



FEASIBLE

Fostering Sustainable Living Cities

Grant number 847118

D6.4 Final Publishable Report

Lead Author: Stefano Faberi

Contributions: Simona Acerbis, Andrea Panzavolta

Deliverable nature:	Report
Dissemination level:	Public (PU)
Contractual delivery date:	Month 43
Actual delivery date:	23 01 2023
Version:	1
Keywords:	Energy efficiency in buildings, Condominiums, One Stop Shop, Phyco-social facilitation

Index of contents

1	Project overview.....	2
1.1	The project aims.....	3
1.2	From incentives to 65-70% to Superbonus: a change of scenery.....	3
2	The Parma "One Stop Shop"	5
2.1	How the Energy & Condominium Desk Works	5
2.2	The services offered by technical advice.....	6
2.3	Operating modes and prospects	7
3	Facilitation services.....	7
3.1	The roles of facilitation.....	7
3.2	The communication	8
3.3	Mediation actions.....	8
3.4	Make a difference	9
4	FEASIBLE in support of Nursing Homes	10
4.1	The work carried out and the final results	10
4.2	The effect of the behaviour on the building energy consumption: a conference addressed to the ASP managers and operators	12
5	The results from the interventions on the condominiums.....	12



1 Project overview

Energy upgrading is not just about 'money'! It also needs a compass, to find the way through the techno-bureaucratic jungle of incentives and a guide, to facilitate certain community processes within the heterogeneous textures of apartment buildings.

A living example of this is the FEASIBLE project which, starting in 2019, supports condominiums in the Parma region through a dedicated Desk. Sharing FEASIBLE's journey can be helpful and inspiring for other Italian cities and municipalities tackling the issue of energy renovations.

1.1 The project aims.

The FEASIBLE - *Fostering Sustainable Living cities* – was funded by the EU, Horizon 2020 -PDA (Project Development Assistance¹) programme. The aim of FEASIBLE was to promote actions for the improvement of the energy performance of private multifamily and public buildings in the province of Parma by triggering investments of around 14 million euros in the private sector and 2 million euros in the public sector.

For what concerns the private sectors the action was addressed to the apartment owners living in multifamily buildings, that in Italy are regulated by the administrative and organizational rules of the condominiums, to which we will therefore refer from now on. The scope was then to provide psycho-social, technical and administrative support to the apartment owners and the condominium managers that wanted to benefit from state incentives to improve the energy performance of their buildings and give a consistent cut to their gas and electricity bills.

As for the public sector FEASIBLE aimed at the energy efficiency improvement of the real estate asset managed by the public company of the Parma Municipality that takes care of elder and in need people. This happened through the implementation of a set of energy efficiency interventions (building refurbishment, cogeneration, trigeneration, replacement of lighting facilities, energy service management) for which the project provided assistance to the procurement setting up and management procedures.

1.2 From incentives to 65-70% to Superbonus: a change of scenery

At the time of the proposal the policy measure to which the project referred envisaged an incentive up to the 75% of the costs to carry out a deep energy renovation of the buildings. This meant that the heart of the project's efforts was directed towards convincing the apartment owners of the condominiums to invest for the remaining 25% of these costs.

In 2020, when the project was already started, this incentive deeply changed arriving to the 110% of the deep renovation costs, provided that this deep renovation allowed the buildings to increase their starting energy class by two steps. The incentive was always a mechanism based on a multi-year deduction from income taxes of the costs incurred to refurbish the building, but, very importantly, the law allowed this tax credit to be transferred to the companies that were supposed to carry out the work.

This means that apartment owners no longer had to face any costs to increase the energy performance of their buildings (in reality, in the years following the approval of this law, this has

¹ The scope of the H2020 PDA projects is to build technical, economic and legal expertise needed for project development and leading to the launch of concrete investments.

not proved to be entirely true) and that the financial costs that companies would have to bear to finance the intervention costs were also included.

Despite the revolutionary mechanisms of this measure, named for this fact: 110% Superbonus, the possibility of obtaining state coverage of expenses has not resulted in greater ease of involvement of potential stakeholders. The incentive in fact - thought to make the interventions practically free - did not involve any automatism at the operational level: if on the one hand it has increased the attention on the opportunities of requalification, on the other hand did nothing but confuse and disorient the condominiums.

