local authorities should avoid when starting a condominium retrofit strategy or policy.

One important take-away: local authorities are strongly advised to work simultaneously on all aspects of the complex chain of actors instead of focussing on just one of them. Let's illustrate that by a simple story: Imagine a team of public servants that spend years working on convincing condominium owners to vote for works. Once this is done, they realise that there are no service providers available to carry out the work, or that the financial offers are not advantageous. Or, even worse, they manage to have the works carried out, but realise at the very end that they are done poorly. This is not only a waste of resources in the past, but it is also going to make it difficult to convince other condominiums to follow suit.



## Who is this guide for?

If you are working in a public (local or regional) authority or in an energy agency, this guide will help you understand your work with condominiums.

Public support programs are very much needed to accelerate the retrofitting of condominiums in Europe. Local authorities or energy agencies are the right facilitators of the process, both for co-owners as well as for experts from building-related professions.

# Why is energy retrofitting in condominiums a challenge?

**Although local authorities are tackling climate change, a majority of buildings in Europe are still not energy efficient and are in need of deep renovation. Without bold action, local governments will be locked into a high carbon footprint future. Currently 42%\* of the European population live in flats (condominiums, multi-owned properties, tenements, social housing, etc.). Retrofitting condominiums (tenements and flatted buildings) is highly strategic, as a large number of private owners can be reached at the same time. Once the retrofitting is done, co-owners benefit from comfortable homes as well as from financial and carbon savings.**

## **Fragmented ownership**

However, many obstacles stand in the way. Retrofitting condominiums with their fragmented ownership structures is often challenging. Private home owners are elusive and tackling a condominium retrofitting project is more than the sum of individual decisions. It is incredibly difficult for a group of homeowners to achieve the necessary approval for retrofitting works. They often lack information about who to contact and shy away from or get trapped in the collective decision-making process. Driven by individual thinking, very personal motivations and bound to their own socio-economic context, each homeowner may act very differently.

## **Black box 'condominium'**

The picture is not much brighter when we look at the supply side: most building professionals as well as energy consultants are still not prepared to work with condominiums. They are unable to cope with the broad scope of works and prefer to only deal with one flat owner and his/her project, instead of the total building renovation involving several parties. Moreover, more financial solutions exist for individual apartments than for multi-owner buildings.

# New facilitation methods: ways out of the condominium inertia

The method presented in this guide was inspired by the ground-breaking work initiated by the Paris Climate Agency in 2013 . Since then, CoachCopro has successfully assisted thousands of French condominium owners and building professionals. It all started from the assessment that condominiums have special assistance needs due to their specific set up.

Since 2017, five other cities have been applying and adapting this method to each of their local situations via the ACE-Retrofitting project: Aberdeen (UK), Antwerp and Liège (Belgium), Frankfurt (Germany), and Maastricht (NL).

**The key to success is to cover all aspects simultaneously: work subsidies, communication, personalised coaching for co-owners, giving visibility to professionals, linking the demand and supply sides, and experience sharing. The holistic and tailor-made approach cultivates trusting relationships while generating direct and indirect jobs.**

# Paris and its CoachCopro: Big picture thinking

The innovative set of methods developed by the Paris Climate Agency has been labelled as CoachCopro. Its central and most visible element is a collaborative web platform composed of a public website and a restricted area for users which monitors activities. CoachCopro is a sophisticated platform, and the initial development cost came to €600 000.

Retrofitting condominiums to reach ambitious climate goals is highly strategic in Paris, a city where 95% of residential buildings have multi-ownership. A web tool was seen to be essential to attain the massive outreach required but experience has proven to the Agency that having a web platform is not enough. Various other information and match-making activities are required to bring people together.

After more than six years of experience with condominium retrofit projects, the Paris Climate Agency takes a holistic approach to its condominium advisory work, combining measures such as:

- + Communication
- + Tailored coaching for co-owners
- + Giving visibility to professionals
- + Linking the demand from homeowners and the services from construction or finance experts
- + Fostering experience sharing
- + Providing subsidies for retrofitting works



# Caring for co-owners: smart support strategies

## What exactly is a condominium?

**For all stakeholders working with condominiums it is important to “understand” the specific complexity linked to private co-ownership.**

**First, a quick reminder what a condominium is. Technically, a condominium is a collection of individual apartments and common areas along with the land upon which they sit. Individual home ownership within a condominium is construed as ownership of only the air space confining the boundaries of the home.**

**Many condominiums have co-owners associations made up of the apartment owners.**

**Associations manage condominiums through a board of directors or corporate body, elected by the members. Decisions are made during general assemblies.**

**Governance rules for the association are usually covered under a separate set of bylaws which generally govern the internal affairs of the condominium. These can and do differ by country.**

**A trustee (syndic) is a person or professional appointed by the co-owners to manage the maintenance and look after their investments.**

## The issue

Currently condominium co-owners are faced with a very complicated maze when it comes to finding useful information to start working on a retrofit. How much energy can each of us save? What are the advantages of making savings together? What policies or regulations do we need to know? How fast will the return on investment be? Is there any financial aid? Can we trust the renovation professionals? Should we be aware of hidden costs? How much time and energy will all of this take?

