Task 3.2

D3.2 REPORT ON PILOT RESULTS

Grant Agreement N° 890598

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SUMMARY

Glossary

ABBREVIATION	DESCRIPTION
CO	Confidential
EC	European Commission
EU	European Union
GDPR	General Data Protection Regulation
HW	Hardware
M	Month
PC	Project Coordinator
POPD	Processing of personal data
PU	Public
WP	Work Package

1. INTRODUCTION

1.1 Climate context and targets

In line with the August 2015 Energy Transition Law for Green Growth, Toulouse Métropole has clarified its commitment to combating climate change by adopting the definitive PCAET in June 2019, with the following objectives for 2030:

- 20% reduction in the territory's energy consumption compared with 2016,
- reduce greenhouse gas emissions by 40% compared with 2008,
- doubling the share of local renewable energies in consumption.

In this context, and in order to have a global and strategic vision of all energies in the territory, Toulouse Métropole drew up its energy master plan during 2018-2019, broken down into operational actions to be undertaken from 2019.

It shows that the two main energy-consuming sectors and sources of greenhouse gases in the region are transportation and residential. In the residential sector, the challenge of energy-efficient renovation of buildings has been given a major boost, with a target of 7,500 renovations per year, compared with 3,000 by 2020.

1.2 A one-stop shop to consolidate renovations

To increase the number of renovation projects from around 3,000 a year to 7,500, the strategy of stimulating renovation projects needed to be amplified.

This was the main objective of the I-HEROS project, which led to the opening of the «Toulouse Métropole Rénov'» one-stop shop for energy renovation in February 2022, accompanied by the implementation of numerous actions to stimulate home renovation: increasing the number of staff at the Maison de l'Energie, defining a strategy for targeting the most relevant homes for renovation, and coordinating the ecosystem of professionals via the creation of a charter.
The one-stop shop offers a 1st-level service open to all and accessible to users in a variety of ways: physical reception without an appointment, telephone hotlines and physical appointments (more information in deliverables D4.1 (FR) and D4.2 (EN)).

renov.toulouse-metropole.fr : A dedicated website gives users access to a wealth of information (technical documents) and enables them to get in touch with an advisor. Several digital platforms are used by advisors to track files: SARENOV (provided by ADEME) for tracking advice, ERPRO for tracking Rénov'Occitanie support (provided by AREC & Région Occitanie), COACHCOPRO for tracking condominiums (tool developed by APC).

The aim of the I-HEROS project was to achieve a further 2,000 renovations per year, with an initial target of 500 renovations per year.

As part of the I-HEROS project, we sought to set up a tool for visualizing the renovations carried out in the territory. The 1st part of this report will be devoted to presenting this approach and the tool used, while the 2nd part will focus on a broader assessment of the number of renovations carried out, with an emphasis on the test districts.

2. RENOVATION MONITORING WITH DASHBOARD

The purpose of the Monitoring batch was to summarise the results of the Toulouse Métropole renovation integrated service in order to assess how well the project is advancing. Several indicators have been implemented to monitor how well the project is running:

- File monitoring indicators in terms of number, progress stages and processing times in order to assess the dynamics of the support system
- Performance indicators for assessing the gains before and after the supported renovations

The information required in order to correctly compile the indicators can be found in the CoachCopro and ERPRO tools used by the One-Stop-Shop advisors.

Features of the home before and after renovation

- Address
- Year built/Habitable floor space
- Type of home: apartment/house
- Theoretical energy use based on the diagnostics before and after the renovations (kWh primary energy per m2 per year)
- Theoretical CO2 emissions based on the diagnostics before and after the renovations (kgCO2 per m2 per year)
- Theoretical yearly saving: in €
- Actual energy use before and after the renovations (kWh primary energy per m2 per year)
- Actual CO2 emissions before and after the renovations (kgCO2 per m2 per year)

Renovations carried out

- Renovation period
- Details of the renovations
- Insulation, type of renovations
- Joinery, type of renovations
- Energy system, type of renovations
- Ventilation, type of renovations
- Cost of the renovations: € (taxes included)

Energy label development

User satisfaction will be assessed as part of the investigation carried out by the French Agency for Ecological Transition (ADEME) and has therefore not been included on the dashboard. Information on energy poverty is not included on the project management dashboard as collecting and processing such data presents confidentiality issues (GDPR).

