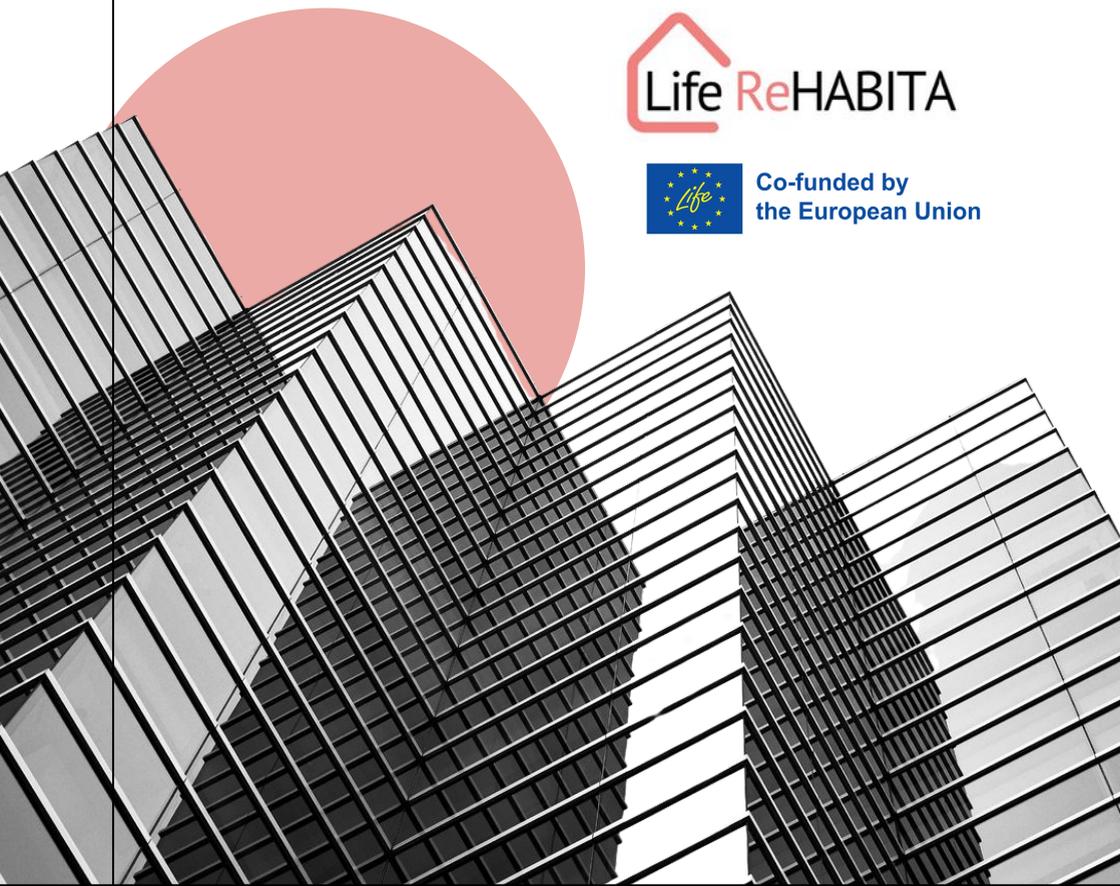


Guidelines about how to address the renovation of buildings affected by a high socio-economic vulnerability



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01.

INTRODUCTIO

The building energy renovation processes involve a technical difficulty that has been worked on in recent decades. The experience gained through the projects carried out has made it possible to define the best solutions to be applied, depending on the climate zone and the building's typology.

However, when it comes to the renovation of dwellings housing of vulnerable families, an additional difficulty arises due to the fragile socio-economic situation of the people concerned. Indeed, this situation generates constraints that can make the development of renovation projects very difficult.