Additionally, collective decision-making is even more difficult when occupants are very different, for example in their interests or sociological profiles. Often for co-owners there are a lot of uncertainties about the reality of the benefits of retrofitting.

The on-the-ground experience during the ACE-Retrofitting project has shown that it is possible to overcome those barriers by empowering owners and managers. Coaching activities and step-by-step guidance enable owners to increase their knowledge and to take action.



# The ACE-Retrofitting Step-by-Step tool

The ACE-Retrofitting tool has been designed for and by local authorities, to make it easier to help condominium co-owners with energy retrofitting projects. The tool is available online in four languages (Dutch, English, French and German). It is divided into three main phases: "First steps", "Taking-off" and "The real thing". Altogether, it contains 17 helpful modules for soft and hard measures:

- + 14 documents are ready-to-use
- + 3 documents are designed to be adapted by a public body, particularly regarding legal and financial issues, according to the local and national context.

## FIRST STEPS: Why and how to start or further an energy retrofitting project?

These tools will help you:

- + Inspire condominium co-owners
- + Assess the existing and required resources
- + Mobilise co-owners around the retrofitting

## TAKING OFF: How to get insight into all the relevant matters to be ready for an energy retrofitting project?

These tools will help you:

- + Design a retrofitting roadmap
- + Get legal, financial and technical information from experts
- + Learn about governance and communication schemes

## THE REAL THING: What, when and how to carry out an energy retrofitting project?

This tool provides you with:

- + A specific project management plan
- + A planned timetable
- + Transparent communication among all the stakeholders



[www.nweurope.eu/projects/project-search/accelerating-condominium-energy-retrofitting-ace-retrofitting/#tab-4](http://www.nweurope.eu/projects/project-search/accelerating-condominium-energy-retrofitting-ace-retrofitting/#tab-4)



City testimonials

# How to support co-owners in their retrofitting project

**There is no unique methodology to support co-owners on their way to retrofit their buildings. Contexts and chosen approaches differ accordingly, but all ACE-Retrofitting project partners agree that the role of municipalities is to provide neutral and professional coaching services to give co-owners the necessary confidence to move forward.**



/// ANTWERP ///

## The Masterplan approach and a personal renovation coach

In our city, 71% of the residential (private) buildings are privately-owned. During the ACE-Retrofitting project, we focused on condominiums that are more than 20 years old with more than 20 units. These are the most complex buildings to renovate and represent more than 20% of the dwellings in the city.

Besides the financial planning, the biggest difficulty for owners and potential investors is knowing how to start, which measures to take first and how to embrace a more holistic approach to long term investments in their condominium.

Here in Antwerp, we put particular efforts on the tendering process as this is a key step in the retrofitting process. In the city, we developed a model of specification which requires professionals to submit a joint and high-quality offer that covers renovation in the

medium-term and maintenance in the long run. The final result is a Masterplan (submitted by the professionals) that guarantees home owners a well-thought-out roadmap for the necessary improvement works in their building.

The aim of the Masterplan audit is to develop a coherent and transparent roadmap for the improvement of the energy performance of the building and to create a healthier and more comfortable living environment. In order to get an optimal and innovative renovation, it is important to always keep the final objective in mind: the creation of a future-proofed building!

To reach the best possible energy performance of the building, the target should be to achieve the same standards as in a new build project. The technical and economic feasibility, as well as the architectural limitations of the existing building, should always be taken into account.

Furthermore, the renovation should fit into the short, medium and long term perspective of the building's lifecycle. Significant maintenance or improvement works, e.g. on external façades, walls and roofs, should be accompanied by an improvement in the energy performance of the respective building component. The philosophy is that undertaking performance upgrades at the same time as maintenance work reduces overall costs and disruption.

By creating this individual renovation roadmap from the start, a technical lock-in effect is avoided by defining the relation between, and impact of, different measures. This 'Masterplan Benovatie' approach comes with tailor-made coaching of co-owners: the coach is a skilled staff member from the Energy House of Antwerp, who guides the co-owners (ideally a dedicated group of homeowners) throughout the entire renovation process from the audit and specification to the selection of craftsmen and the implementation of works. To encourage and get buy-in from all co-owners from the very beginning, the coach organises meetings with all owners of a building during which the Masterplan approach is presented through a short video and a few slides. Lastly, participants sign a declaration of engagement through which they commit to carry out the Masterplan.

