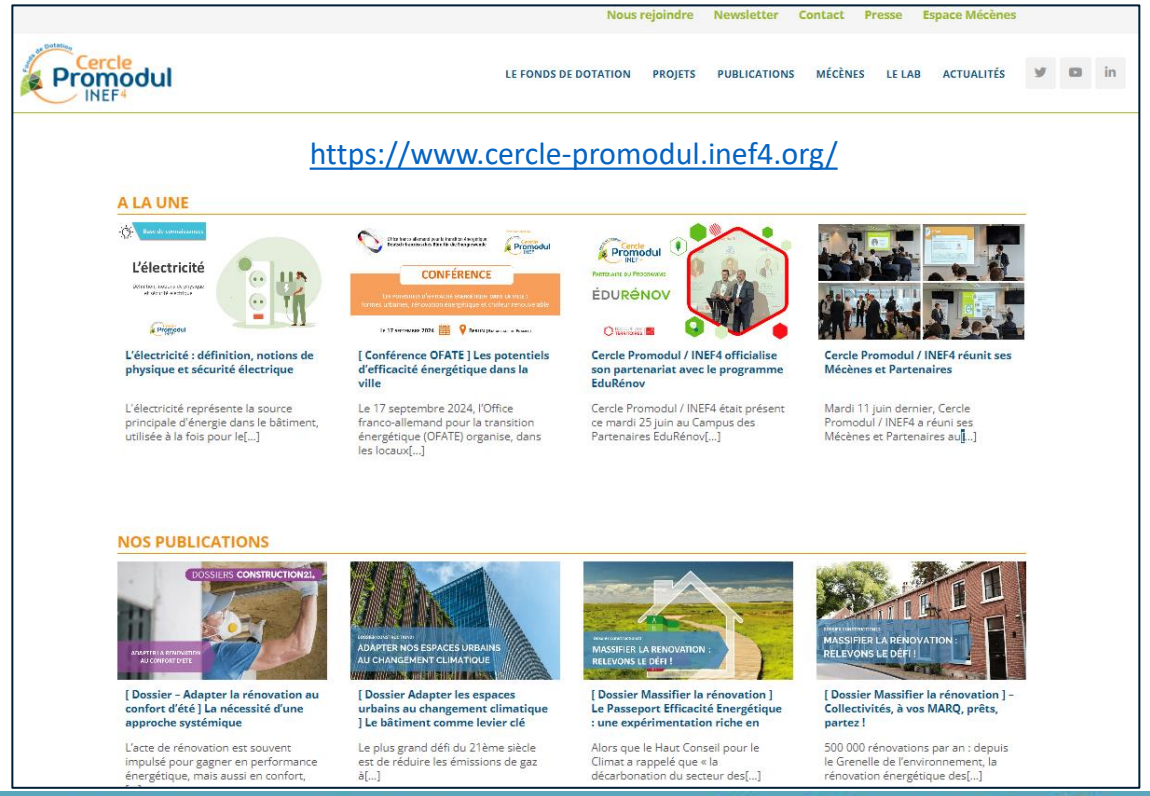
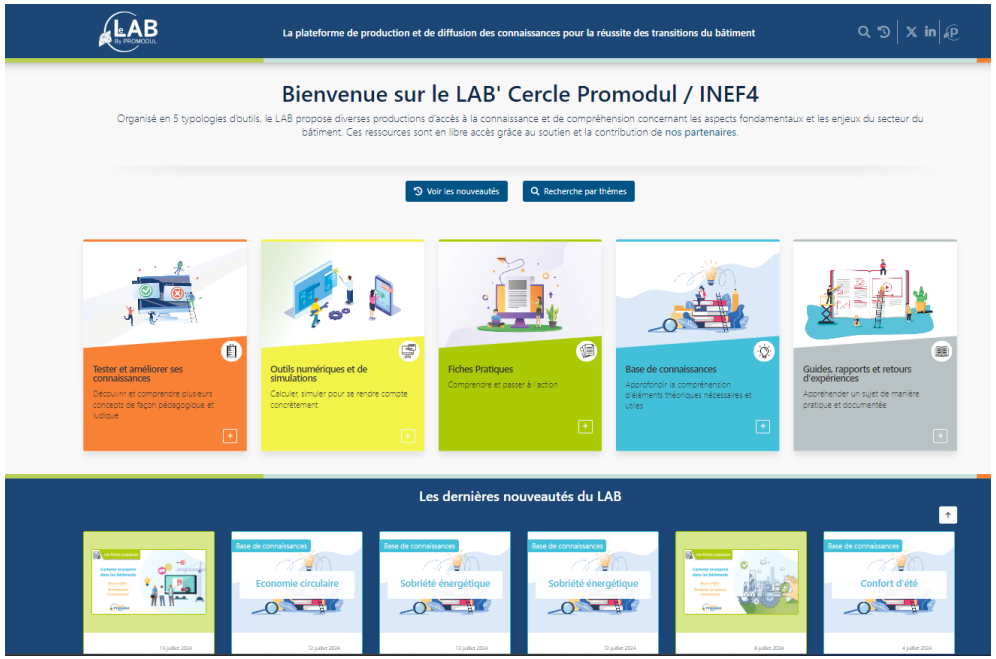
Rethinking Renovation at the Neighborhood Level