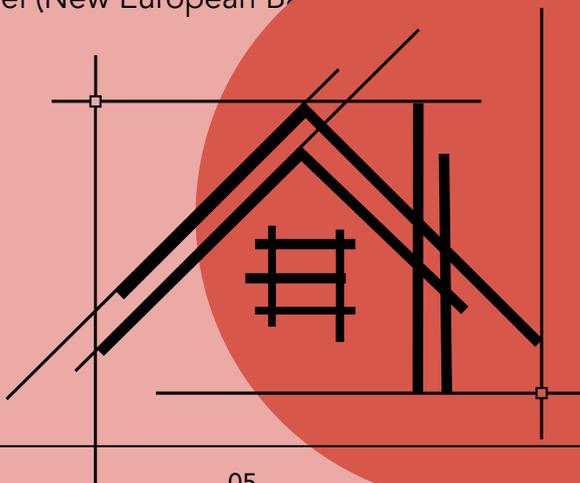
Knowledge of how to deal with these situations is essential for the success of such complex projects. The problem is even greater when dealing with multi-family buildings, where the

particularities of each dwelling or resident family greatly complicate both the definition and the execution of the project. The LIFE ReHABITA project aims to disseminate this knowledge among all actors in the value chain of energy renovation of vulnerable housing.

Among its objectives is the reduction of the impact of the actions on people, minimising the need to move and temporarily relocate families to other dwellings. It is therefore a priority in energy refurbishment projects projecting vulnerable buildings to carry out the action with the minimum possible impact on residents.

On the other hand, the delicate socio-economic situation of the affected families implies the need for special soft skills. The approach to these citizens requires high levels of empathy and the involvement of municipal social services.

The LIFE ReHABITA project proposes the development of meetings or workshops with the affected neighbours, in order to involve them throughout the whole process and reduce the insecurity and even anxiety that these complex projects can generate on them. On many occasions, the social de-structuring existing in the districts to be renovated implies a disaffection of the residents with their neighbourhood. These meetings or workshops will also serve to cohesion the population around a more inclusive, better and sustainable district model (New European Ba



02.

PARTICIPATO

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METHODOLOG

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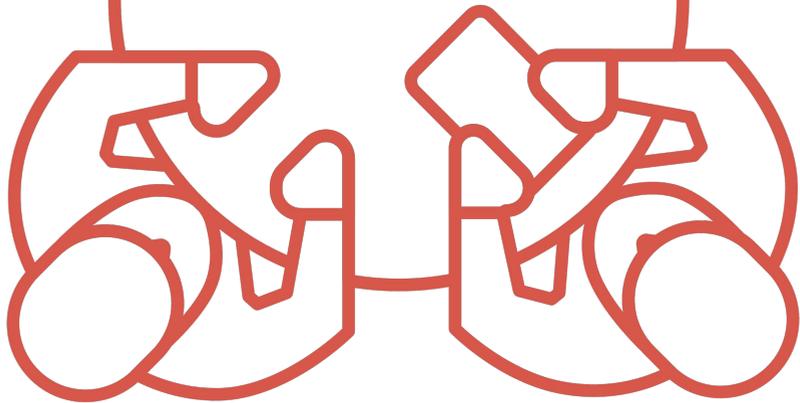
The special situation of affected households implies a closer approach to vulnerable residents. However, such an approach should not only be carried out by only technical staff without specific knowledge of social aspects. Therefore, the accompaniment of social services throughout the whole process is a key aspect of the process.

Obviously, the sequence of meetings will depend on each case, but the following series of meetings is proposed:

1 First contact meeting: informative meeting and data collection, prior to the energy studies, with the aim of informing about the refurbishment process and the available aids. The meeting will be organised by the ReHABITA Office (one stop shop) and will be attended by owners and tenants, representatives of the municipal social services and the building manager, if there is one. At the meeting, several decisions will be taken: to tackle the building renovation project, commissioning the preliminary project to the architect of the ReHABITA Office or whoever is considered appropriate.



- 2 **Presentation of the preliminary project:** in this second meeting, the architect in charge at the renovation project will present the preliminary project and the doubts raised by owners and tenants will be solved. The project budget and the possible subsidies that the owners could have access to will also be presented. Figures on expected energy savings and payback periods will be shown as well. The attendees will raise possible modifications and adjustments to the budget, in order to approve the commissioning of the final renovation project.
- 3 **Presentation of the final project:** the final project, its budget and the proposed grants will be presented. The execution period and the possible impact on residents will also be discussed. Once approved, the project is validated for the contracting of the work.
- 4 **Stakeout of the works:** once the company that is going to carry out the work has been contracted, a meeting will be held to discuss the details of the work with the residents. The phases of execution, the effect on the dwellings' indoor in each phase and the need for collaboration from the residents will be discussed. In the event of difficulties in carrying out this collaboration, the necessary help will be provided in each home.