We make sure there is an ongoing dialogue with the co-owners and the trustees. As an independent and reliable partner throughout the whole process, the renovation coach from the Energy House of Antwerp city is able to identify barriers and help co-owners solve the problems they encounter.



/// ABERDEEN ///

### City signposting

In Aberdeen we have focussed on our tenement buildings. Most of these are now over 100 years old, with an average of 6-8 flats. We have met residents face-to-face to discuss energy efficiency measures that would be suitable for their properties as well as highlighting the benefits of installing these measures. We have facilitated residents to install measures by engaging with their neighbours, in order to gain consent for works, and helping them to find suitable funding mechanisms e.g. grants or loans. Although we are unable to recommend specific contractors to residents, due to council impartiality rules, we have been able to signpost residents to organisations that can arrange the works as part of a loan or grant funding package. We have also provided advice on what to look for when appointing a contractor, for example, trade body membership and guarantee scheme membership. A website offers advice and step-by-step guidance, through this we are able to engage with many more Aberdeen residents.



/// FRANKFURT ///

### Tailor-made energy advice

In Frankfurt, we have developed a new municipal energy advice service for condominiums. This new approach is exemplary and starts with a free energy check for condominiums which shows co-owners the potential energy savings for an energy retrofit. It then links them to a commercial energy consultant who produces a condominium retrofitting masterplan.

This set of support measures can easily be adapted by other local authorities. Furthermore, we organised a series of events (e.g. condo-Forum, expert meeting, building managers events, Frankfurt's 1st retrofitting day), which received a lot of interest and very positive feedback. These events helped to raise the public awareness on condominium retrofitting both at the owner and expert level.



/// MAASTRICHT ///

### A self-help (DIY) website

In Maastricht we have many small condominiums of 2-10 apartments. Therefore, we have focussed on developing a self-help website. This website is structured following the step-by-step tool (see infobox p.9) and guides the reader through the process. Amongst the multitude of existing information and tools in Dutch we have chosen the most relevant ones to complement the tools developed by the ACE-Retrofitting project. For each step we provide information, links to other websites about the topic and/or downloadable tools. For some people this information will be enough to help them in the next steps. Others need more support. We organise training, thematic information sessions and site visits to explain the process. Additionally, we can of course give some individual support and guidance upon request. That way we offer different levels of support that fit a wide range of condominiums.



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# What you need to watch out for!



/// ANTWERP ///

## Build good relationships and be patient

We strongly advise cities to build a good relationship with their federation of trustees (building managers). By collaborating with them, you reach your target group with greater ease. As the trustees are convinced of the coaching and the instruments provided by the Energy House of Antwerp, they are the best sellers of our advice.

Secondly: If you set up an advisory service, do not expect to see renovation works implemented after one year. Decision-making can be long, and it can take more than three years before deep retrofitting projects are realised in condominiums.



/// FRANKFURT ///

## Awareness-raising is key

When we started to design a municipal energy advice service for condominiums, we had doubts about offering it free of charge. We were afraid we would be buried under an avalanche of consulting demands as this is really an exceptional offer from the municipal point of view. But in the end, this was not the case at all. Although we have invested quite a bit of additional resources in publicity, interest from condominium owners is still limited. So, we had to learn a hard lesson: although having free and independent advice was assessed to be of high value for house owners (this can be seen in many surveys, studies and also comments from our customers), our efforts to raise sufficient interest from condominiums were not very successful. So, we now know that awareness-raising really should be at the centre of any other future condominium-targeted measure we propose.



/// MAASTRICHT ///

## Cooperate closely with existing federations of condominium owners

When our website with its step-by-step tool was finally ready, we realised that our target group was not. Although we had sent a notice to 5 000 co-owners in Maastricht inviting them to our launch event, only a couple of co-owners showed up. Apparently, this was not the right message, communicated in the right way or at the right time. Four months later we had our second chance to present our platform: together with the federation of co-owner associations we co-organised an event on the energy transition and its financial challenges. The federation's invitation to their members was more successful and about 150 people attended. At the event, quite a few people signed up for follow up activities such as our training, site visits and thematic information sessions. The next challenge is to keep this group engaged and interested.



# The private building sector: filling the skills gap and federating professionals

## The issue

When it comes to retrofitting works in condominiums, there are a large number of players from the private sector:

**construction companies / builders / energy service providers and financiers / audit service companies / project management assistance / financial engineering / operators / developers specialised in floor elevation / construction companies / craftspeople and banks.**

They represent a range of professions and skills that need to be combined to provide high quality and economically viable works in a condominium block. Until now, collaboration is scarce – very often because professionals are not used to working with this particularly complex building segment.