The Cercle Promodul/INEF4 *is a foundation, a non-profit organization with a public interest mission, dedicated to promoting a sustainable building industry.*

The focus on energy and carbon themes is central to its initiatives. Leveraging a broad and cross-disciplinary ecosystem, Promodul benefits from extensive expertise and a wide-reaching dissemination capacity.





Le LAB provides all relevant stakeholders with educational tools and resources to support the successful energy and environmental transitions in the construction and renovation sectors.

https://lab.cercle-promodul.inef4.org/

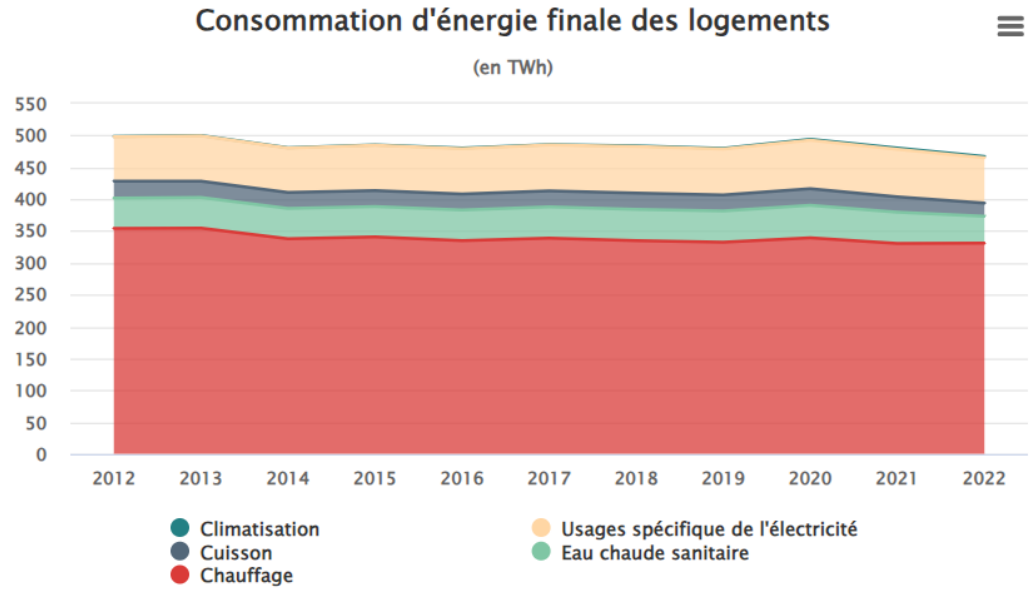
Summary and Outline

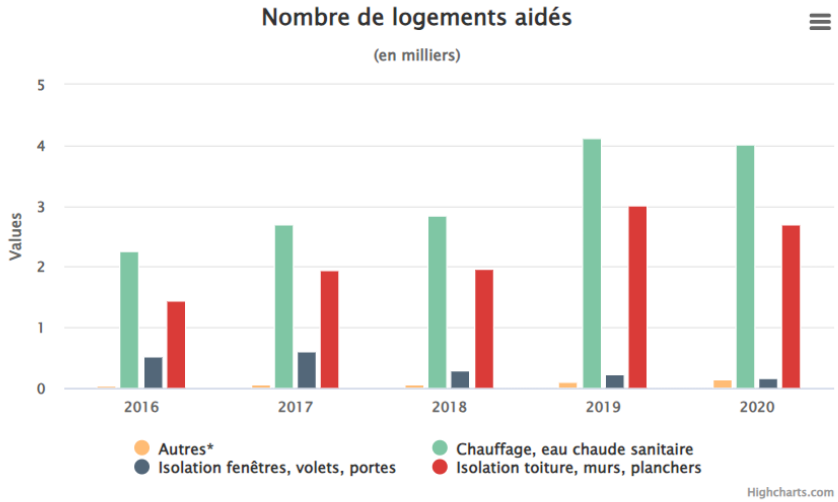
- Context
- Why ?
- New Approach
- A Survey to Gather the Opinions
- First Action : A Preliminary Study
- Second Action : Define and Structure the Methodology
- Review and Areas for Improvement

Context

