

# Report on drivers and barriers to the deployment of citizen-led renovation

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## Context

### Climate imperative

To reach carbon neutrality by 2050, European countries to secure a halving of energy consumption compared to today's level and the decarbonisation of energy sources.

Buildings have a critical role to play for the climate and energy future of Europe, being responsible for 36% of GHG emissions in Europe.

The decarbonisation of Europe's building stock represents a particular challenge. Indeed, most of the buildings that exist today have a poor energy performance and will still be standing in 2050. The current renovation rates are not sufficient to ensure a decarbonisation of the stock by 2050. It shall be increased by a factor 3 (to reach 3% per year). The average depth of the energy renovations conducted today is also insufficient to achieve the decarbonisation objective.

The service market for deep energy renovations is not yet mature. The missing skills and the fragmentation of the market players are making it difficult to get the needed amount of projects delivered in order to reach the governmental objectives.

Finally building standards deployed at the European level were very efficient to push the newly constructed building stock toward more efficient constructions, but renovation standards made it more difficult to trigger projects by putting the bar higher than possible to handle for some private consumers<sup>1</sup>. Triggering those private home renovation will be to most difficult target because of the highly specific situations and capability of each household.

### Energy efficient houses - a citizens' interest

The European citizen are preoccupied by their homes and houses being efficient to save money, improve comfort and decrease their environmental impact<sup>2</sup>. While citizens are facing barriers related to available capital and complexities linked to the delivery of home renovation project, those barriers are even higher relating to deep renovation. Despite support programs put it place at the member state level, the trust in market actors in the construction industry<sup>3</sup>, split incentives and feeling of overwhelming complexity makes private consumers reluctant to invest in renovating their houses.

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<sup>1</sup> [https://www.nweurope.eu/media/9786/ace\\_recommendations\\_v5.pdf](https://www.nweurope.eu/media/9786/ace_recommendations_v5.pdf)

<sup>2</sup> <https://europeanclimate.org/content/uploads/2019/11/12-03-19-uncover-the-underlying-motivations-and-barriers-for-energy-efficient-renovations.pdf>

<sup>3</sup> See European Sector Observatory country report 2018 for Germany.

The renovation sector is heavily relying on private decision of home owners to trigger projects<sup>4</sup>. But the private and public sectors are both facing heavy barriers:

Barrier Categories	Common Barriers
Lack of knowledge and know-how	Lack of reliable and credible information about energy performance and the costs and benefits of efficiency improvements Lack of implementation capacity: shortage of relevant technical skills in local markets to ensure compliance of building EE codes Risk aversion to unfamiliar materials, methods and equipment, or uncertain outcomes
Institutional and regulatory deficiencies	Lack of national and/or local commitment to EE in general, and to EE in buildings in particular Government internal procedures and lines of responsibility that discourage EE in public buildings (e.g., budgetary and procurement policies not conducive to contracting EE services) Poorly designed social protection policies that undermine price signals for efficient use of energy (e.g., generally subsidized energy prices)
Financing challenges	Local government budget constraints Lack of long-term financing at a moderate cost High transaction costs due to small individual investments Unattractive financial returns Unreliable repayments
Market failures and inefficiencies	Split incentives: EE investment decisions are made by actors that do not receive direct financial benefit Suboptimal decisions or choices due to insufficient information Fragmented building trades: multiple professions involved in different stages or decision processes

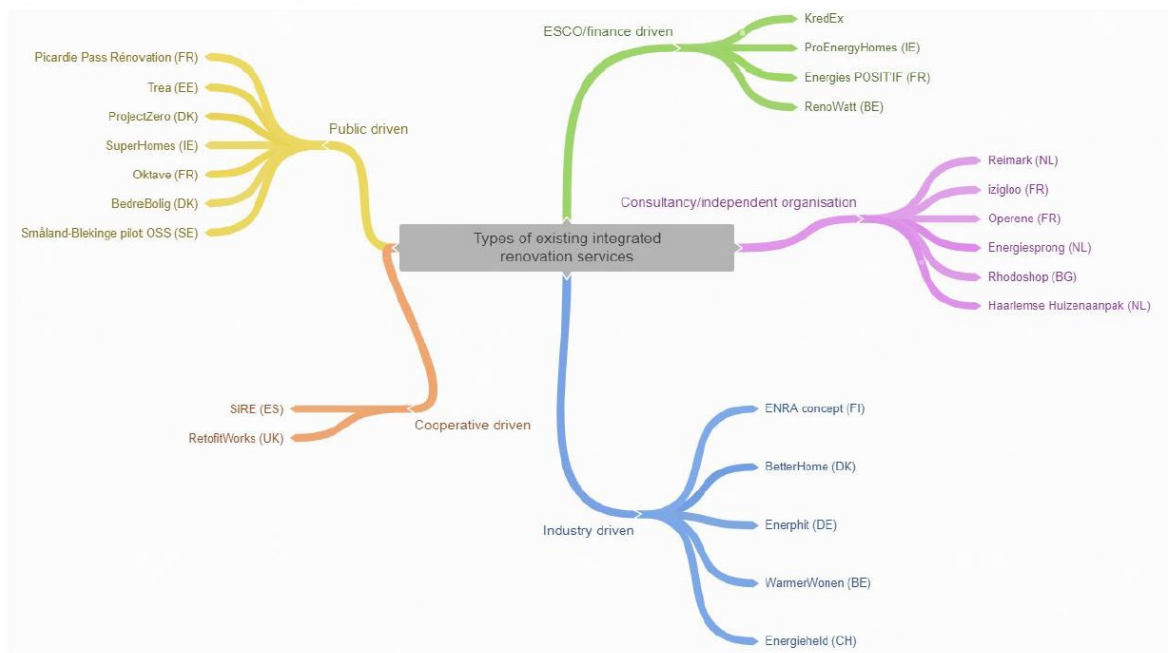
In the meantime, many mechanisms have found successful results as shown by the turnkey retrofit report<sup>5</sup>. The variety of business models available, highlighting the role of local actors, is encouraging regarding the implementation of support schemes to help trigger renovation projects. The main take away from the turnkey retrofit project is twofold: one,