In order to overcome the weakness of the sector it is necessary to provide condominium-targeted tools and coaching opportunities to building professionals.



## The ACE-Retrofitting method to empower building professionals

All ACE-Retrofitting partners agree that the role of municipalities is to provide neutral and professional services. The list of possible activities is endless, but we share the most successful ones with you:

- + **Set up an online professional directory:** it allows professionals to give information on the services they provide and helps co-owners find all the relevant trades for energy retrofitting in one place.
  - + **Encourage professionals to sign a charter** and commit to comply with a list of objective criteria including training qualifications, transparency and use of ecological materials. By signing the charter, they become partners and are considered as affiliated companies.
  - + **Create an online project directory or disseminate case studies** which adds visibility to examples of renovated condominiums. Case studies should describe the impact on the energy performance of the building, the works conducted, the detailed costs, the timeline of the renovation and the stakeholders involved.
- Additional services that target building professionals are regularly used by the Paris Climate Agency and have been tested within the ACE-Retrofitting project:
- + **A bimonthly newsletter** highlighting professional services, upcoming information events or networking breakfasts.
  - + **Training sessions** explaining the energy retrofitting market of condominiums:
    - targeting condominium managing structures by teaching how to support co-owners,
    - targeting architects, advice companies, engineering companies and building companies and providing advice on how to enter the condominium retrofitting market.
  - + **Interactive conferences:** Professionals get the opportunity to present technical retrofitting solutions identified by the Paris Climate Agency (e.g. windows, ventilation, external insulation, collective heating systems) to building professionals.
  - + **Meetings, webinars and working groups:** professionals talk about experiences and barriers to retrofitting, but also share their knowledge of resources and/or innovative concepts adapted to retrofitting condominiums.

City testimonials

# How to support building professionals

**As you will see in the following examples, there are a number of different ways to federate professionals especially as they are highly affected by market forces.**



/// FRANKFURT ///

## Germany's first quality-controlled directory of building professionals for condominiums

We created a web platform with a lot of information for condominiums. It also contains helpful tools and practical advice for retrofitting measures. Moreover, we set up the "WEG-Bereiter-Liste", a public directory of qualified building professionals, energy consultants and building managers. A building professional who wants to feature on the list must comply with three levels of criteria. Through this process, we created Germany's first quality-controlled directory of building professionals for condominiums. The website information such as the directory are not limited to the Frankfurt area. Other German local agencies are also welcome to include their services and information on condominium retrofitting.



/// PARIS ///

## Professionalising building retrofitters

The technical specification for professionals that are part of the Masterplan are freely available on the CoachCopro platform. Since our climate agency developed an analysis grid, each agency advisor knows how to interpret the offers provided by professionals. Advisors quickly assess if a masterplan produced by a professional is of high quality or not. As a result, advisors assist co-owners to better understand the offer provided by professionals. As an example: a holistic audit is not always adapted to the specific building (for example for small condos). By consequence, our agency must adjust the coaching so that coaches can identify (and adapt to) specific needs. In Paris, for example, holistic audits are sometimes oversized and quite expensive for the average condominium containing 24 apartments.

The coaches that work for our agency have witnessed that professionals have better skills now. They are more aware of the specific issues linked to condominiums and work better together.

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# What you need to watch out for!



/// ANTWERP ///

## Building professionals are part of the journey

It is very useful for a city to involve the building sector experts when defining its advisory service and instruments. In Antwerp we identified and mapped contractors (architects and engineering companies) operating in our region and that know how to conduct a full audit for a condominium. We also discussed with them what was expected for the audit and the estimated price of the study.

On the other hand, it is also important to know the needs of the construction sector throughout a full renovation process. We started with a needs assessment and sent out a survey to the different target groups of the building supply side. Needs vary depending on whether a company is already involved

with condominiums and have know-how around deep energy retrofitting of condominiums or not.

As a result, our renovation coaches know which are the companies that cover the different expert fields required by an audit. We work with existing professional federations to promote the importance of producing condominium-focused masterplans.

Nevertheless, it is crucial to train local craftsmen for the implementation of deep retrofits in condominiums in order to have enough capacity on the supply side. As a positive side-effect, this also strengthens the local and regional economy.





# Linking homeowners and building professionals

## The issue

What makes the ACE-Retrofitting concept so special is the holistic approach to condominium retrofitting. Guidance is provided to both homeowners and professionals. Connecting them is key to success and unfortunately is still rather rare. Online platforms have proven to be very useful for matchmaking but require additional forms of facilitation, coaching and methods to bring people together.