A few figures (https://www.statistiques.developpement-durable.gouv.fr/tableau-de-suivi-de-la-renovation-energetique-dans-le-secteur-residentiel)

Consumption that does not significantly decrease despite increasing public or private financial assistance.





Champ : France métropolitaine | Source : fichiers d'aides à la rénovation (DGFip, Anah, DGEC), calculs SDES .

Total residential sector consumption. Heating is the main source of consumption. Total consumption had been slightly declining between 2012 and 2019 (-0.7% per year on average). In 2020, 2.1 million homes in mainland France benefited from at least one of the four main financial renovation aids.

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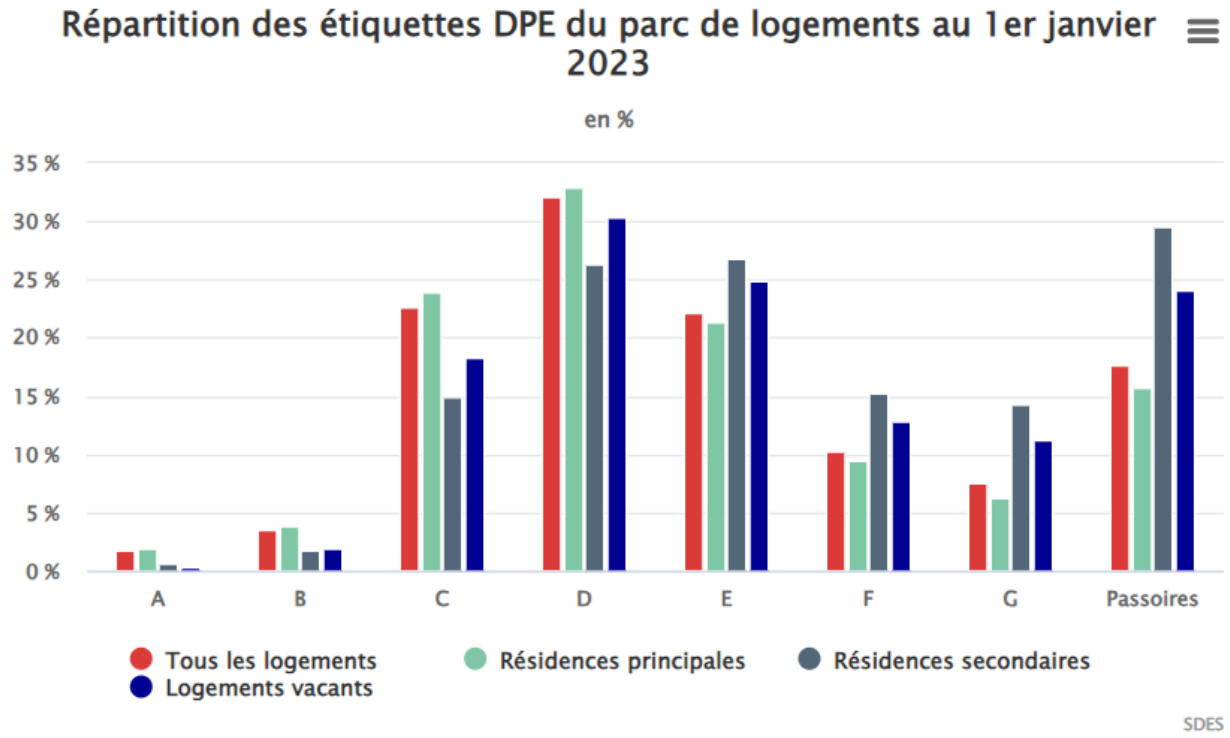
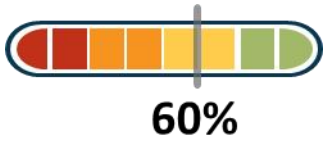


A housing stock still far from ambitious goals, with **only 5%** in **Class A or B as** of January 1, 2023.