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<sup>4</sup> [https://e3p.jrc.ec.europa.eu/sites/default/files/documents/publications/jrc113301\\_jrc113301\\_reportononesto\\_pshop\\_2017\\_v12\\_pubsy\\_science\\_for\\_policy.pdf](https://e3p.jrc.ec.europa.eu/sites/default/files/documents/publications/jrc113301_jrc113301_reportononesto_pshop_2017_v12_pubsy_science_for_policy.pdf)  
<sup>5</sup> [https://www.turnkey-retrofit.eu/wp-content/uploads/TR\\_D1.1\\_BPIE\\_30\\_08\\_2019\\_FV.pdf](https://www.turnkey-retrofit.eu/wp-content/uploads/TR_D1.1_BPIE_30_08_2019_FV.pdf)

coaching of consumer is key, and especially coaching in a group, and two, the most successful schemes are building on existing institutional supports.

Figure 2: Compilation of existing OSS (compilation by Turnkey Retrofit consortium)



## The role of energy cooperatives

Since the adoption of the Clean Energy package last year, citizen participation is one of the governing principles upon which the EU's energy market operates, and a lighthouse for the European energy transition. Provisions included to involve citizens in the design of policy proposals allow them to benefit from energy market rules<sup>6</sup>, and to tackle energy poverty.

A role is recognised for renewable and citizen energy communities to support the energy transition, including on energy efficiency matters. The Renewable Energy Directive for example acknowledges the potential for renewable energy communities to advance energy efficiency in households and address energy poverty, and requires Member States to develop an enabling framework for renewable energy communities. Member States must report in their National Energy and Climate Plans (NECPs) on policies and measures which support energy communities, and, where applicable, their role in achieving energy efficiency policy objectives.

Renewable energy communities (RECs) are a tool to support the collective action of European citizens to deliver a decentralised energy transition. This new policy tool,

<sup>6</sup> For more information, see REScoop, 2019, [Europe's new energy market design: What does the final piece of the Clean Energy Package puzzle mean for energy democracy?](#)

recognizing the impact of the community energy movement across Europe, will offer an opportunity for European citizens to develop collective approaches to energy-related issues faced locally. These models are getting more and more traction in Europe. In the Netherlands for example, the number of energy cooperatives grew by 21% in 2018<sup>7</sup>. By making it possible for citizens to actively participate in renewable energy and energy efficiency projects, RECs foster social acceptance for renewable energy, keep the individual investment affordable and benefit the local community. They are offering an opportunity to private citizens to deploy collective action schemes.

The revenues that result from renewable energy projects can be used to finance energy efficiency measures in buildings. Cooperatives have long invested profits of renewable activities in supporting members to change their behaviours, both in terms of consumption patterns and investment in more efficient homes and collective infrastructures. Some REScoops have paid for insulation material for public buildings, while others pay the wage of a local energy expert who helps citizens and the local municipality improve their overall energy efficiency. REScoop models offer interesting synergies in the fulfilment of climate and energy targets. Overall, community-led projects are built on complete transition projects, putting efficiency and sobriety at the center of their action.

## Why this report?

As part of the EU-funded REScoop PLUS project, several tools<sup>8</sup> were developed to help REScoops promote energy efficiency in their organisation and to help their members being more energy efficient. This Horizon 2020 funded project brought together 8 cooperatives from 7 different countries, and created a toolbox that has been adopted by 10 cooperatives during the time span of three years. The project reached almost 200,000 cooperative members across Europe. The project created tools and an expert network supporting energy communities on the path of supporting their members to be more energy efficiency. The REScoop PLUS research also linked the cooperative membership with a reduction in private consumption going up to 20% in some countries.

Following the REScoop PLUS project, a number of cooperatives (Energie partagée, Enercoop, Middelgrunden, Energie Samen, ect.) have expressed interest in finding solutions to tackle energy renovation activities and help overcome the challenge of the renovation of the residential sector through the community energy concept.