In this context, the action put in place by the FEASIBLE project has not been more to convince the condominiums to invest, but to help them to orient themselves in a scenario characterized by continuous regulatory change, by bureaucratic complexity, uncertainties related to the procurement of materials up to the suspicion of possible fraud on prices, materials and assignment of credit. All while maintaining the idea of the project to encourage conscious and rational choices - and not dictated by the gratuitousness of the interventions - based on the recognition of the energy and environmental benefits given by efficiency.

To achieve this the activities in support of the condominium ecosystem have traveled, as basically envisaged in the project grant agreement, but with a different approach due to the change of scenery brought by the 110% Superbonus, on a dual track:

- **technical and bureaucratic advice** on procedures to be followed (compliance with criteria, feasibility studies, etc.);
- **social and psychological facilitation** for condominiums.

Two complementary, synergistic and parallel actions involving both the material component (the building to be renovated), and the 'human' aspect (tied to enabling an agreement between apartment owners and residents). Both support services were provided **free of charge** - thanks to the funds available from the FEASIBLE project - by the **Energy & Condominium Desk** opened in the City of Parma and run by ATES Parma, the local Agency for Energy and Sustainability.



The activities carried out and the services offered by these two actions are illustrated in detail in the following two chapters.

2 The Parma "One Stop Shop"

The One Stop Shop (OSS) is the tool provided by European policies to overcome the barriers and obstacles that prevent citizens from making their homes more energy efficient.

2.1 How the Energy & Condominium Desk Works

The Parma One Stop Shop, named “Energy & Condominiums” officially started its activities on September 2020, after the working activities lock down of the spring-summer of the same year due to the COVID pandemic.

From its starting day the Desk doors are open for citizens, condominium managers and professionals who can contact it by phone, email and in-person (via appointment).



The Desk is dedicated to informing and raising awareness on the importance of saving energy and the consequent environmental benefits. Specifically, the Desk provided, for the duration of the project, a range of **free technical services** for condominiums that have joined the FEASIBLE project. Since its kick-off, the support offered by the Desk has been refined, over time, to reflect both the on-going evolution of the regulatory framework related to the *110% Superbonus* (which has taken center stage over other types of incentives), as well as the insights emerging from a series of online meetings with building managers and trade and professional associations in Parma.

The Desk responds to requests through the involvement of different professional profiles capable of:

- Supporting apartment owners and condo managers through a **facilitation process that promotes dialogue** and constructive discussions during condominium assemblies.
- Operating alongside apartment owners, technicians and condo managers by activating a **technical consulting service** aimed at implementing energy renovations in residential buildings through the obtainment of the available incentives.

The offer of technical services in combination with the facilitation activity has made it possible to help overcome, in many cases, the obstacles of understanding and conflict during the condominium assemblies.

It is finally worth noting that the intense networking activity carried out by both ATES on behalf of the Desk and by the facilitation team to well set up profile and contents of their services (see the following paragraphs) was also very useful for making citizens aware of the existence of the Desk itself and the typology of the services it was proposing to offer. To this end, printed information material was also produced which was distributed to the contacted building managers and within the condominiums themselves.

2.2 The services offered by technical advice.

At the beginning of its work, the Desk found itself facing a new situation both for those interested to the opportunities offered by the new law and for those who had to offer the required technical and administrative support. In fact, the law had been approved only two months before the opening of the Desk and it would have taken a long time before all the actors involved fully understood the implications and the problems deriving from its application.

The range of services offered by the Desk was therefore initially designed and then fine-tuned over time, as the needs for clarification and technical-administrative support were refined by the OSS interlocutors themselves. The work scheme envisaged in the project's Grant Agreement, largely based on the validation of services that ESCOs could provide to condominiums, was in fact no longer applicable, as apartment owners were no longer required to invest in improving the energy efficiency of their housing.