The building sector remains responsible for 23% of greenhouse gas emissions and 44% of final energy consumption.

Why ?



The pace of renovation in France is insufficient to achieve a carbon-neutral building stock by 2050 (300,000 renovations per year versus a target of 700,000).

No "mass effect" because renovations are mostly individual decisions

Collective renovations cause disruptions and are spread out over time.

The energy performance of a renovation is not guaranteed.

The cost of renovation is a barrier to comprehensive rehabilitations, which are nevertheless the most effective.

The "massification" or acceleration of renovation must remain efficient and aligned with BBC/SNBC goals, without leading to underperformance or eco-opportunistic practices.

Try a new approach ?

Working at the neighborhood level (rather than isolated buildings)

- Establishing homogeneous actions and solutions that enable a comprehensive energy renovation strategy.
- The potential for mass renovation by considering a larger scale, paving the way for necessary investments in appropriate technical, organizational, or financial solutions.

The "neighborhood scope" allows for :

- A scale effect on the renovation site (waste, transportation).
- The pooling of spaces and energies produced (local renewable energy production), consumed, and recovered.
- A Better energy efficiency and therefore a reduction in CO2 emissions during the operational phase.

Local authority as a Trusted third party

- Working at the neighborhood level => involving the local authority **by providing them with the necessary tools**
- For the community => Local authorities are "pillars of trust", reassuring citizens by being involved in offering reliable solutions.

A survey to gather the opinions of local authorities?

The results on our website site internet

Recognized as a key stakeholder, we provided public entities with the opportunity to express their views on this matter through a questionnaire/survey.

77% of the municipalities *surveyed consider the energy renovation of a neighborhood within their jurisdiction is achievable*

73 % of public entities are even ready to undertake such an operation!

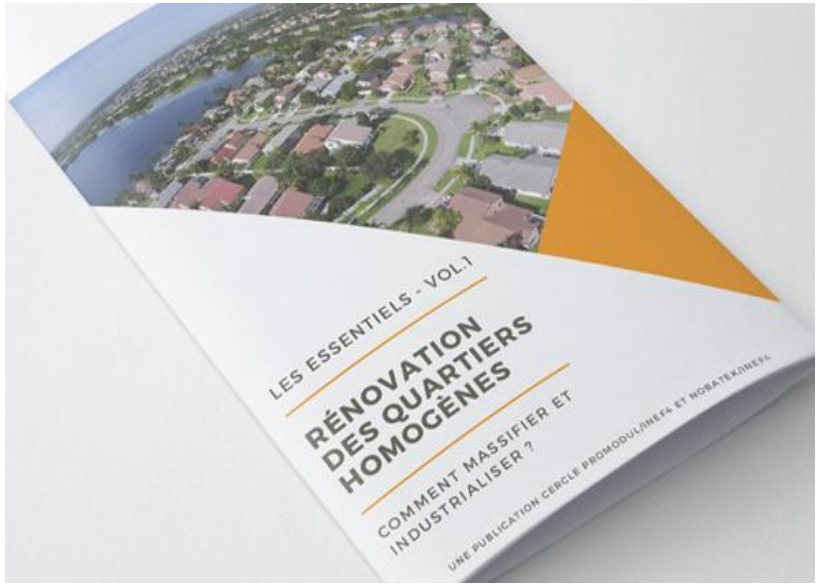
50% are seeking more comprehensive support.

Regarding the means to facilitate "the taking action process" , the municipalities cited the following:

- Funding, with the creation of a financing model tailored to households (42%);
- Support, both in terms of technical solutions (38%)
- And through the creation of a new role/function to coordinate the entire operation (31%);
- Experimentation, with concrete examples of successfully completed projects (35%).