## Online platforms to bring together homeowners and professionals

Browse through the online platforms that ACE partners developed

- + Antwerp:  
<https://samenklimaatactief.be/appartementsgebouwen>
- + Frankfurt:  
[www.sanierungswegweiser.info](http://www.sanierungswegweiser.info)
- + Liege: [www.reno-copro.liege.be](http://www.reno-copro.liege.be)
- + Maastricht:  
[www.vveenergiebaliemaastricht.nl](http://www.vveenergiebaliemaastricht.nl)
- + Paris:  
<https://paris.coachcopro.com>

City testimonials

# How to connect all stakeholders



/// LIÈGE ///

## Create a powerful network

When we started the ACE-Retrofitting project, it seemed obvious that it was all about connecting the right people. But we realised we had no idea who they were. The condominium sector in Liège was so particular that even the housing department of the city did not know how to identify who is who. We had a particularly hard time identifying the professionals who were able to offer relevant retrofitting material, technical solutions or services to condominiums.

We thus worked with the Local Energy Agency and the National Association of Owners and Co-owners to reach the home owners. To mobilise the professionals, we collaborated with two Walloon clusters of enterprises dedicated to sustainable buildings and retrofitting, which together have around 500 members. These partners helped the ACE-Retrofitting project to develop synergies with the Liege Chamber of Builders in order to feed the directory of professionals.

Together with these existing structures, we were able to develop a network of actors such as the National Registry of Enterprises, a research unit of the Brussels University in charge of sociology, the planning department of the city, the cartography/GIS platform, the ICT department, and the metering unit of the Energy Grid Manager to gather important data concerning the condominiums in our city.

This network allows us to speed up decision-making and to raise general awareness around condominium related retrofitting projects.



/// PARIS ///

## Positive peer pressure

We see that it is crucial to propose a wide panel of events for different stakeholders. What matters to people is having discussions with their peers. Co-owners, for example, are very keen on giving advice to other co-owners who may only be starting the energy retrofitting process. Depending on the theme chosen amongst the most recurring questions and demands (holistic audit, heating, how to renovate a Haussmann building...), our energy agency advisor gets in touch with trustees and building professionals. Together they set up the event and plan its format. It can be a condominium visit with the general contractor, consulting firm and/or architect invited to present the technical side of the renovation to a maximum of 20 co-owners. Alternatively, it can be a peer-to-peer event gathering up to 50 co-owners. In that case, meetings and webinars are organised by professionals around presentations of resources and/or innovative concepts adapted to the retrofitting of condominiums. Both events usually last 2 hours and are concluded by networking drinks.



/// ANTWERP ///

## Online matchmaking for offline success

The objective of our online platform is to increase and to speed up the number of renovation projects in condominiums. We therefore set up a digital marketplace to facilitate matchmaking between homeowners and the professional stakeholders. The renovation coaches of the City of Antwerp and of the AG Energiebesparingsfonds encourage interested syndics and co-owners to this virtual market place. It is the perfect place to find the appropriate construction company for the works that need to be conducted as described in their Masterplan.

# What you need to watch out for!



/// ALL CITIES ///

## Finance is not a small thing

Retrofitting in a condominium situation is very complex. This is due to the number of stakeholders, but also due to the special financing requirements of retrofits. Retrofits can get quite expensive, especially for very old buildings, and individuals owning condominium apartments face financial constraints. For single-family houses there are more financial tools available and the decision to retrofit is usually not that complex. However, when it comes to condominiums there is still a lack of financing solutions in the EU and beyond to boost retrofitting of condominiums.



/// ANTWERP ///

## Do not forget to involve the financial sector

After all, this is the most important building block in your coaching process. If there are no adequate financial products for co-ownerships available on your local market, deep retrofit of condominiums will not happen.

Here in Antwerp, co-owner groups receive a customised financial model with an overview of existing loans and subsidies. This helps them find the required funding and carry out the renovation measures in line with their financial means. The City of Antwerp also set up a new grant programme for co-owner associations. It subsidises the preparation of a Masterplan to 50% of the study cost with a maximum threshold of €7 500.

## The INNOVATE project: Innovative energy efficiency service packages

Over the past years, public administrations and private players have been developing and testing solutions for energy efficient homes. Retrofitting a home requires important financial resources and services. The EU-funded INNOVATE project has been working on one-stop-shops as the solution to provide everything needed: they function as a marketplace and make the connections between supply and demand. The INNOVATE work sheets help to assess the financial means of homeowners as well as their need to find additional financing for their renovation works. New financial solutions are often needed for building-related credits (instead of people-related), but also for people who cannot access traditional bank loans (e.g. duration of loans is too short or too expensive).