5 Monitoring of the works: during the execution of the works, the necessary number of meetings will be held to keep neighbours informed and to resolve any conflicts that may arise. It is proposed that at least two meetings be held throughout the process. These meetings will also serve to reduce residents' anxiety and concern about the works.

6 Monitoring of the action: once the works have been completed, a final meeting will be necessary to discuss how the impact of the action will be monitored. Representatives of the ReHABITA Office and the municipal social services will be the ones who, from this moment on, will carry out this monitoring, analysing and assessing the impact produced on residents by the multiple benefits derived from the energy refurbishment of buildings.

All these meetings should be highly participatory (in both cases: multifamily buildings or at district level in case of single-family houses), so that they are more like a workshop than a traditional neighbourhood meeting. Their dynamisation is decisive to achieve the expected result. For this reason, the technicians of the ReHABITA Office and the representatives of the municipal social services will be trained in participation and co-creative dynamisation techniques, adding great value to the meetings.



The final goal of this methodology is to take advantage of the available support resources to achieve deep and comprehensive reforms that become an opportunity for integration among neighbours. To not only improve the comfort, energy efficiency and accessibility of a home or building, but to significantly transform their living conditions, self-perception and coexistence of households in vulnerable situations.



03.

THE FOUR PHASES OF THE BUILDING RENOVATION PROCESS

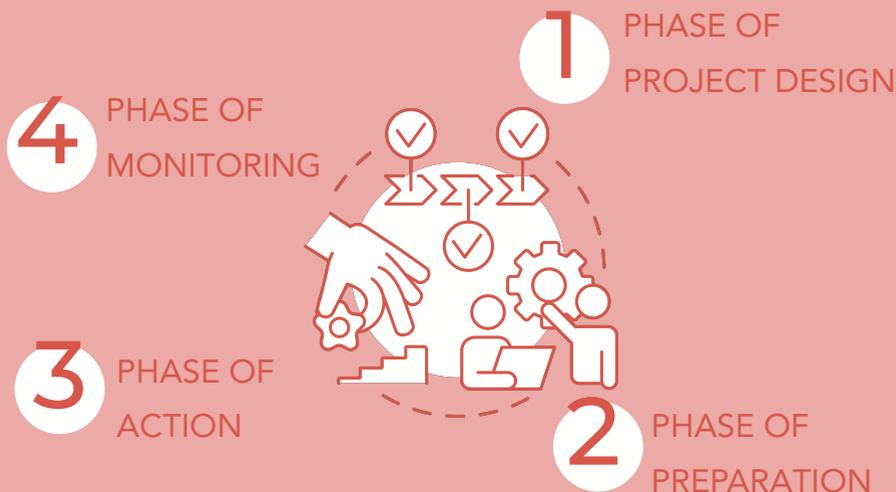
In order to structure the outreach work with neighbours, the building renovation process has been structured in four phases:

1 Phase of project design

This phase covers from the first approaches to inform residents of the possibilities offered by the renovation of the buildings, its benefits and available aid, until the technical project for the development of the works is drawn up.

2 Phase of preparation

Once an agreed project has been defined, it is necessary to address how the sequence of the works will be developed, how they will affect the dwellings and their habitability during the works and the need for help inside the dwellings or relocation in case of need.



3 Phase of action

In this phase, the renovation works are carried out, accompanied by a close monitoring of the impact on the residents.

4 Phase of monitoring

Fundamental to achieve high levels of efficiency in the renovated buildings, making an important contribution to reducing the socio-economic vulnerability of the residents.

04.