In the meantime, a need to motivate and enhance demand for home renovation was identified by the work of the Coalition for Energy Savings<sup>9</sup>. This also came at a crossroad with the challenge formalized by the Green Deal announced by the European Commission in

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<sup>7</sup> More information: <https://www.hieropgewekt.nl/local-energy-monitor>

<sup>8</sup> See toolbox here: <http://www.rescoop-ee.eu/the-toolbox>

<sup>9</sup> [http://www.energycoalition.eu/sites/default/files/20200130%20Energy%20Efficiency%20Package\\_corr.pdf](http://www.energycoalition.eu/sites/default/files/20200130%20Energy%20Efficiency%20Package_corr.pdf)



December 2019. Considering those factors, the first step was to explore the barriers and available pathways to develop an answer to the challenge of a bottom up approach of tackle the renovation wave.

## **Objective of the report and methodology**

The objective of the project is to develop the concept of citizen-led energy renovations and a roadmap on how to further roll it out. This report is the current result of this on-going work with cooperatives and communities across Europe.

REScoop.eu is running a working group within its members to discuss the experience with implementing energy renovations projects. The group aimed at identifying the drivers that lead energy communities to consider these projects, and the barriers that prevent more activities to take place in this field. This peer group and our discussion fed this report, and allowed us to discuss a way forward.

First, we will look at examples on the ground, concrete cases that REScoop have successfully experimented with. The second part of this report will be dedicated to analysis and giving a pathway to continue developing citizen-led renovation.

## **Case studies**

Those cases were collected during the work of the working group on building renovation of REScoop.eu. Each of those examples are specific because of the legal, social and economic environment in which they have been developed. However, they have something in common: the role of the cooperative.

Cooperatives and other citizen-led collective action schemes have a specific relevance to the renovation sector, by their very nature. Those citizen-led initiative are built on the trust of their members, and rely on this trust as a key component for their activities. Trust of the consumers is exactly the issue in the building sector: from the trust on the contractors, to the trust in the technologies and technics needed to reach the household decarbonization goal.

### **Tipperary Energy Community**

The mechanism run by TEC is currently successful with projects running every year, and more than 150 houses being renovated. However, the type of renovation actions is still shallow and the operational funding is still a challenge.



<b>Name of the project</b>	<b>Tipperary Energy Communities (Community Power Ireland)</b>
<b>Country</b>	IR (Tipperary and neighboring region)
<b>Website</b>	<a href="http://www.energycommunitiestipp.ie">www.energycommunitiestipp.ie</a>
<b>Description</b>	<p>TEC is a group of citizens that are supporting households in energy poverty. The cooperative is providing services for shallow retrofits services (mostly around heating system), for single houses. The cooperative is receiving support from the Irish state, and lower the cost of the retrofits, by bundling houses together to increase bargain power.</p> <p>The cooperative starts by finding homes in need of retrofitting. They are recruiting tenants into the program, providing them with a technical assessment of their house and an overview of the capital to invest.</p> <p>Once the pipeline is ready, the cooperative leadership is pitching the renovation project to regional and national funding institutions, as well as utilities.</p> <p>Finally, once the funding is awarded, the cooperative is coordinating the project, including sourcing local contractors and ensuring the quality of the delivery. The cooperative will go through a tendering process that includes only local contractors.</p>
<b>Target</b>	Fuel allowance home : “A household is considered to be energy poor if it is unable to attain an acceptable standard of warmth and energy services in the home at an affordable cost.” Says the DCENR. Fuel Allowance is a means-tested payment to help with the cost of heating your home during the winter months. It is paid to people who are receiving a long-term (15 months or more) social welfare payment. The rate of payment is €24.50 per week from October to April each year.

	<p>The TEC started with targeted actions and now moved on to complete renovation program.</p>
<b>Cost structure</b>	<p>Most of the recruitment and bundling work is done on a volunteer basis.</p> <p>The staff time for coordination and project delivery is paid partly by the funding instructions, partly by the homeowners.</p>
<b>Revenue Streams</b>	<p>State Funding : Sustainable Energy Authority of Ireland</p> <p>Utility companies</p>
<b>Average Project Size and investment</b>	<p>12 000 euros retrofit projects on average</p> <p>The cooperative retrofits about 150 to 200 houses a year</p>
<b>Barriers</b>	<p>The funding for the work is not stable at the moment, considering that state funds are unreliable.</p> <p>The financing of the project is complex and requires high efforts from the part of the cooperative. There is a lack of a long term plan to support financially the aggregation process.</p>
<b>Key Drivers</b>	<p>The key driver is local development, supporting investment in rural areas. The goal was to bring back employment into the region and support damaged communities after the crisis.</p> <p>The goal to support households in fuel poverty was guided by two main drivers: first, in order to reduce local poverty (visible to local inhabitants), second because the national funding was incentivizing this types of projects.</p> <p>Local : several villages together in the first place, then the county in the second place. TEC focused on the ownership feeling of the local citizens.</p>

The TEC start from the point of view of a local development project. The first study and energy plan was carried out by students from a local college. This plan was used to spark interest and mobilize local actors. It all started as a reflection on : *How much money are we spending in this community on energy ? What is the average bill for an household ?*

The cooperative then collected interest in the local county to know which households would be interested in investing in retrofitting services. There was close to 100 responses.