2.1 Energy use tracking

2.1.1 For single-family houses

Environmental benefit tracking further to renovations is assessed in two ways:

- Based theoretically on the initial energy audit
- Based on actual use (subject to the consent of the relevant household)

With regard to tracking actual use, at the beginning of the support procedure the supported household is asked for its consent so that the household's usage can be tracked over a period of 3 years from the completion of the renovations.

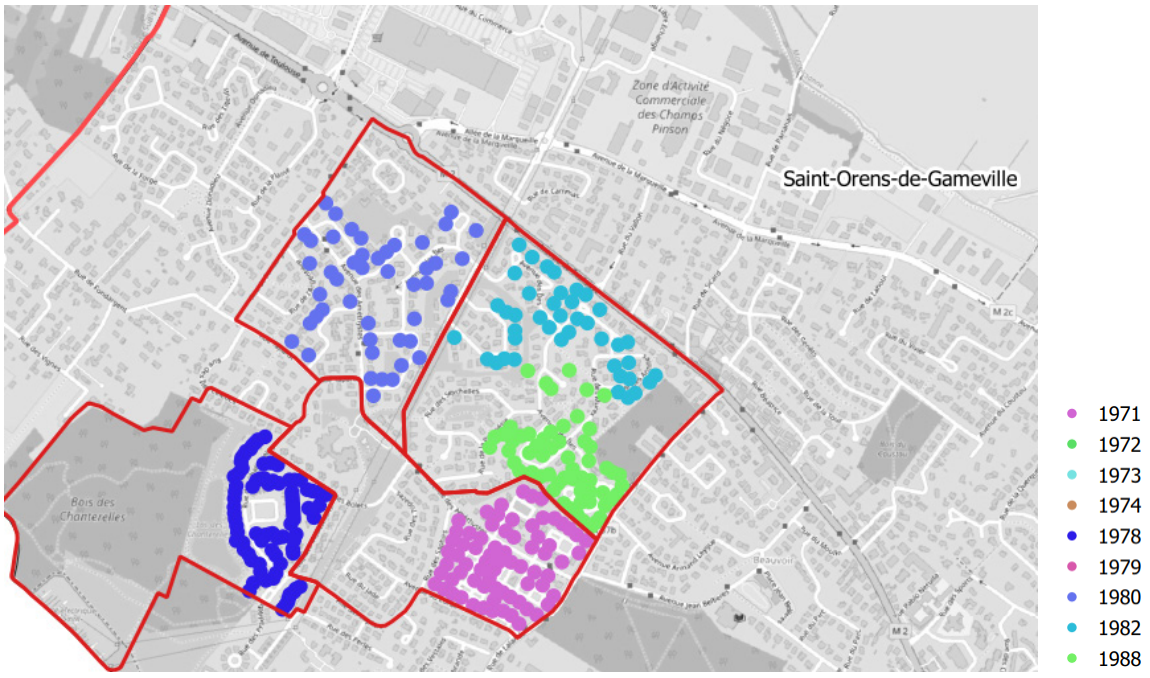
This usage data is gathered from the electricity network supplier ENEDIS and from the gas network supplier GRDF.

These operators install devices which allow the data to be retrieved from Linky and GazPar smart meters.

The meeting on 7/11/22 with the network operators confirmed that it is possible to retrieve such data based on a request listing the electricity reading stations (PRM) and gas reading stations (PCE) for the relevant households specifying the selected observation periods (consent compulsory).

As part of the project, several neighbourhoods in Toulouse Métropole have been targeted. Each neighbourhood includes several hundred houses and it will be possible to assess usage before and after the renovations for a sample group of houses (no consent needed for over 10 reading stations). This methodology will provide specific information on the environmental benefits linked to the renovations in the targeted neighbourhoods. The amount of supported projects at the end of February 2024 does not currently allow these statistics to be produced for the targeted neighbourhoods as not many renovations among the targeted homes have been completed as of this date (targeting campaign carried out mid 2023).