THE BUILDING RENOVATION PROCESS

1

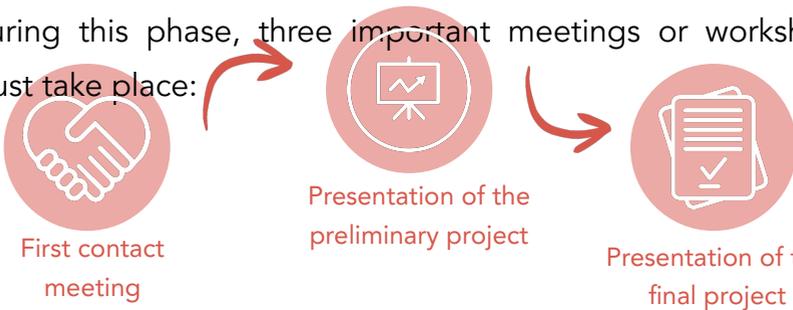
PHASE OF PROJECT DESIGN

The design of the action has to be highly participatory. During this phase, participatory meetings will be held with owners and tenants. It should be borne in mind that socio-economic vulnerability in general and energy poverty in particular is more prevalent in the rented population (up to four times higher than in the case of owner-occupied households).

On the other hand, since most of the renovation grants are addressed directly to the owners and, very often, to the condominiums, rented households are excluded from the decision-making processes linked to building renovation. It is therefore important that tenants also attend meetings to explain the retrofitting process, participating in the information, discussion and decision-making processes, whenever possible. This fact also enhances the sense of belonging of these neighbours to the building,

It should also be considered that the party responsible for making the investment for the renovation of the dwelling is the person or entity that owns the dwelling, while the benefits of the refurbishment, in terms of lower running costs and improved thermal comfort, accrue to the tenants. This disconnection between investment and direct benefit discourages property owners from taking the initiative to refurbish rented accommodation.

During this phase, three important meetings or workshops must take place:



Without prejudice to the above comments, during these meetings the attendants will discuss about issues such as:

- explanation of the actions to be carried out and how to reduce the impact on residents;
- the possibility of temporary relocation of residents;
- the tenure arrangements that vulnerable households tend to have;
- calls for subsidies for households in vulnerable situations, resources needed to meet these subsidies;
- support system by the municipality and its relationship with the construction company;
- how the meetings are to be conducted in the case of multi-dwelling buildings.

The design of the action may be conditioned by various requirements from calls for proposals, the ReHABITA Office, municipal rules or higher-level regulations (regional or national). These include:

-  reduction in final energy consumption
-  reduction in non-renewable primary energy
-  reduction in emissions
-  improvement by a certain number of letters/levels in the energy performance certificate
-  minimum rating or minimum final level in the energy performance certificate

Households in vulnerable situations that own their homes are also not exempt from problems when it comes to accessing aid for building renovation. On the other hand, in many cases, there is no property administrator in multi-family residential buildings where many dwellings are owned by vulnerable households. This, again, would make access to information and the refurbishment process difficult.

To overcome these and other barriers, there is a need for technical (rehabilitation offices) or social agents from the Local/Regional Administration or third sector entities that can accompany vulnerable households during these difficult first steps of the rehabilitation process.

On the other hand, many of the problems encountered in a contemplation phase (prior to the first meeting) have repercussions in the preparation phase, but with different consequences. Financial constraints, for example, lead to

These projects do not contemplate the comprehensive and deep building renovation, but rather propose superficial renovations that sometimes do not go beyond rehabilitating some individual dwellings. Sometimes, these one-off interventions without an overall vision can give rise to unexpected problems in dwellings, such as the appearance of damp after improving the carpentry of a dwelling without incorporating insulation in the rest of the building envelope; or, if the actions are not planned in a coherent manner, they can hinder a future comprehensive and thorough refurbishment of the building. To avoid this issue, and without prejudice to the specifications of the bases established in the calls for actions, **the rehabilitative project should address, in**

1

priority: windows and insulating opaque enclosures, both vertical and roofing.

2

Action on the air-conditioning and DHW equipment, which is more complex to tackle. It should be used as an opportunity to propose the centralisation of the installations, as well as energy management and monitoring systems.

3

~~Common renewable energy installations, mainly those related to shared photovoltaic self-consumption.~~
Opportunities to create energy communities.

4

5

Actions related to the elevators and other common facilities/buildings infrastructures.

In order to avoid lack of ambition and coherence in retrofitting proposals, use could be made of existing tools, but which have not yet been widely implemented, such as the "building passport" and the "existing building book", which propose the design of deep and comprehensive retrofitting projects, but which can be divided into different stages, which can be undertaken independently.