During the first year the core group of TEC tracked down specialist and pulled favor in order to get funds to pay for the first look at retrofit activities. Supported by the Tipperary Energy Agency, they were able to mobilize local experts and funds to support the first part of the plan. Energy Audit were delivered and cost estimation made for all the households that expressed interest. The pipeline was 20 houses (4/5000 euros per household). Financing was between 20 and 30% from the home owners.

Community grants became available from the Sustainable Energy Authority of Ireland to support their cost of aggregation. Those funds were mobilized to support the growth of the scope of the project.

Following this pipeline creation in year 1, the cooperative launched a tender procedure with a specific scoring encouraging local companies. Faced with the lack of skills availability in the county, the cooperative start training workshops with local contractors from year 2 on.

### People Power Retrofit - Carbon Coop

The People Power Retrofit, is a program running in Manchester and being taken up in several municipalities around. The project has been successful and has a stable business model. However it is only tackling single households with a middle to high level of income.

<b>Name of the program</b>	<b>People Power Retrofit</b>
<b>Country</b>	UK (Manchester Urban Are)
<b>Website</b>	<a href="https://carbon.coop/portfolio/people-powered-retrofit/">https://carbon.coop/portfolio/people-powered-retrofit/</a>
<b>Description</b>	The program is focused on identifying barriers to home owners to trigger the renovation project of their house. The pipeline of project was already identified by Carbon Coop and the

	<p>households are already qualified in terms of their resources and technical needs of the renovation project.</p> <p>The cooperative provides an end-to-end services to support the technical assessment of the home and decision making of the home-owner. The cooperative assesses the needs, finds the contractors and identify financial support schemes.</p> <p>The second part of the program is focused on training local contractors in order to grow locally the skills necessary to realize quality deep renovation actions onto the identified homes. The added benefit is to increase local capacities for building renovation, which the Manchester market is struggling with.</p> <p>Finally, the cooperative built an IT platform in order to streamline the project management and support local contractors and inhabitant to get in contact.</p>
<b>Cost structure</b>	Coordination of the overall project / sourcing / training / quality insurance / financial engineering
<b>Target</b>	Owner-occupiers with ressources
<b>Revenu Streams</b>	Service contracts with home-owners
<b>Average Project Size and investment</b>	The retrofit projects are from 50 000 euros, up to 300 000 euros
<b>Barriers</b>	<p>Access to technical skills : It is hard to find people for the cooperative that have the relevant and specific skills to deploy the retrofit actions in good conditions</p> <p>Access to quality contractors: The capacities and numbers of local contractors is making it difficult to find capacity to realize the projects.</p>

	Confidence in the decision making: The main barrier of the retrofit projects is the confidence that the cooperative is recommending the right solution for the private households.
<b>Key Drivers</b>	<p>The creation of an ICT tools was crucial, and it was done in co-development with the contractors and the users</p> <p>Neighborhood and local aspects are crucial - having a people centered method and grow trusted local intermediaries was the key to success</p>

The People Powered Retrofit program is probably the most established and successful program of the examples we could gather from the cooperative movement. The key success factor of this program, beside its intrinsic value, is the wealth of experience gathered by Carbon Coop along the year of working in the community on building retrofit and construction in the Greater Manchester in general.

Carbon Coop has been working on building renovation, and energy poverty alleviation for a number of years before the launch of the program. This allowed the cooperative to gather knowledge, build trust and a brand in the local community. The cooperative already had local multipliers and members that could be ambassadors to mobilize a project pipeline.

The cooperative also had the time and experience to create a network of local workman to deliver the services. This allowed to avoid the biggest challenges of local procurement. Despite this, the cooperative struggled to secure the necessary work-force to deliver all the mobilized pipeline.

## Rhedcoop

The Rhedcoop project is supported by INTERREG NEWE, it is a project that was not successful to launch a renovation wave in Belgium due to the lack of stable business models. REScoop Flanders is now looking at developing two renovation projects in the city of Kontrich, with grouped individual houses. In the meantime, the project also supports the cooperative EnerGent that is developing a PV production project on the roof of a condominium in Ghent with the final goal of triggering a larger renovation project.

<b>Name of the program</b>	<b>Rhedcoop</b>
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<b>Country</b>	BE
<b>Website</b>	<a href="https://www.grensregio.eu/projecten/rhedcoop-renovatie-en-hernieuwbare-energie-diensten-via-co%C3%B6peraties">https://www.grensregio.eu/projecten/rhedcoop-renovatie-en-hernieuwbare-energie-diensten-via-co%C3%B6peraties</a>
<b>Description</b>	<p>The goal of the project is to trigger home renovations in multi-tenant and single occupancy houses. After looking at ESCO models and bundling models, the project is now experimenting with various business models.</p> <p>For the condominium target, the cooperative EnerGhent is experimenting with implementing PV production on the rooftop in order to trigger financing for a large renovation project later on.</p> <p>For single owner occupiers, the REScoop Flanders federation is looking at several business models in order to deliver renovation actions. The neighborhood approach is the most promising one. In the city of Kontrich, the team of REScoop Flanders is looking at standardizing and grouping houses of the same type in order to bundle renovation actions and provide a solution for group purchase. The neighborhood is organized around units of 5 houses that are very similar to one another. This allows for a rapid scale up.</p> <p>The overarching goal of the cooperative is to get to carbon neutrality. The issue with the limited amounts of available budget, and the lack of knowledge are tackled by taking the first step on the “road to BBC”. This process is allowing cooperatives to get a first action in place, which results will allow to trigger the next step on this road.</p>
<b>Target</b>	Public building / multi-tenant housing
<b>Cost structure</b>	<p>Coordination of the program</p> <p>Project Assessment / Financial engineering</p>