At the end of this planning work, the services offered by the OSS have been structured according to the following four lines of action:

- **Access service and retrieval of documents** for the verification of the building and town planning conformity of the common parts, born from the need to facilitate compliance with the regulatory requirements required by the 110% Superbonus and to cope with those difficulties encountered by several technicians and administrators (for example, inability to access municipal archives given the restrictions related to Covid, service times too long compared to the needs of users). The collaboration with the historical archive of the City of Parma allows the Desk to access directly, find and quickly make available all the necessary documentation to evaluate the possibility of access to incentives by the condominiums concerned.
- **Drafting service of preliminary feasibility analysis** to evaluate the type of possible interventions and the calculation of energy savings, in the case of condominiums with centralized systems, through the simplified conventional Energy Performance Certificate. The analysis allows to identify interventions and incentives available, facilitating during the condominium meetings the understanding of technical topics and anticipating issues related to the entire process from the project to the construction site, which if addressed too late, may hinder dialogue between owners.
- **Commissioning service**, through a platform for further verification of the correctness of the documentation to be kept for any ENEA checks. The activity of the Desk provides support for the loading of documents on the platform and the execution of an on-site inspection during the execution of the works. At the end of the job, the administrator will also have the possibility to store all the documentation in a single folder.
- **Collaboration with the Building Office of the City of Parma** to answer the questions posed to the helpdesk by technicians and building managers to overcome the difficulties of integration between the rules of the Municipal Building Regulations and those relating to the Superbonus. The FAQs are available on the website of the Municipality of Parma.
- **Worksite supervision**, on-site inspection carried out in order to: i. update the progress of the works of the condominiums, ii. analyse any problems (e.g. delays in the supply of materials) and unforeseen events that appeared during the of the construction site, which can also determine variations at the executive project level as well as iii. highlight critical issues and inconveniences reported by the condominiums during the execution of the works.



2.3 Operating modes and prospects

The services offered leveraged the **impartiality of the Desk with respect to the professional figures and bodies involved in the redevelopment process**. This ‘neutral’ nature was particularly appreciated by users.

The Desk has sought to guide condos towards conscious, rational and well-informed energy choices, not dictated by the Superbonus wave of the operations but based on the recognition of the environmental benefits deriving from energy upgrading.

Nonetheless, the achievement of the minimum savings thresholds required to access to the Superbonus, and the market trends have hampered an organic and holistic vision of energy, seismic and architectural upgrading. The **complex scenario of multiple incentives** has favored structural approaches geared to traditional materials and technologies (e.g., gas condensing boilers) that have **hindered the adoption of high-impact solutions for decarbonization (e.g., electric heat pumps combined with photovoltaics)** and the reduction of climate-changing emissions.

Looking forward, the extension and evolution of technical and facilitation services may improve the strength of the offer by expanding it to other sectors (e.g., banking, microcredit). Broadening stakeholders’ involvement, also through **training activities**, to reach the network of qualified companies and actors, will make energy upgrading increasingly more 'feasible': simple, affordable, effective and quality-driven.

3 Facilitation services

Non-economic barriers can significantly reduce the possibility of finding the necessary agreement to improve the energy performance within apartment buildings. Facilitation, as a 'third' service of care of the human factor, can play a decisive role.

3.1 The roles of facilitation

The FEASIBLE project adopted an innovative approach in proposing to the citizens of Parma solutions to improve the energy performance of condominiums, based on the idea that efficiency did not only concern buildings, but also and above all those who live there. This is why he introduced what in many cases turned out to be a key factor: facilitation, understood as a real psychosocial mediation service between the different instances present in the apartment buildings, provided - as well as technical services - by the Energia and Condominiums Desk. It is therefore focused on the human factor to try to compose and harmonize the different points of view and help the condominium to make informed and rational choices, in agreement with the building administrators.



Operationally, the FEASIBLE project developed:

- a strategy of **communication and involvement of condominiums** to stimulate interest in the redevelopment of energy and make known the support and assistance services offered by the Desk.
- a **mediation** path to help the condominium to arrive at a choice that was as consensual as possible, but also well motivated.

3.2 The communication

At the very beginning of the project (autumn 2019) it was launched a communication campaign with the objective to involve citizens already climate-sensitive, to strengthen their motivation in energy saving and provide, through the services offered by FEASIBLE, to be later materialized through the starting of the Energy & Condominium desk, a source for qualified information and assistance to face the energy renovation process.

This awareness-raising and communication campaign was implemented through wall posters placed in the streets and places of greatest traffic in the city, radio commercials and articles published in the local press.

The long interruption of activities in the spring summer of 2020 due to COVID pandemic and the subsequent promulgation of the Superbonus law partially nullified the effects of this communication campaign which it was then preferred to continue by building, through direct contacts and online meetings (see also chapter 2), "**alliances**" with stakeholders, empowering them to become direct promoters of the residential energy renovation path amongst other apartment owners.