In any case, renovation projects should prioritise intervention on the exterior of the building, minimising disruption to residents. External insulation systems generate improvements in building efficiency that are superior to inner cladding or any other type of intervention. In addition, they have much less impact on residents. There are many solutions of this type on the market, which facilitates the definition of the project and the intervention on the building. Only in the case of replacement of windows and heating, cooling and ventilation equipment, an intervention inside the dwellings is required. In such cases, the design of the intervention will always be based on minimising the impact on the residents.



In summary, at this stage, the following considerations should be taken into account:

- Respect in the approach to the residents of the dwellings.
- Need for social skills and a high level of empathy.
- It is essential to have a facilitator for the meetings who is capable of extracting agreements and achieving progress in the refurbishment through decision-making.
- Attendance of owners and tenants.
- Need of social services representative.
- Design of a rehabilitation project by consensus.
- Take into account the regulatory bases of the calls for subsidies in order to maximise the amount received and reduce the co-financing rate by the owners.
- Articulate instruments for compensating tenants to landlords in the event of the need for compensation.



2

PHASE OF PREPARATION

Once the refurbishment project has been defined, the preparation phase requires a closer approach to address how to carry out the works, together with the dwellings' owners and tenants. This approach requires technical teams specialised in building refurbishment who are close to and aware of the socio-economic conditions of the households they are working with, adapting the stages of the renovation project to their possibilities.

To support this task, social services teams would also be needed that can accompany households in vulnerable situations, accurately reflect their conditions and possibilities and serve as a disinterested party in the process.

From the administrations, part of the ReHABITA Offices' teams could be made available to households in vulnerable situations so that, together with the social services teams, they can accompany them in the rehabilitation processes. This can be done jointly by the ReHABITA Offices, the project design team and the contractor for works.

The problems arising from the rental tenancy regime, or the lack of property administrators are reflected in this phase. These issues result in a lack of a sense of belonging to the building as a whole. The non-existence of a neighbours, understood association as a group of people linked by common interests, makes it difficult to carry out interventions in the common spaces and in the building as a whole. Both are essential for in-depth and comprehensive refurbishment operations.

To solve this problem, the ReHABITA Office can help by providing a kind of "property manager by trade", as well as a social accompaniment that manages to create an actual community of neighbours. If this community of neighbours can be promoted or strengthened, the renovation process will not only improve the physical conditions of the building, but will also greatly strengthen coexistence, which is an enormous added opportunity in the renovation process.

Ideally, this cohesion could lead to improvements in the behaviour and use of common spaces or the building as a

In this phase it would be necessary to analyse, on a case-by-case basis, the possibilities for each resident to undertake the proposed rehabilitation of his or her home. The following aspects should be considered:

-  **Age**

Existing handicaps (physical, psychic, motor, visual, hearing, etc.)
- Level of dependence**

-  Possibility of temporary relocation to the home of relatives.

All actions will always be carried out in such a way as to affect the residents in the building as little as possible. Noise will be reduced to a minimum during hours of rest and works will be carried out, whenever possible, from the outside of the buildings, minimising the entry of workers into the dwellings. Operations that open up openings on the façade will be carried out throughout the day and the openings will be covered before nightfall. In the case of window renovation, the operation of removing the old window and replacing the new one will be carried out during the same day.

The timetable of actions will try to accommodate, as far as possible, the requirements of the neighbours, considering

In this phase, the following considerations should be taken into account:

- Respect in the approach to the residents of the dwellings.
- Need for social skills and a high level of empathy.
- It is essential to have a facilitator for the meetings who is capable of extracting agreements and achieving progress in the refurbishment through decision-making.
- Attendance mainly of residents (owners or tenants).
- Minimise disruptions on residents during the works.
- Design of action's timetable in accordance with residents' needs.
- Preparation of lists of trusted/accredited suppliers.
- Preparation of a checklist of implementation activities.
- Identification and selection of an active owner tenant for performance monitoring, including deadlines on behalf of the co-owners.

3

PHASE OF ACTION

This is the most expected phase by households, which facilitates the acceptance of possible complications that may occur as a consequence of the works' execution.