First Action : A Preliminary Study

«"Renovation of Homogeneous Neighborhoods: How to Scale Up and Industrialize?"»



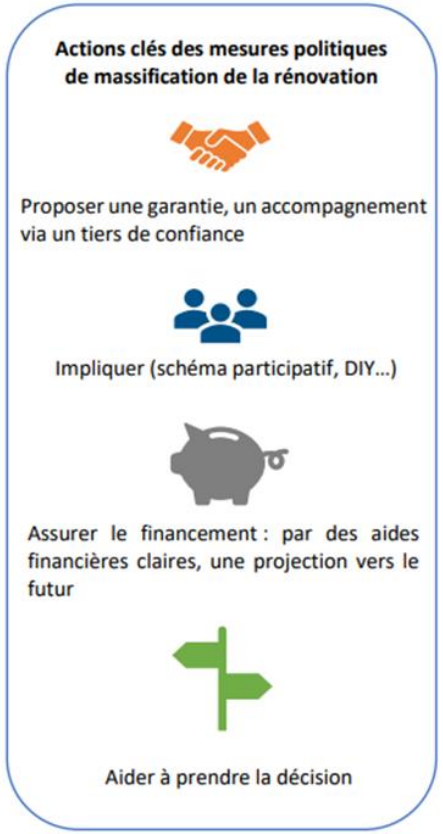
https://lab.cercle-promodul.inef4.org/tool_type/guides-rapports-et-retours-dexperiences/tool/les-essentiels-vol1-renovation-des-quartiers-homogenes-comment-massifier-et-industrialiser

This work is the result of a series of discussions that began in 2018 during a forward-looking and participatory seminar involving 25 stakeholders from the ecosystem including:

- industry professionals,
- project managers,
- digital actors,
- technology centers, and universities.

It presents a shared vision on the approaches to be implemented, the obstacles to overcome, and the opportunities to be analyzed for such a project:

➢ Propose, Involve, Finance, Help



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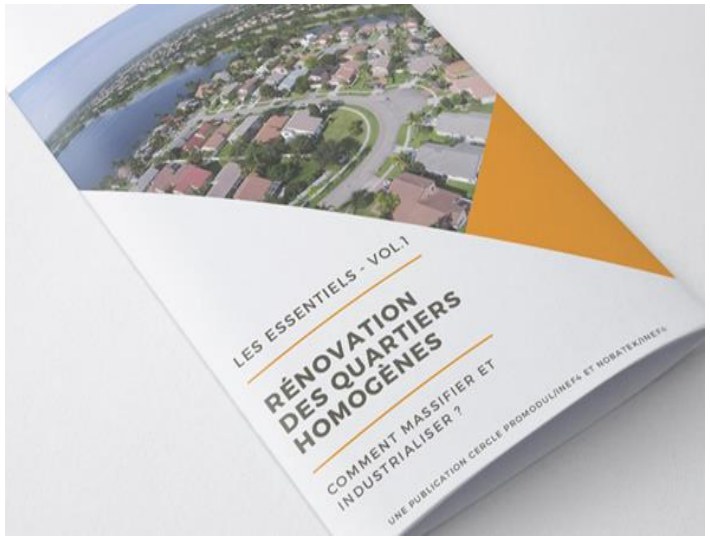

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Here are the insights from this initial action

The very first step: What is a homogeneous neighborhood? What obstacles, opportunities, and needs can be identified?

- The major innovation will be **to work together** and move away from "silo" thinking.
- **New working methods** that emphasize collaboration and consider customer expectations will help trigger renovation efforts and optimize the steps of the project.
- **Training** is essential to ensure high-quality projects and more cost-effective renovations.
- The creation and/or identification of **trusted technical and socio-economic intermediaries** will be important.
- **Better integration of the end-user**, by considering potential barriers or encouraging factors, will promote greater acceptance of renovation efforts.
- **Awareness among Mayors** and local governments is crucial for the future.