[www.financingbuildingrenovation.eu](http://www.financingbuildingrenovation.eu)



# innovate





# The way forward

## Top 3 tips from the ACE-Retrofitting cities

Through experimentation, the ACE-Retrofitting cities gained three precious insights that may be helpful for any other local authority wishing to tackle condominium retrofits:

- ① **Take a holistic, big picture approach (beyond energy)**
- ② **Adopt a multi-pronged strategy (target homeowners, retrofitters, financiers, etc. at once with a multitude of complementary activities)**
- ③ **Coach and connect all stakeholders in the most tailored way**

Thanks to the ACE-Retrofitting project, six cities designed and experimented with new ways of facilitating retrofit works in condominiums. This is an important step, both for them and a learning opportunity for others. Unfortunately, this is only a drop in the ocean compared to the urgency for climate and energy action and the low renovation rates in Europe.

**More cities need to focus on condominiums.** Indeed, they are not low-hanging fruits and need well thought-out strategies. However, the tools are there, and the pioneers have proven that despite its complexity, this segment can be tackled. What is still far too weak, is the political awareness of condominiums' strategic importance. The more local government takes the political decisions and actions to target condominium retrofits, the more we will have lessons, data and advice to share. Ultimately, this will lead to significant collective intelligence around the topic...and ultimately to efficient and liveable homes.

# ACE-Retrofitting partners' look towards the future



/// PARIS ///

## Dream big, but tell the whole truth

Within the ACE-Retrofitting project, the Paris Climate Agency has been carrying out a detailed audit of 8 condominiums from December 2017 to December 2019. Its purpose is to measure real energy consumption before and after retrofitting by installing several energy meters during two consecutive heating periods. A number of interesting points have been highlighted through this experimentation.

Considering the metering itself, we identified several critical points to be checked before the installation of any sensors. For example, the presence of any heat meter in the condominium, the electric synoptic, or the heating distribution regulation. On the downside, the experiment results show that targeted energy savings are often not reached during the years following the retrofitting project. This is due to a number of factors including: the difference in the calculation method between the predicted consumption (TH-CE-EX) and the real consumption (metering and bills), on-site hazards during planned works and partial insulation of walls, leading to a complex heating regulation.

In December 2019 the Paris Climate Agency will publish and present the experiment report containing several recommendations addressed to professionals, institutions and citizens to ensure that the optimum savings can be achieved.



/// ANTWERP ///

## Align your Masterplan with legal frameworks

A renovation Masterplan should not only focus on the energy efficiency of the building, but also provide concise information on the status quo of the building. This applies to the common parts of the building and concerns the building quality and structure, technical installations, fire risks, public utilities, health and safety and general living conditions. Furthermore, a condominium Masterplan should be in line with all your local and regional legal frameworks. In Antwerp the renovation scenarios for ambitious retrofitting must comply with the following:

- The Flemish energy efficiency long-term policy framework;
- The existing local and regional renovation procedures and subsidies which promote 'clustering' of different renovation (energy efficiency) measures;
- The development of a multi-annual long-term maintenance plan (which is a part of the Masterplan) is a legal duty for the trustees.



/// LIEGE ///

## Liège takes rare steps towards better condominium retrofits

Energy efficiency investments need to be considered as one brick out of the complete wall to be built. Building owners, as well as their managers, face a wide range of challenges that go beyond energy efficiency issues: ageing buildings and their equipment, the update of health and safety rules as well as sustainable development aspects (waste sorting, inclusion of sustainable mobility, greening and biodiversity integration, rainwater recovery, etc.).

In Liège, in order to convince the sector to accelerate the process, we, the strategic department, got the green light to implement - under the Mayor's leadership - a dedicated interdisciplinary working group focusing on "Condominium retrofits". This working group gathers the persons in charge of urban safety, the fire service's risk prevention unit as well as co-owners' unions and major condominium trustees active on the city's territory.