<b>Revenu Streams</b>	European and national Grants
<b>Average Project Size and investment</b>	N/A
<b>Barriers</b>	<p>The main barrier is the lack of knowledge which forced the project consortium to research and experiment instead of focusing on scaling.</p> <p>The lack of stable business model is also a challenge that is being explored by the consortium.</p> <p>There are technical barriers to implementing the deep retrofit necessary to reach the renovation standards required by institutions.</p> <p>The collective decision making process is a challenge.</p>
<b>Key Drivers</b>	<p>The main driver for the cooperative is to get to carbon neutrality for the targeted neighborhood.</p> <p>The second driver is to support local development by tackling specifically vulnerable neighborhoods.</p>

Rhedcoop is taking a systematic approach to citizen-led building renovation. Specifically, the project is looking at the cost per household for a cooperative to trigger a renovation project (several renovation action). The goal being to understand and compare, depending on neighborhoods, the level of effort necessary to deliver a collective zero carbon strategy.

### **EcoTrajet - Ecopower**

EcoTrajet was launched in 2016 by Ecopower thanks to the H2020 project REScoop MECISE, however it was stopped in 2019 due to the lack of interest of the members of the cooperative. The first part of the program (quick scan) was successful, but the paying model was never rolled out successfully.



<b>Name of the program</b>	Ecotrajet
<b>Country</b>	BE
<b>Website</b>	www.ecotrajet.be
<b>Description</b>	<p>The Ecotrajet consists of several steps. The first is the quick scan : The Quicksan is an online questionnaire used to collect information on the current energy level of the house and to get a first idea on the planned investments. The answers are translated into a concise report that is used in the first contact over the phone with the members that filled in they want to get some further information or want to subscribe to the service. The report is also used to share the information with the energy auditors, for those members that subscribed for the service.</p> <p>After subscription to the service, an energy-audit of the house is organised. The energy auditor for that region goes on site. After a brief introduction and getting some background information about the case, the energy auditor and the shareholder make a tour of the whole house. After his visit, the energy auditor translates his findings and advice in a concise report.</p> <p>In a third step, the cooperative helps with the writing of good quotation requests. Once the offers are received, the cooperative is helping the member to make their choice.</p>
<b>Target</b>	Owner-occupiers with ressources
<b>Cost structure</b>	<p>Coordination of the program</p> <p>Assessment of the building</p> <p>Procurement</p>

<b>Revenu Streams</b>	Service Fee paid by the customer to the cooperative. The Quick Scan is free and online. From the energy audit on, the nominal fee is 499 euros for members (599 for nonmembers).
<b>Average Project Size and investment</b>	The target project are renovation above 10 000 euros.
<b>Barriers</b>	<p>Low needs of the members</p> <p>No clear business model</p> <p>Complex procurement</p>
<b>Key Drivers</b>	<p>Relative interest for a cooperative services around building renovation.</p> <p>Potential for additionality is high</p>

The experience of Ecotrajjet ended in 2016 with limited success. The number of members that signed up for the service and then business model were not stabilized. Ecopower therefore abandoned the services in order to focus on building renovation linked to district heating.

The main reasons for this stoppage were:

- Low number of members signed up : this service was only opened to the members of Ecopower whom are already quite advanced in their energy reflection and therefore did not need an addition consulting service.
- The distance between bundled project was too large : the service covered the whole region on Flanders and contractors would not take on buddle projects in different cities. Therefore the cooperative had to find a local contractor for each contractor.
- The legal and technical context in Flanders: the Flemish region and municipalities are already running quite successfully support scheme for energy renovation of private dwellings. Therefore the cooperative was competing with a largely free service.

A way forward

Ecopower decided to build on the experience that was gathered in EcoTrajet and to leverage it in conjunction with the deployment of district heating. Today the cooperative is offering EPCs to citizens choosing to connect to the district heating system installed by the

cooperative in the municipality of Eeklo. The municipality itself already signed those contracts and will encourage its citizen to do so as well.

The goal is to create a win-win-win situation between the district heating operator (Ecopower), the citizen and the city. Ecopower is running an energy audit to have more efficient houses in their network, the citizens are investing part of the capital to renovate their property and get the support of the cooperative. The municipality is reach the renovation objectives fixed to them by the region.