Second Action

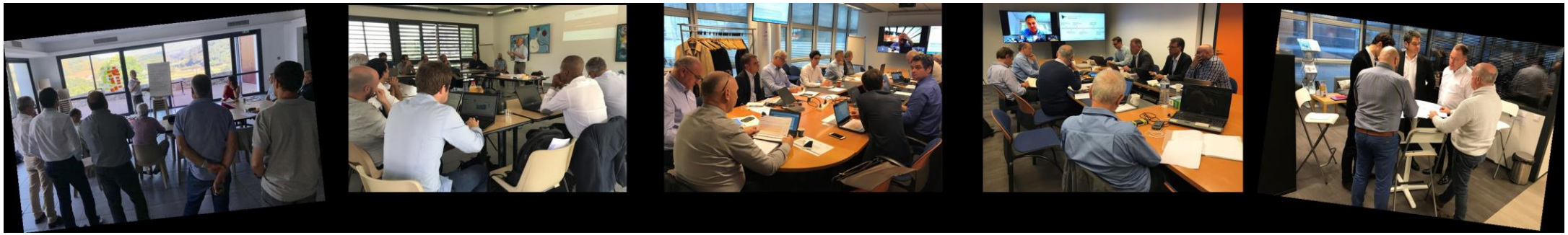
Define and structure the methodology to assist local governments

Five dedicated cross-functional **sub-working groups** with a high diversity of expertise in each => creation of a methodological guide

Over 20 meetings held across 18 months for the working groups

Trend analysis, identification of needs, obstacles, and drivers to better guide research and development.

Creation of a "Guide" aimed at supporting local governments by providing a **methodology** for energy renovation at each stage for a neighborhood project



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Project management : *Proposes a **distribution of roles and associated expectations** in the process of energy renovation for a homogeneous neighborhood.*

Financing methods: ***A**nalyzes various financing programs and incentives for renovation, providing a roadmap, timeline of interventions, and **a financing package tailored to different project** configurations**.***

Execution management: *Similar approach, focusing on **the roles and responsibilities** in the renovation process.*

Implementation and execution: *Aims to shift from a client-by-client approach to a **more comprehensive strategy**, optimizing costs, material resources, and implementation time.*

Sustainability of performance: *Proposes processes to **maintain the long-term benefits** of the energy renovation operation.*

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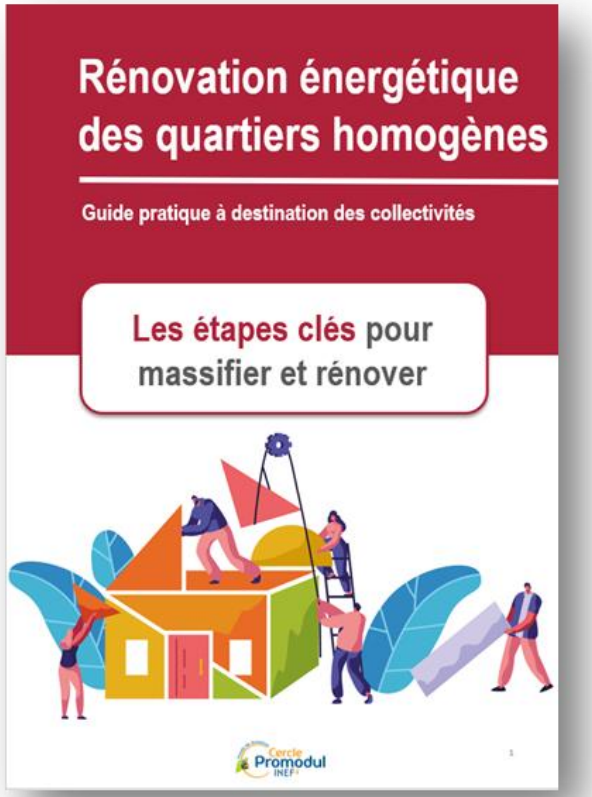
The work undertaken within the working groups has led to the creation of a "Guide"



Structured in 10 steps:

- 5 before,
- 2 during,
- 3 after renovation

This guide allows local authorities to identify the **tools** (human resources, existing technologies) at their disposal, as well as **the obstacles** that need to be overcome to implement renovation at the neighborhood level with multiple project owners.

https://lab.cercle-promodul.inef4.org/tool_type/guides-rapports-et-retours-dexperiences/tool/renovation-energetique-des-quartiers-les-etapes-cles-pour-massifier-decarboner-et-renover