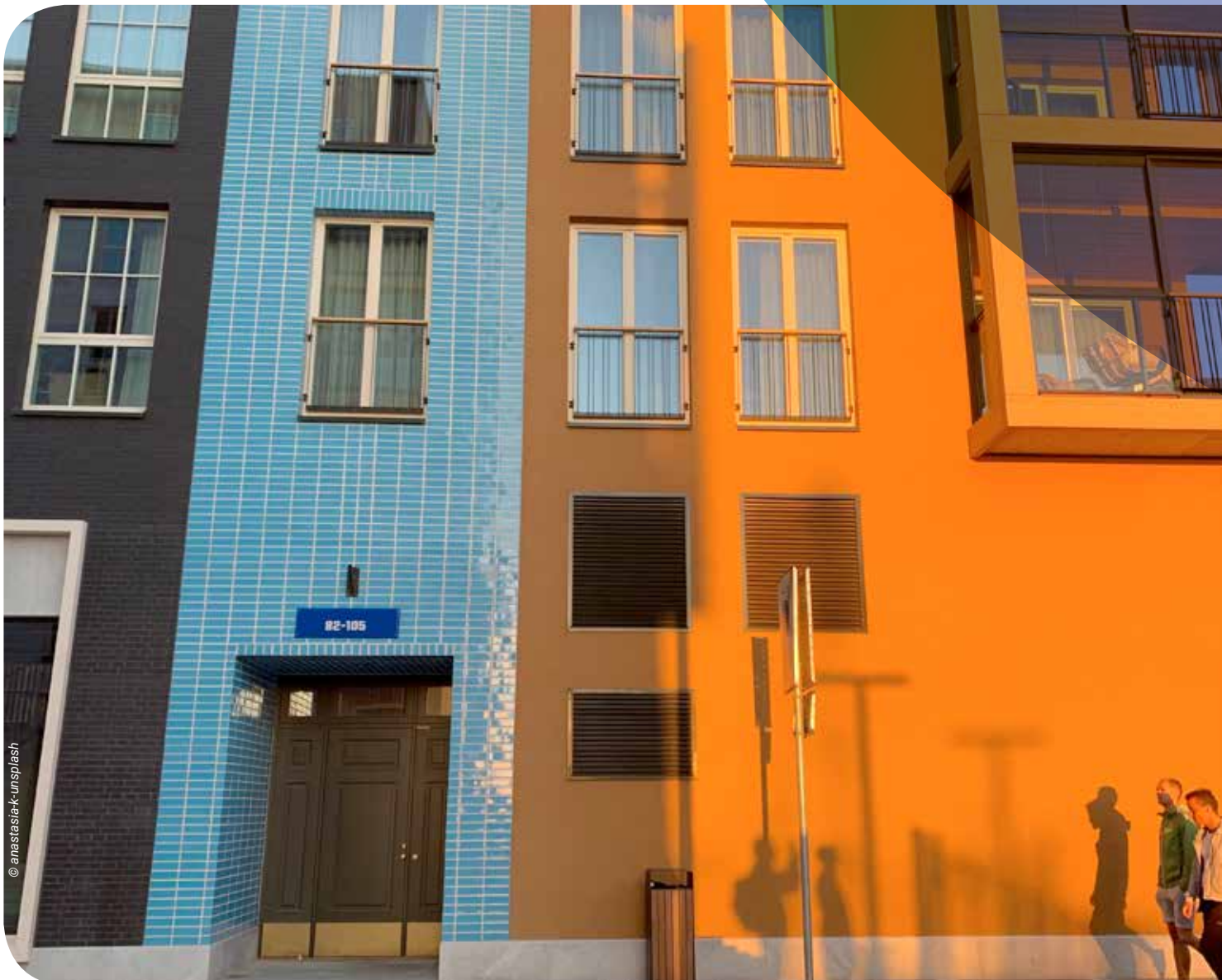
Furthermore, recently the new Walloon housing aid system merged the various aspects of investments linked to safety, health, energy efficiency in one singular administrative procedure. In addition, housing aids have now become available for co-owner associations in the form of 0% loans up to €500 000 with repayment terms of up to thirty years.



/// ABERDEEN ///

## Put your money where your mouth is

This may seem common sense, but the ACE-Retrofitting project in Aberdeen has highlighted that political commitment needs to come with proper resources. Human resources are essential to deliver high-quality energy efficiency retrofitting projects. Despite Aberdeen Councillors being fully committed to the ACE project its delivery has been severely hampered by a lack of staff. This has been due to a number of factors such as recruitment embargos within the organisation. As a direct result, the size and scope of the project within Aberdeen has been dramatically reduced. For any project of this type, continuity planning must be in place from the outset to ensure that if key staff do leave the organization the project can continue.



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# Outreach strategies to put condominiums higher on the political agendas



## /// LIEGE ///

Due to a concerted strategic outreach, our condominium retrofitting project is a fully integrated part of the Walloon Long-Term Strategy for the Retrofitting of the Building Stock. Concerning legal and financial aspects, we developed strong relations with the regional energy and housing administration and Ministers' offices. We also collaborate with the Walloon Housing Fund for public loans and through the National Association of Owners and Co-owners with the Federal Ministry of Justice to update the co-ownership law. Furthermore, we established successful contacts with the European Investment Bank and its ELENA facility in order to benefit from the technical assistance programme for the auditing and preparation steps of condominium retrofitting projects.

Through these contacts in the framework of the ACE-Retrofitting project, different high-level stakeholders acknowledge the realities of condominiums and have integrated them into the political agenda. As one example: we notice the recent extension of the Walloon public housing financial aids (0% loans) to co-owner associations as well as strong commitments towards condominiums taken by the new Walloon government.