## 7 Vents - Enerterre

<b>Name of the program</b>	Enerterre
<b>Country</b>	FR
<b>Website</b>	<a href="https://helpsproject.eu/">helpsproject.eu/</a>
<b>Description</b>	<p>The mechanism is based on the bartering of time to support the renovation of households in energy poverty.</p> <p>Households in energy poverty looking to perform refurbish their home are applying to the association Enerterre (supported by the cooperative 7 vents). The association then recruits volunteers to perform the renovation under the supervision of construction professionals. The renovation is performed by the group, and the volunteers get in return a training on the specific renovation technics, while the households will pay a lower price for the renovation, and owe a certain number of hours of work to the network.</p>
<b>Target</b>	Energy poor households, single occupancy, owner-occupiers
<b>Cost structure</b>	The lowered cost of the renovation is paid by the household, which will also owe a number of hours to continue to make the network grow.

	The operational cost of the association are paid through public grants.
<b>Revenu Streams</b>	There are no revenues for the association.
<b>Average Project Size and investment</b>	N/A
<b>Barriers</b>	<p>The scheme is not viable without public funds and other supporting funds. The cooperative is looking at energy production to support their renovation activities.</p> <p>The number of renovation project delivered is low, despite the hope that the scaling would increase that number in the future.</p>
<b>Key Drivers</b>	The mechanism is creating a win-win-win situation, offering an opportunity for a low cost renovation for vulnerable households, technical training for volunteers, and growing a network of builders in the region.

The program of Enerterre was replicated in Greece through the “Hands for Homes” program funded by the Horizon 2020 program. The model is working despite the cultural difference, but the support of H2020 was absolutely necessary to ensure the training and coaching of the community builders in Greece.

## Barriers faced

Based on the experiences presented above and the detailed discussions that we had with cooperatives across Europe. We identified barriers to the development of “bottom-up” and community-based approaches to building renovation

We group the barriers faced by the REScoops in three groups:

- **Sector related barriers:** historically, a number of cooperative actors were active in the construction sector. Construction and housing cooperatives have existed and still exist to this day, however, their impact today seems rather limited, and the

links to the current wave of new energy cooperatives are quasi inexistent . As a result the know-how on collective building renovation built up in the cooperative movement and successful models are quite limited.

- **Financing and funding related barriers:** there are two types of financing barriers faced by citizen-led projects. The first one is the large capital investment need, coupled with a low return on investment for these deep renovation projects. The second barrier is the difficulty to aggregate the activities of smaller cooperative projects allowing them to reach favorable financing.
- **Systemic barriers:** There are several factors inherent to the renovation sector that are making citizen-led projects even more complex: their small size, the lack of available skilled workers and the uniqueness of each home renovation project.

## Sector Related Barriers

Lack of knowledge and awareness in the movement are translated in two main ways:

- **Lack of awareness:** the community energy movement in Europe, despite being historical in some parts of Europe, is mostly constituted of young citizen group and organizations focused on one service. One of the key lessons of the REScoop PLUS is that despite interest and understanding of the priority of energy efficiency topics, cooperatives gravitated toward stable business models in the energy sector. Therefore the awareness that building renovation can be taken on by citizen-led project is still in its infancy. There is a strong need to have an information campaign directed toward citizen-led organisations in order to orient them toward renovation services. The best examples we have is Tipperary Energy Communities which have taken on building renovation thanks to the intervention of the Tipperary Energy Agency.
- **Lack of knowledge:** Cooperatives are created by local citizens and volunteers, therefore they often lack technical fiscal and legal knowledge at the origin. Many training programs exists for community leaders and project carrier in the field of renewable production, those programs have allowed many citizen-led initiatives to access knowledge necessary to develop their activities.

## Financing and funding Barriers

Citizen-led initiative have traditionally faced barriers to financing because of the lack of understanding and distrust of financing institutions<sup>10</sup>. This issue is being partly tackled thanks to the framework on “Energy Communities”, however those barriers are even stronger in the building renovation sector:

- **Lack of upfront investment:** the European and state regulations are pushing consumers to perform deep renovation actions onto their homes. In order to reach those high standards of renovation services, consumers need support with the high

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<sup>10</sup> Report on financing barriers and existing solutions; REScoop.eu, REScoop 20-20-20 project

upfront costs. Another piece of this puzzle is also linked to households in energy poverty where upfront investments are simply impossible. Therefore, cooperatives have operated with different models like EPCs. In this case, state backing and bank guarantees are essential to allow cooperatives to deploy this type of solutions.

- **Lack of funding for smaller initiatives:** most of the state support schemes are targeted to support large renovation projects, such as collective buildings and disproportionately support tertiary building renovation. On the other hand, funding institutions are usually rewarding large pipelines of renovation projects. This puts the smaller, locally based projects at a disadvantage. In many countries, the funding is difficult to reach for private persons due to the complexity of the administrative procedures.
- **Lack of funding for community building:** one of the key aspects of the bundling of community energy projects as well as the collective decision making process linked to the advantages of citizen-led projects is the community building process. The process however is rarely recognized, or funded by funding institutions. Most of the cooperatives that we got in contact with are using the profits produced by other energy related services to finance this type of services.