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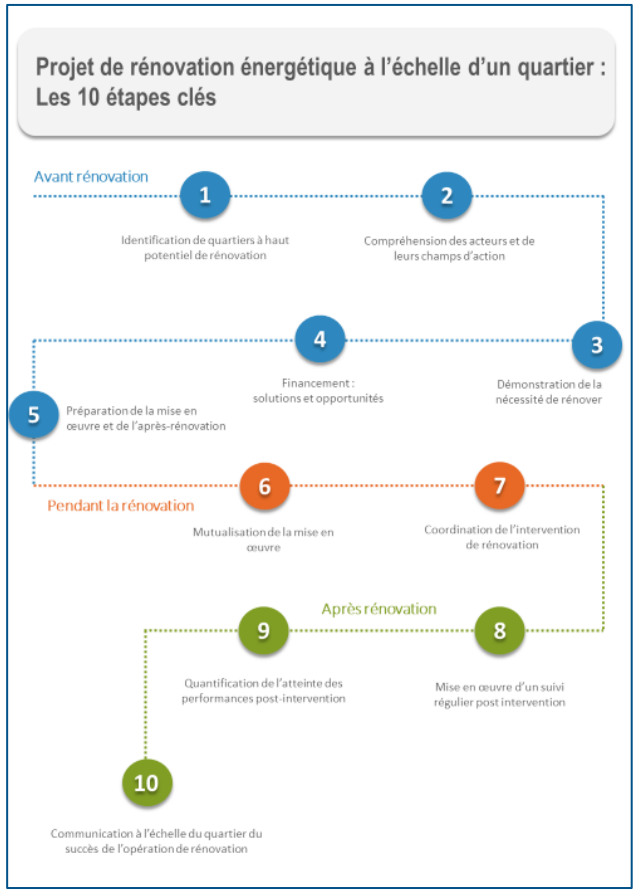

: Each step is designed to guide the local authority in its reflection, with

- A paragraph introducing the objective of the stage and its end point/success criteria
- Identified and involved stakeholders;
- Identified blocking points
- objectives achieved at the end of the stage
- Check list of validated steps

Project review and areas for improvement

"Since its widespread adoption, the idea that energy renovation projects should be approached at the neighborhood level has increasingly gained traction. However, it remains areas for improvement so that structured projects can be effectively implemented across various regions."

Le guide jalon sur la massification de la rénovation énergétique des quartiers

Direction départementale des territoires

Syndicat de gestion des énergies de la région lyonnaise

Club de l'Amélioration de l'Habitat

GREENFLEX

Cit'Energie

Contacts qualifiés :
Ministère de la Transition Ecologique
Communauté d'agglomération Porte de l'Isère
Région Occitanie / Site de Montpellier
CCI du Var

Relais réseaux sociaux :
Construction 21
ALEC Pays de Rennes
ALEC Métropole de Marseille
Novabuild
TEARA Association (Regroupe 13 syndicats d'énergies / Territoires d'énergie)
Réseau Bâtiment Durable
Efficacity
Think Smartgrids
Pôle énergie Bourgogne-Franche-Comté
Réseau breton bâtiment durable
Low Carbon & BIM World
ENERPLAN
Réseau AMELIO et la Maison de l'Habitat Durable (service public indépendant / Lille – Hauts de France)
BATEC QHSE (Cabinet de conseil spécialisé en management de la Qualité, de la Sécurité et de l'Environnement)
Association CREAQ, pour la transition énergétique
Systovi
ADEXSI
Salon Artibat
Prigent & Associés (Bureau d'études en aménagement du territoire)
Autodesk
Alterea

Project review and areas for improvement

Successfully moving from the initial idea to full-scale implementation by structuring the entire process and creating a positive methodology that serves local authorities, and the public interest is already a good progress

- Contributes to the goal of accelerating and efficiently scaling up energy renovation efforts.
- Reinforce collaboration with local authorities, residents, and local stakeholders to build trust.

But still areas for improvement

- Working with municipalities involves addressing the challenge of electoral timelines, which can sometimes slow down progress
- Promoting early-stage approaches is still difficult
- Organizing neighborhood diagnostics and clear renovation objectives, which enable the development of coherent, ambitious, and high-performance work plans, remains complex.
- The issue of financing, including grants and third-party funding, remains an area for further development, where innovative approaches could be explored

Thank you for your attention