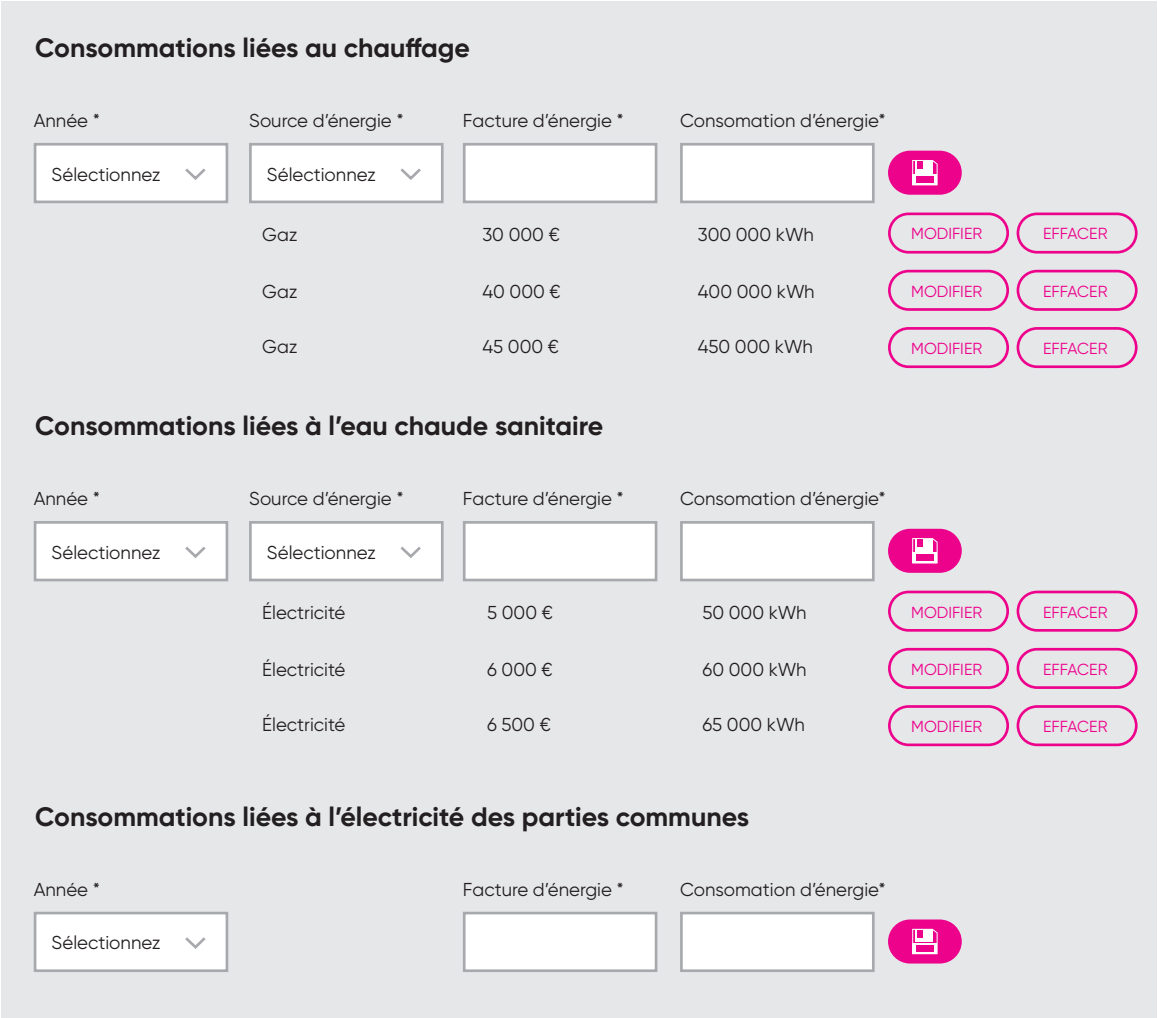
Targeting example in the municipality of Saint-Orens-de-Gameville in accordance with the year of construction.