## Systemic barriers

The renovation wave is facing several difficulties in its deployment that is specifically touching citizen-led initiatives:

- **Difficult sourcing:** citizen-led projects in the renovation sector are usually having an objective of local development, and therefore tend to source renovation service locally. Because of the overall lack of skilled workers on the construction industry and the relative small size of the local markets, it makes it hard to source the necessary services for deep renovation projects. Even when opening the sourcing procedures, cooperatives are faced with an overloading of the whole sector. The experience of Ecotrajec is telling, with a complete impossibility to find companies that would travel the length of the region of Flanders (240 kms between furthest points).
- **Multiplicity of cases and target groups:** “no two houses are the same” mentioned one of our cooperative leaders during a working group call. This variety of cases, public and financial situation increases the complexity of offering a one-size-fits all solution. Despite similar actions being taken in all houses, each situation is different and requires specific attention. This tension with the needs of standardization can only be met by community building and creating networks that will facilitate to the flow of information and collective ownership.

## Key success factors

Despite those barriers, cooperatives have deployed successful schemes and programs to support their members in renovating their homes. The cooperative schemes that we identified focused on three types of targets:

- **Single homes owner-occupiers:** in general those are the simplest case, where the home owner is looking for support to renovate its dwelling. The needs of those

households were usually linked to energy audits, support to find trustworthy contractors and quality insurance. Because of the budget of such projects, the homeowner is able to pay a premium on top of the overall budget. This key driver for this type of project is the trust in the cooperative. The competition of these types of projects is high. The likelihood of a successful delivery of the project is also high.

- **Condominiums:** those multi-tenant buildings are presenting other challenges and opportunities. The main challenge is the collective decision making which has been the most difficult part to trigger the renovation project. The opportunity for collective buildings is linked to the more stable business model for renovation. Cooperatives have been specifically contacted due to their experience in community building, which supports collective decision making.
- **Energy Poor (Fuel poor) households:** the specific situation for households in energy poverty is being tackled by several cooperatives. Usually cooperatives consider it part of their social mission to support energy poor households through programs of reduced bills, coaching tools and efficiency support. These types of publics are also better recognized by public authorities that allows to collect supporting funds more easily. Cooperatives have a limited experience in recognizing vulnerable households, and supporting deep renovation in those housing projects are challenging across the board.

The schemes implemented by cooperatives are usually revolving around four main drivers:

1. **Demand aggregation :** by aggregating demand, we allow for more purchasing power, and more sourcing power. This pipeline creation is also a key to allow smaller projects from individual households to reach for more interesting conditions through state supported funding.
2. **Standardization of renovation actions:** the cooperatives have successfully learn the lessons of large renovation projects, and are looking to standardize local renovation actions in order to lower the costs of a single action. Projects are still tailor made, due to the owner's needs and nature of the building, but single building blocks can potentially be standardized. However, this calls for a close quality insurance monitoring and a long term view toward a carbon neutral standard.
3. **Collective decision making:** triggering collective projects by finding a common solution. This is the core of the cooperative action. Several cooperatives are also collaborating specifically on this point with pre-existing organisations. The cooperative supporting the community building while the expert organization is adding its technical expertise.
4. **Skills building:** both on the demand and on the supply side, by providing support to small and local SMEs to get the necessary skills to perform deep renovations. While also allow members to understand the potential and costs of building renovation

There is another transparent point in most of the interviews that we conducted : community building is at the core of the bottom up process of the citizen-led initiative. Community building is defined here as the creation of a network of opinion leaders in the community that will be representing the cooperative, provide advises and support the detection of renovation projects. This network produces citizen groups that will then evolve to investment groups once recognized by the cooperative.



## Lessons Learned

The experiences that have been shared with our team were only several examples of a starting group of energy cooperatives serving their members and the community at large with building renovation services. The lessons learned from those projects are :

**Focus on the local :** *“EnerGhent (Rhedcoop) is focusing on the neighborhood while Ecopower focused on the region and could not find operational efficiency.”* Grouping on the same neighborhood seems to be a key factor for success.

**Find the right financing :** *“Subsidies made a big difference in terms of covering the bundling cost of the project. This upfront cost that is to create a pipeline is the trigger that can support the start of a successful scheme.”* The TEC project was based on services that were not profitable by themselves, but the subsidies allowed the cooperative to expand drastically the pipeline of project.

**Find synergies between activities :** *“Energhent started by implementing PV production to make the project more attractive”* - The additionality of activities such as production, supply, flexibility are allowing cooperatives to take on less profitable projects. In general renovation activities are considered as an additional activity and therefore cooperatives should be looking for models able to breakeven, not make significant profits

## Recommendations: The role of citizen-led initiatives in the renovation wave

In order to support the growth of the citizen-led initiatives in the building renovation sector, we are building on the work that has been done by cooperatives across Europe. Here are the key asks from the cooperative group:

- **Share experience and models:** to create a build experience in building renovation as it is still a new field for energy cooperatives. In order to find and scale successful models, we need to have space to share successful experiences and have a space to get training and support.
- **Find financing:** to support the pipeline creation, and to develop interesting financing options for participants (investment plans).
- **Build a network:** to coordinate of efforts and to build scale. Even if support to citizens will remain local, as national legal and technical environments can strongly differ, a network offering collaboration and support will allow to reach exponential growth..
- **Build evidences and indicators:** to compensate for the lack of experiences and knowledge in the cooperative movement. Our group is calling for a more systematic approach based on evidence and supported by research. This should also help us support a whole-system approach to the use of citizen-led initiatives to include building renovation projects at the local level.