However, severe complications can occur at this stage, particularly in some types of socio-economic profiles.

Households composed of elderly people or those with functional diversity, or single-parent households with children, may not be able to make certain adjustments to the dwelling that are required prior to the works in order for them to be carried out correctly. For example, the need to remove furniture or other elements from the walls of the home if they do not have a network of family members or friends who can help them with these tasks.

This type of adversity would disappear with a comprehensive action from the outside, but a minimum intervention on the inside will always be necessary, such as the finishing after the installation of the new windows. In this case, the removal of curtains, even curtain rails, may cause difficulty for residents.

As a possible solution, the professionals in charge of the refurbishment could budget the hours needed to carry out these tasks and perform them themselves. In the case of families with children or dependent members, the dismantling of some elements such as windows or handrails, even temporarily, can produce safety problems for them that should be considered. In order to avoid possible dangerous situations, temporary elements should be installed, and before starting the renovation process, the necessary measures should be taken to avoid any dangerous situation for the people at home.

Although this phase is usually the most awaited, it is also the one that produces the most doubts and conflicts. This once again highlights the need to have a technical and social team close to the households that can resolve possible queries and conflicts. To this end, it will be necessary to hold follow-up meetings, following the same methodology applied in the previous phases.

Here, the ReHABITA Offices²⁵, which are close to the buildings when carrying out rehabilitation processes on a

The conflicts produced during this phase require continuous attention, which prevents the households living in the rehabilitated building from falling into discouragement, even depression. An important way to prevent this loss of interest is to be extremely transparent with the deadlines and the inconveniences that may occur during the process, avoiding the creation of unrealistic expectations.

Some of the conflicts that arise during the rehabilitation process can be addressed in follow-up meetings, which also serve to reinforce the cohesion, participation and complicity of the neighbours as a whole, generating virtuous circles that improve the self-perception of vulnerable households.

The need to vacate the dwelling for a few days is particularly dramatic if the vulnerable households living in the building under renovation do not have networks that can accommodate them during these periods. In order to soften as much as possible, the impact of these temporary displacements, the rehabilitation agent or the administration linked to the rehabilitation process should provide transitional or temporary housing for households that have to temporarily leave their homes.

In such cases, close monitoring of the situation of these families by social services is essential. The physical and mental health of people who have to leave their homes

To get a good result in this phase, the following considerations should be taken into account:

- Respect in the approach to the residents of the dwellings.
- Need for social skills and a high level of empathy.
- Follow-up meetings are necessary to gather residents' views and concerns.
- Attendance mainly of residents (owners or tenants).
- Minimise disruptions on residents during the works.
- Relocation options need to be considered on a case-by-case basis, where relocation is mandatory.
- Follow-up by social services of relocated families is required.

4

PHASE OF MONITORING

Building energy refurbishment processes must be accompanied by actions related to awareness-raising and behavioural change. Retrofitted buildings will improve their energy performance and increase their thermal inertia by improving the insulation of their envelope. This means that an increase in the energy culture of its users should lead to a change of habits that will help to reduce energy consumption, reducing the level of vulnerability of the residents.

Regardless of the awareness-raising actions carried out before the action phase, it is necessary to monitor the energy behaviour of the users. In some cases, new elements installed in the dwelling are misused by the inhabitants of the dwelling, resulting in improvements in comfort and energy efficiency that are far below those initially calculated.

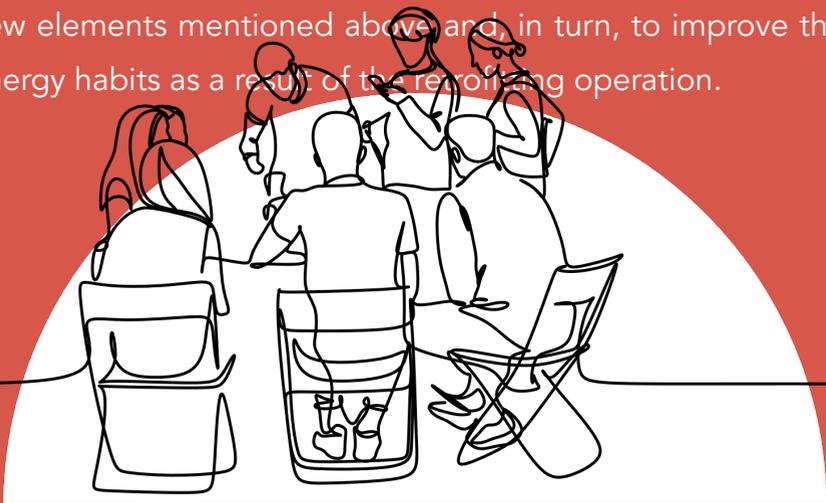
In response to this, the aforementioned support processes should go beyond the actual execution of the work, by highlighting the immediate improvements that these operations represent in the face of problems that would arise in the future if they were not carried out, and by educating about the new technologies (active or passive) that may be installed in the dwelling, such as heat recovery systems or bioclimatic elements.