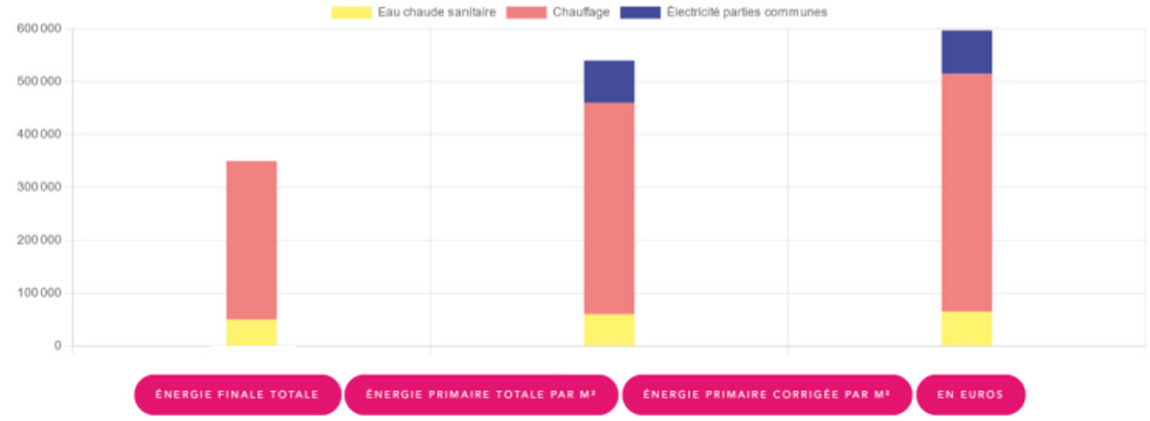
The meeting with the network operators also confirmed that it is possible to retrieve usage data automatically from households which have given consent (API IT flow). However, this solution will not be initially used as it requires significant investment in dedicated software that can retrieve such IT flows. Ongoing consideration is being given to developing a tool within Rénov'Occitanie, so that this software could receive this type of IT flow.

2.1.2 For condominiums

An online Simplified Energy Performance Rating (BES: Bilan Energétique Simplifié) has been developed in the CoachCopro tool. This tool allows co-owners to fill in annual energy usages for each type of use in line with the collective energy bills for the condominium.



CoachCopro then produces the associated statistics using a bar chart which can display the results for total final energy, primary energy per m2, adjusted primary energy per m2 or in euros.



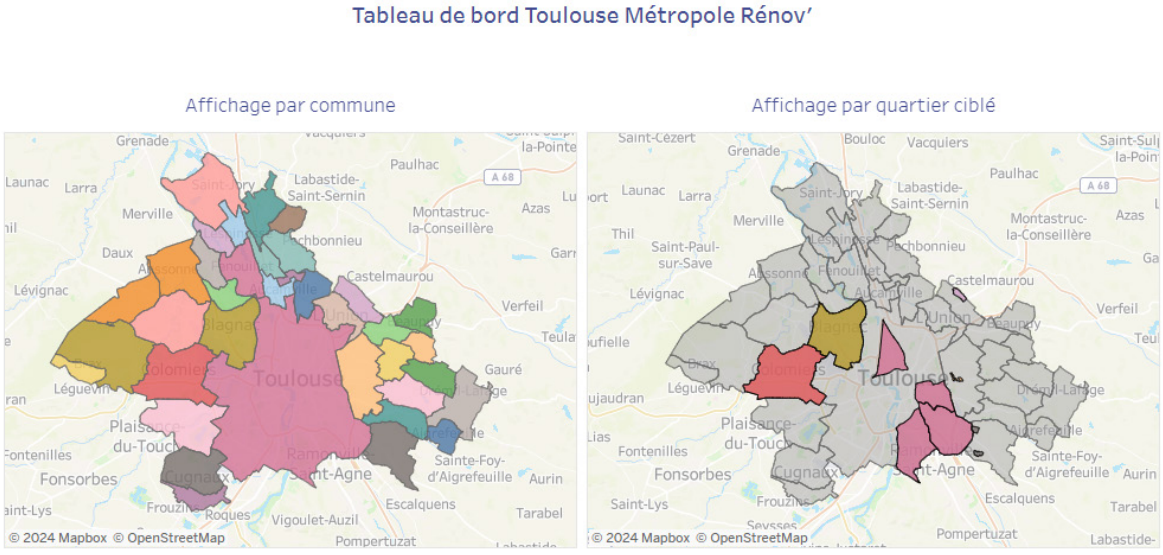
2. 2 Toulouse Métropole Rénov' project management dashboard

A data visualisation, developed alongside the Agence Parisienne du Climat (Paris climate agency), is now available and the results can be collated on 3 levels:

- Overall summary
- Summary for condominiums
- Summary for single-family houses

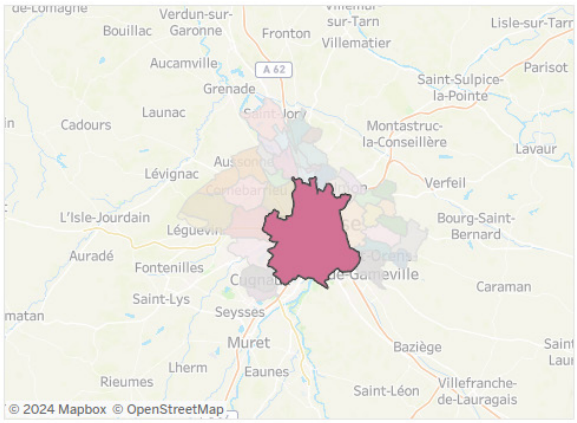
These 3 summaries are also available on a municipality scale by clicking on the relevant municipality, as well as on the scale of the neighbourhoods targeted by Toulouse Métropole's support measures.

View of Toulouse Métropole:

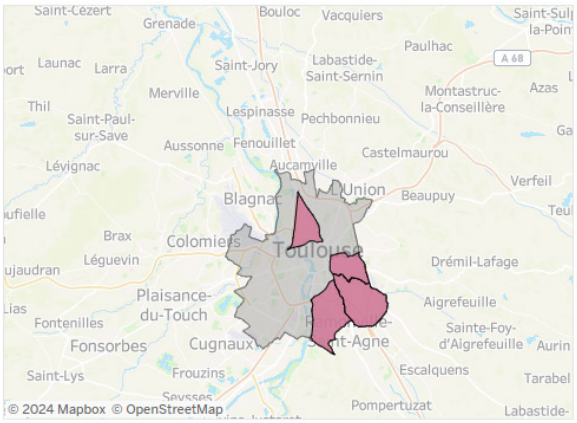


Municipality-scale selection with targeted neighbourhoods displayed:

Affichage par commune



Affichage par quartier ciblé



Display of municipality-scale results (example: the municipality of Toulouse):

This selection displays the results specific to the municipality of Toulouse. The indicators focus on the three levels of analysis.

TOTAL DOSSIERS ACCOMPAGNÉS

Suivi des dossiers

820 dossiers accompagnés
Soit 19 046 logements

Travaux réalisés

250 adresses ont réalisé des travaux
Soit 835 logements

Montant moyen des bouquets de travaux (TTC) : 41 129 € par logement
Nombre moyen de postes de travaux : 1,6

Délai moyen entre la création du dossier et son solde : 197 jours

Indicateurs de performance.

En moyenne, les projets de rénovation permettent un gain énergétique théorique de 63,4 %.
Ils permettent de gagner 2,3 classes DPE en moyenne (kWh/an EP).
Le **gain énergétique réel** moyen est de ... %

En moyenne, les projets de rénovation permettent une réduction d'émissions de GES théorique de 79,4 %
Ils permettent de gagner 2,6 classes GES en moyenne (kgCO2eq/m² an)
Le **gain GES réel** moyen est de ... %

COPROPRIÉTÉS (collectif)

577 dossiers accompagnés
Soit 18 572 logement

Travaux votés

13 copropriétés ont voté des travaux
Soit 451 logements en copropriété

Montant moyen des bouquets de travaux (TTC) : 6 707 € par logement

Nombre moyenne de postes de travaux 1,3

Délai moyen entre la création du dossier et son solde : jours

Travaux réalisés

7 copropriétés ont réalisé des travaux
Soit 361 logements en copropriété

Montant moyen des bouquets de travaux (TTC) : 5 258 € par logement.

Nombre moyen de postes de travaux : 1,6

Délai moyen entre la création du dossier et son solde : jours

Indicateurs de performance.

En moyenne, les projets de rénovation permettent un gain énergétique théorique de 59,0 %.
Ils permettent de gagner 1,0 classes DPE en moyenne (kWh/an EP).
Le **gain énergétique réel** moyen est de ... %

En moyenne, les projets de rénovation permettent une réduction d'émissions de GES théorique de ... %
Ils permettent de gagner ... classes GES en moyenne (kgCO2eq/m² an)
Le gain GES réel moyen est de ... %

LOGEMENTS INDIVIDUELS

243 dossiers/logements accompagnés.