The cooperative group is recommending the creation of a **support team**, mandated with four main missions :

- **Training and capacity building:** The support team would produce content and trainings for the cooperatives that are looking to take on a building renovation activity. This activity should be done in conjunction with national training programs.
- **Research and monitoring:** The support team would monitor and investigate existing resources in order to collect evidences and provide training material for citizen-led initiatives. The scope should be 1) collecting information on the available resources in each member state relating to building renovation; 2) producing easy to use guides and factsheets to deploy a building renovation services for energy communities; and 3) collecting barriers and experiences at the local level to bring them back to European policy makers, informing the legislative process.
- **Fundraising and pipeline building:** There are several funding streams available at the European level. However, most of them require the collection a larger pipelines of renovation projects. The support team should support local citizen-led initiatives in mobilizing resources at the European level in order to offer funding solutions to local citizen-led initiatives.
- **Advocacy:** There is a need for specific policies to be developed both at national and European levels to support community ownership to invest in the building renovation sector. This relates both to new tools created by the Clean Energy Package (Energy Community definitions), existing tools like building standards, and specific missing pieces like the support the energy poor households.

## The missing piece

Building renovation is a complex topic, which have been the target of large amounts of resources and public policy. Cooperatives at their core have the goal to provide a pathway to a democratic and renewable transition. Therefore, it is natural that supporting members to renovate their homes have been a natural service to tackle. However, due to the technical, financial and social challenges as well as the cost of opportunity relative to other energy relevant activity, it is a rather under-developed activity in the movement. Our challenge to make building renovation relevant for the cooperative movement is then double: we need to tackle the technical and financial barriers linked to those services, and we need to create momentum in the cooperative movement to encourage start REScoops to take on this challenge. This is especially challenging considering that there is a limited number of positive examples to build on, where cooperatives have had building renovation as a core service.

In order to tackle both of those barriers at once, we need to grow the maturity of cooperative organizations in the construction sector, in order to achieve two milestones:

- Cooperatives need to gain confidence in their capabilities to support their members to take on renovation projects : we need to be able to provide examples and trainings to support the maturity of cooperatives in building programs for the members.
- Cooperatives need to be able to identify opportunities for their members to trigger renovation projects: we need to provide experience and technical support for

cooperatives to identify the right solution for their members based on the national characteristics.

The final point will be to influence European and national policy makers and funders to support the development of favorable tools and policies, supporting the community energy movement taking on more responsibility to help their members triggering renovation projects in their homes.

In order to deliver this growth while building quick wins that will create momentum in the movement, we are proposing a three phase plan over the span of three years. We will take cooperatives from discovering the building renovation sector (low maturity), to having a stable renovation program for their members that is adapted to the opportunities at national level.

Our process should move in three steps:

- **Map:** we need to find cooperatives that are in capacity, and motivated, to develop a building renovation program. This step will be based on the working of the building renovation working group for the cooperative movement. We should also take this opportunity to detect other potential citizen-led organization (energy communities, associations, citizen groups, ect.) that are taking on the topic of building renovation. Our goal is to create a roster of organisations.
- **Build:** we support the cooperative to build its renovation program, through background research, mentorship and specific training. This will be feed by the research conducted in parallel by the support team, and the existing network of cooperatives and other citizen led organization. During this phase, we reinforce our network of practitioners and practices.
- **Assess:** we support the launch of the program by offering assessment tools and feedback to the young program, allowing it to stabilize its business model and value base for the members. This will allow us to feedback to our experts and network to allow for optimization of existing programs. This will also support our financing and advocacy activities.

In general we are hoping to ramp up the growth of building renovation programs, using positive experiences of the cooperative movement to trigger the creation of more energy communities directly tackling building renovation as a core service. This is where the support team will become also a way to incubate more communities taking on this essential yet challenging types of services.

## Ramping up building renovation programs in the Cooperative Network

Thanks to this pre-project, the ECF Citizen led renovation project, REScoop.eu and Stefan Scheuer Consulting have detected a number of opportunities in the cooperative movement. Those early opportunities will be used to ramp up the construction of building renovation programs to other cooperatives.

Level of Maturity	Cooperatives	Countries
<i>Assessed building Renovation Program.</i> The program is stable and delivering renovation projects.	Carbon Coop	UK
<i>Stable building renovation program.</i> The program exist but is not stable.	Energetica; Energy Community Tipperary Cooperative; REScoop Flanders	IT; IR; BE/FL
<i>Expressed interest.</i> Cooperative have demonstrated interest to launch a building renovation program.	Enercoop; Energie Partagée; EBO Consult; EnergieSamen; Goiener; CLEF; Coopernico; ZEZ	FR; DK; NL; ES; BE/WL; PT; HR

The building renovation working group, which is a group where members of the federation gather to discuss and learn from the existing practices in the network federation and outside.