Particularly important are cases in which the improvements require a change of habits in the home, such as the need to increase the ventilation time of the home, if the airtightness of the home has been improved, in order to avoid the appearance of dampness. This updating of the habits of the inhabitants can also take place through a process of integral accompaniment.

Such monitoring will be carried out through the rehabilitation offices, maintaining mixed teams composed of energy or urban planning technicians and representatives of the municipal social services. The technical teams involved in the retrofitting process must be transparent with regard to the warranty, complaint and replacement periods for the different elements installed. It is essential to develop information actions, particularly in the case of heating, cooling, ventilation and DHW equipment.

On the other hand, such buildings used by vulnerable households often lack a proper maintenance culture. Maintenance is often conceived, not as an extension of the useful life of a dwelling, but as an inconvenient expense to be faced occasionally. This conception of maintenance as a burden, coupled with the precarious economic situation of vulnerable households, can sometimes lead to a refusal to carry out essential maintenance work.

As discussed in the previous sections, if these dynamics are properly addressed, with accompaniment by specialised social agents, a cohesive neighbourhood community could be created. The figure of an "energy educator" is crucial in the follow-up phase, presenting itself as an agent that could be introduced at this point in the process. Their role would be to enable vulnerable households to make the best use of the new elements mentioned above and, in turn, to improve their energy habits as a result of the retrofitting operation.



05.

THE ROLE OF THE REHABITA OFFICES IN THE ENERGY RENOVATION

ReHABITA offices are key elements in the renovation process of buildings, whether they belong to vulnerable or non-vulnerable population groups. However, in the particular case of the most vulnerable households, the existence of this type of support is crucial to address these needs throughout the long and cumbersome process. Local or regional administrations can implement these offices, which can be structured in different ways:

- An own department of the local authority.
- A new entity created for this purpose, which may be a public-private organization, with the participation of other public or private entities.
- An outsourced service³¹, through a long-term public tendering procedure, giving stability to the service.

FEATURES OF THE REHABITA OFFICES



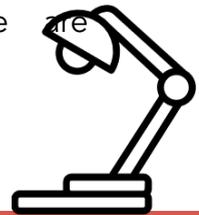
Scope of action

It is necessary to define the target population to which its services are addressed. It can cover the whole municipality, one or several specific neighbourhoods, or population groups in special situation of vulnerability. It can also differentiate the type of services offered according to the target population groups, showing special interest in the most vulnerable households.



The services offered by the ReHABITA office are wide-ranging and may include:

- Advice on financing possibilities.
- Processing of subsidy applications.
- Drafting of projects and technical advice.
- Accompaniment during the rehabilitation process.



The ReHABITA offices will be sufficiently equipped to be able to carry out their function. Its staff structure can include the following professional profiles:

- ~~Technical staff (architects, engineers, energy experts), with experience in drafting and managing projects.~~
- Experts in economics and/or project financing



Communication

It is essential to publicise the existence of this service, providing contact details: address, email address, phone numbers, etc.

The ReHABITA offices plays a crucial role in addressing the rehabilitation needs of the community, offering a wide range of services adapted to the target population, particularly those in vulnerable situations. With a well-equipped staff structure that includes technical, financial, legal and administrative professionals, the office is prepared to provide comprehensive support throughout the entire rehabilitation process, thus maximising the impact of housing rehabilitation funds and promoting sustainable urban development and improving the quality of life of residents.



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