Travaux réalisés

243 maisons individuelles/appartements ont réalisé des travaux
Montant moyen des bouquets de travaux (TTC) : 44 905 € par logement
Nombre moyen de postes de travaux :
Délai moyens, entre la création du dossier et son solde : 197 jours.

Indicateurs de performance.

En moyenne, les projets de rénovation permettent un gain énergétique théorique de 63,4 %.
Ils permettent de gagner 2,3 classe DPE en moyenne (kWh/an EP).
Le **gain énergétique réel** moyen est de ... %

En moyenne, les projets de rénovation permettent une réduction d'émissions de GES théorique de 79,4 %
Ils permettent de gagner 2,6 classes GES en moyenne (kgCO2eq/m² an)
Le **gain GES réel** moyen est de ... %

As the supported projects currently stand, it has not been possible to procure data on actual energy gains as the renovations are either too recent or consent from the relevant households has not been obtained. Nevertheless, the field is available and a value can be calculated depending on the support given to future projects.

For condominiums, it has been identified that the advisors need to standardise how information is entered, in order to collect the information regarding not only the completion of the renovations, but also by how much GHG emissions have reduced. This work is ongoing and will continue in 2024 so that the information being entered into the monitoring tool is more comprehensive.

In 2024, the OPENDATA usage data will be retrieved for condominiums with over 10 supply points or a boiler-room usage of over 200 MWh/year (with historical records going back at least 3 years).
This information can be integrated into the coachcopro tool, and then in turn feed into the project management dashboard.

User satisfaction will be assessed as part of the investigation carried out by the French Agency for Ecological Transition (ADEME) and has therefore not been included on the steering chart.

Information on energy poverty is not included on the project management dashboard as collecting and processing such data presents confidentiality issues (GDPR).

2.3 Information included on the dashboard

	Copropriétés	Maisons individuelles	Total
Suivi des dossiers			
Nombre de dossiers accompagnés	x	x	x
Nombre de logements accompagnés	x	x	x
Nombre de projets terminés	x	x	x
Montant moyen des bouquets, travaux par logement (€ TTC)	x	x	x
Nombre de postes de travaux de rénovation en moyenne	x	x	x
Travaux votés/décidés			
Nombre de copropriétés	x		x
Nombre de logements copro	x		x
Travaux terminés			
Nombre de copropriétés	x		x
Nombre de logements copro	x		x
Nombre de maisons		x	x
Indicateur délais de traitement			
Délais moyens entre création du dossier d'accompagnement et solde du dossier	x jours	x jours	x jours
Indicateurs Performance			
Gain théorique moyen des actions menées (kWhEP)	x %	x %	x %
Nombre de classe DPE gagnées en moyenne (kWh/ an EP)	x	x	x
Gains théoriques GES après travaux (kgCO2eq/ m2 an)	x %	x %	x %
Nombre de classe GES gagnées en moyenne	x	x	x
Gain réel moyen des actions menées (kWh)	x %	x %	x %
Gain réel GES après travaux (kgCO2eq/ m2 an)	x %	x %	x %

2.4 Conclusion

The implementation of the dashboard means that the information reported from the tools used by the advisors can be summarised and the project progression and environmental benefits can be consulted on various scales.

In order to implement this tool, work was carried out on standardising the input data and making it reliable. This work highlighted the need to improve data entry quality at advisor level and also to structure a single database so that the information entered into the project management dashboard is more reliable and streamlined. These areas for improvement are currently being actioned alongside the Agence Parisienne du Climat (Paris climate agency) which has developed the « Tableau de bord Toulouse Métropole Rénov' » (Toulouse Métropole Rénov' project management dashboard) tool.

Although not exhaustive, this scorecard shows that 604 homes have undergone energy-efficiency renovations, including 243 single-family homes and 361 condominiums over the reference period (2022-2023).

The renovations for which data is available are among the most ambitious, with an average energy gain of 63% and a GHG (greenhouse gas) reduction of 79%. On average, 2 energy classes are gained after renovation.