## /// ANTWERP ///

The energetic ambition set at the local level for condominium retrofits should be in line with the European Energy Performance of Buildings Directive (EPBD) standards. If possible, it should also aim to reach the expected legal standards for 2050 for existing residential buildings. The current requirement in Flanders is E60 (100kWh/m<sup>2</sup>) for the long-term ambition for existing residential buildings by 2050. Of course, the technical and economic feasibility, as well as any architectural constraints must be taken into account.

What we learnt here in Antwerp is that it is important to be an ambassador for the condominium sector: through insights from concrete projects we can lobby for better policies, regulations and subsidies at the national, regional and local levels. Many of the existing regulations and subsidies for the built environment focus on individual homes and not on apartments. It is important to understand all the barriers and to discuss them with the relevant actors in order to adapt the regulations and instruments to the condominium sector.



## /// FRANKFURT ///

Within the ACE-Retrofitting project, we learnt that it is very challenging in Germany to identify and establish contacts with condominiums. There is no inventory of condominiums and they are also rather cautious to act. Surprisingly, the interested condominiums were often much larger than expected (up to 300 housing units). It is challenging for them to get the right advice, and adequate support programmes are sometimes missing. Overall, the political awareness and support for the retrofitting of condominiums is not strong enough in Germany. Fortunately, there is reason to believe that this is changing at the moment - also thanks to the ACE-Retrofitting project in Frankfurt.

# Energy retrofitting of condominiums: a stronger political commitment is needed. Join the ACE Campaign!

Sustained action to retrofit apartment blocks starts and succeeds with a decision at the highest political level. You too want to put condominium-targeted activities on the political agenda of your city? The ACE-Retrofitting charter allows your city leaders to give its political commitment and to be part of a network of engaged local authorities benefitting from the pioneer's experience.



The charter in English:

[www.nweurope.eu/media/7727/ace\\_charter\\_en.pdf](http://www.nweurope.eu/media/7727/ace_charter_en.pdf)

All other language versions are available on the ACE-Retrofitting website:

[www.nweurope.eu/projects/project-search/accelerating-condominium-energy-retrofitting-ace-retrofitting/#tab-5](http://www.nweurope.eu/projects/project-search/accelerating-condominium-energy-retrofitting-ace-retrofitting/#tab-5)

Accelerating energy retrofitting of condominiums

## CHARTER

**Energy retrofitting of condominiums: a stronger political commitment is needed**

Although local authorities are tackling climate change, a majority of buildings in Europe are still not energy efficient and in need of deep renovation. Without bold action, local governments will be locked into a high carbon footprint future. Retrofitting is therefore a key measure for energy efficiency policies in the residential sector.

Currently, 42% of the European population lives in flats (condominiums, multi-owned properties, tenements, social housing, etc.). By targeting condominiums, a large number of private owners can be reached at the same time. Once the retrofitting is done, they benefit from comfortable homes as well as from financial and carbon savings.

However, many obstacles stand in the way. Retrofitting multi-family houses with fragmented ownership structures is often challenging. The necessary approval for retrofitting works, due to the collective decision-making process, is incredibly difficult to achieve. The supply sector is not organised and often lacks skills to respond to this level of demand.

Municipalities and regions play a key role to provide a dynamic framework that encourages condominium energy retrofitting. They should raise awareness of the demand side (co-owners, building manager, in-house project team, retrofitting coaches), improve skills of the supply side (building professionals) and facilitate the interaction between both sides.

**Political voluntary self-commitment**  
Success means making a significant contribution

**We are aware that:** it is our responsibility to take action to overcome the legal, human and financial barriers to the energy retrofitting of condominiums.

**We acknowledge that:**

- Condominiums play an important role to achieve climate targets
- Co-owner groups require assistance due to their specific challenges (such as legal decision-making frameworks or complex building structures)
- An integrated approach is required to overcome the legal, human and financial barriers to the energy retrofitting of condominiums

**We commit ourselves to:**

- Stimulate the acceleration of condominiums energy retrofitting in our territory
- Issue a plan or strategy to speed up retrofitting of condominiums in our territory

**In return, through the ACE Retrofitting project, we will have access to:**

- Existing stakeholder networks working on the energy retrofitting of condominiums
- Practical information such as decision-making tools, feedback from other experienced cities/energy agencies
- Tools created within the ACE Retrofitting project as the step-by-step guidance tool in English, French, German and Dutch: [energy-retail-ace-retrofitting](#)
- Case studies on working methods for the supply and demand side as well as on how cities are leading the way

☐ I, the legal representative of the public authority of:

Municipality: \_\_\_\_\_

Position: \_\_\_\_\_

Date, stamp and signature: \_\_\_\_\_

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