3. OVERALL MONITORING OF RENOVATIONS

3.1 Overall assessment of renovations

At present, only a small proportion of renovations carried out in the Toulouse Métropole area are known precisely and completely (address, energy consumption before & after work, nature of work carried out, etc.). These are the only renovations that could be entered into the visualization tool described above.
However, other indicators were used to assess the energy renovation work carried out within the scope of our one-stop shop. In particular, ANAH data on households who have applied for a "MaPrimeRénov" subsidy provides information on a large proportion of renovations carried out over the course of a year.
However, as we do not have access to information on the addresses of the homes concerned, it is not currently possible to cross-reference these data with those collected by the service (and included in the dashboard presented above).
The number of homes renovated under Toulouse Métropole's PIG (Programme d'Intérêt Général) is also known precisely.
These financially assisted renovations of private housing represent 3,200 homes renovated per year (2,940 MaPrimeRénov' files + 260 monitored by the PIG).

As the PCAET's objectives in terms of housing renovation (7,500 renovations/year by 2030) also include the public housing stock, we have included these renovations in this indicator, which represent 950 homes per year.

Finally, the proportion of renovations not covered by public financial aid (TM or ANAH) has been estimated at between 500 and 1,000 homes per year. This is because many households carry out the work themselves, or because some are not eligible for assistance (e.g., higher incomes).

As a result, the total number of energy-efficiency renovations in 2023 is estimated at 5,000 homes, compared with 3,000 in 2020. The implementation of the one-stop-shop has therefore had a significant impact on boosting the number of renovations in the region.

These positive results should be maintained, with the aim of achieving 7,500 renovated homes by 2030.

3.2 Focus on support paths

On average over the 2022-2023 period, 1,610 homes per year will have undergone an energy audit with the Rénov'Occitanie program (730 individual homes and 880 condominiums/year).
Of these homes, 110 have signed up for support during the works phase, although many individuals carry out works after the audit, even if they have not signed up for support. We can therefore estimate that between 400 and 800 homes have carried out work following the energy audit (assuming 25% to 50% action following the audit).
To this must be added the 260 homes (on average per year) that have undergone energy renovation under the PIG program.

Following the introduction of the one-stop shop, we can therefore estimate that between 600 and 1,000 homes have undergone energy-efficiency renovation following a support program offered by the one-stop shop.

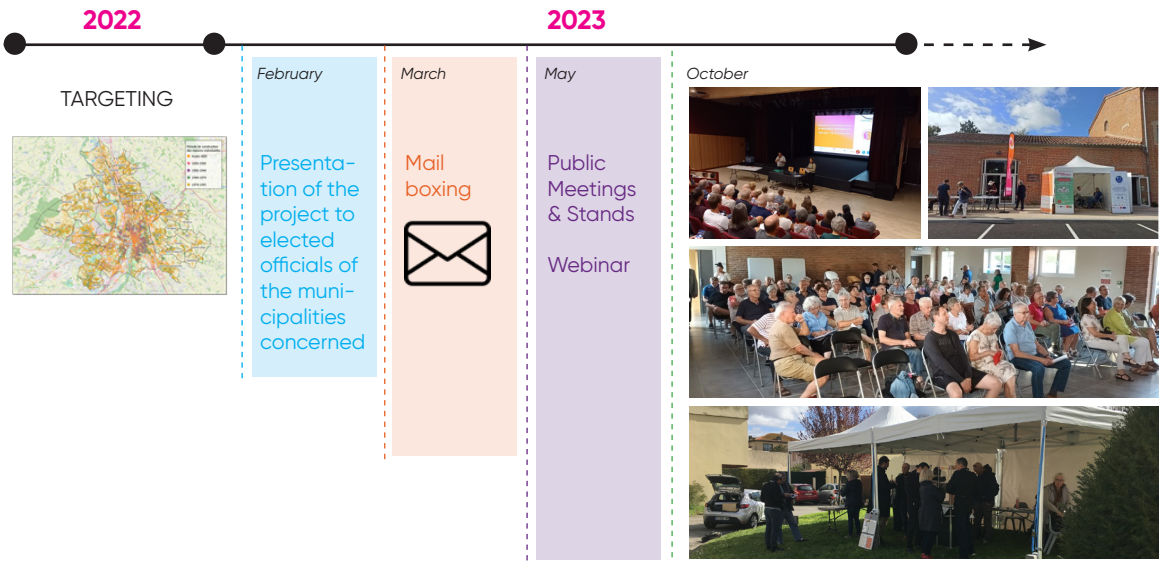
3.3 Focus on test districts (targeting strategy)

As part of the I-HEROS project, in addition to providing advice to users who have contacted the one-stop-shops, a pro-active strategy has been put in place to reach out to local residents.
This involves Toulouse Métropole Rénov' taking part in events for the general public, such as trade fairs, as well as hosting conferences and public meetings.
In particular, during the project period, several test districts identified as priorities were the subject of a specific approach detailed in deliverable D3.1.

A total of 30,000 condominiums were targeted, spread over 4 districts of Toulouse and the towns of Blagnac and Colomiers, for a total of 600 condominiums.
As for houses, 2,000 units were targeted in Balma, Saint Orens de Gameville and Saint Jean.

An information letter was sent to each of the targeted homes, informing them of the approach and inviting them to information events on energy renovation.

Targeting individual houses : Strategy of communication



Type of housing targeted	Number of homes targeted	Actions taken	Attendance at public meetings
Condominiums	30 000 (600 condominiums) i.e. 11% of the territory's condominiums	7 public meetings	500
Houses	2 000 i.e. 2% of the territory's single-family homes	3 public meetings + 3 stands	250
TOTAL	32 000	10 meetings	750

Around 8% of condominiums contacted the counter after the actions, and 7% of targeted homes.

Among the events offered to residents, the physical public meeting format was a great success, while information webinars were also offered, but with much less success (sometimes only 1 or 2 participants).For the housing districts, the public meeting was followed a few days later (on a Saturday) by a stand with advisors from the Maison de l'Energie, ADIL and representatives of the operators offering the various support packages. Following these initial contacts, workshops were offered to help residents reread their energy audits, and then to help them organize themselves to place group orders for work.

As it turned out, this part of the project required a great deal of the advisors' time, with few results. Indeed, despite the initial interest shown by residents in carrying out grouped work, and despite the fact that relatively similar houses were targeted, the number of similar projects was quite low and/or the residents not sufficiently autonomous to bring these grouping projects to fruition.

As far as condominiums are concerned, one of the difficulties we encountered was to succeed in mobilizing the owners of the dwellings, in particular the landlords, since the letters were sent to the residents (whether tenants or owner-occupiers). In fact, we noted a lower turnout at the Toulouse meetings, where the proportion of landlords was higher. It was also difficult to mobilize property managers at these meetings, despite a specific letter being sent to them.

Approximately 1 year after targeting, 11% of the targeted co-ownerships contacted the one-stop shop after the targeting actions, representing 24% of new co-ownership contacts over the period (whereas the targeted co-ownerships represented only 7% of co-ownerships in Toulouse Métropole). Among these co-ownerships, 27% have gone beyond simple advice and seem genuinely interested in a renovation project: energy audit in progress or in the process of being voted on, financial aid simulation in progress.

In the case of single-family home neighborhoods, an increase in the number of contacts (+37%) was also measured in the targeted neighborhoods compared with the rest of the city concerned, although the extent of the increase varied between the 3 experimental cities. However, it is not possible yet to know how many renovations have been carried out as a result of these contacts.

Overall, despite certain challenges, these actions were positive, as they helped to increase the number of residents receiving advice in the target areas. They will therefore be reproduced beyond the I-HEROS project, focusing on the most effective actions, i.e. mailings and public meetings.

4. CONCLUSION

The first two years of operation of the «Toulouse Métropole Rénov'» one-stop shop have boosted energy-efficient home renovation in Toulouse Métropole, in line with the initial objectives of the I-HEROS project.

However, one of the difficulties encountered concerns the precise monitoring of these renovations, as the one-stop-shop is mainly involved in the upstream part of the projects, and a large number of projects are not monitored by us.
In the case of supported projects (energy audits, or even work supervision), we have a good knowledge of the work carried out, with the possibility of tracking key data on these renovations at the level of a commune or metropolis, thanks to the data visualization table built as part of I-HEROS.

Particular attention will need to be paid, however, to the way in which internal monitoring tools are filled in by advisors, so as to ensure uniform, easy-to-use databases for this dashboard.

Lastly, initial feedback from the neighborhood-targeting initiatives shows that the scheme has boosted the number of contacts in these neighborhoods, as well as the number of energy audits carried out, suggesting a positive impact on the number of energy renovations in these areas.

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