The communication strategy was to encourage free discussion among condominium members, promoting a bottom-up approach, rather than having the condominium manager 'impose' matters from the top, given that the role is not always perceived as being the gatekeeper of the condominium owners' needs.

3.3 Mediation actions

To achieve the objective of this communication strategy the team of facilitators dove into the condominium's everyday life, conducting **targeted meetings** with stakeholders and condominium managers, analyzing the human, social and cultural blend of residents (the registry-based analysis proved particularly useful: e.g., presence of many elderly dwellers, foreigners or residents with technical expertise on the subject) and **assessing obstacles**.

Overall, the aims of these meetings were to:

- Raise awareness of the potential of interventions and the requirements of renovation companies.
- Provide information to the owners of the apartments regarding possible inconveniences and discomforts that may arise during the execution of the works.
- Show the utility of facilitation.
- Provide informative and motivational support on the benefits of the interventions, sustainability and transparency of the procedure.
- Strengthen the consent of the owners within the condominium.
- Create a community of condominium managers.

The following questions show, as an example, some of the topics debated during the meetings organized within the contacted condominiums:

- Are there pre-existing conflicts or tensions related to cohabitation?
- Is there a fear that construction sites may cause excessive inconvenience and negatively impact the daily life of apartment owners/residents?
- Is there mistrust towards innovative actions?

- Is there a lingering feeling of having to sacrifice something (such as covering the facade or narrowing of the porch due to thermal insulation fitting or, even, empty the cellars or the garages to allow the insulation work on the floor of the condominium)?

To achieve the aims outlined before and, in particular, to reach a common and shared agreement to start with the refurbishment works with the support of the Superbonus, the facilitators team had:

- Participated in all the meetings organized by the condominium to evaluate and vote on the choices of redevelopment.
- Joined the technicians of the Desk helping them to illustrate the different opportunities of requalification.
- Played a role of reassurance with regard to the transparency and correctness of the procedural process, accompanying the owners in the examination of costs/ benefits and through the translation of technical aspects in information accessible to non-experts.
- Acted as a "glue" between the different instances in the field: institutions, administrators, owners and technicians.
- Mediated between different perspectives and needs with the aim of pursuing the public interest and creating mutual benefits for the different actors, accompanying the building until the final decision.

The method of *consensus*-building was thus applied to ensure that all owners had the opportunity to be fully informed about opportunities and problems and to freely express their point of view within a listening space, especially where ideas, needs and conditions different by age, culture, family conditions and economic availability emerged. Where necessary, informal meetings were organized with small groups to explore the more critical aspects.

To give an idea of the mix of social and technical complexity faced by the facilitators team, the majority of condominiums who chose the facilitation service had:

- High mix of nationalities, cultures, owners residing outside Parma, etc.
- Conflicts generated by the disagreement on the renovation works.
- Buildings in which the building architecture and shape was complex and the external wall insulation was difficult to design and build.
- More complex interventions related to the interventions for anti-seismic measures incentivized by the same law that promoted the energy efficiency interventions (the so called "earthquake bonus").
- Previous interventions not yet been approved after a long period of time (e.g. to adapt the fire protection system).

3.4 Make a difference.

Given that the 'new' facilitation element proved quite successful, an early assessment attempt can be made of how/why an attention to 'human' variables was able to make a difference.

Data analysis shows how facilitation proved particularly useful - if not crucial - in contexts **with greater social complexity**, especially in large apartment buildings where the number of apartments/owners is so high that the exchange of views is limited and where conflicts or tensions related to cohabitation are easily triggered.

In these 'sensitive' areas, especially in the case of old buildings, energy renovations have proven to be more complex and often became **sources of potential conflicts** when issues such as amnesties, changes in the use of common areas, displacement of air conditioners, giving up mosquito nets, reduced access to basements or attics due to insulation requirements, etc. were involved.

In some cases, mediation actions were not sufficient to bring the community to approve the renovations mostly due to **uncontrollable variables** such as price changes and the risk of exceeding the upper budget limits to cover the renovation costs or because of unsolvable pre-existing conflicts between apartment owners.

Despite these obstacles, the Desk has succeeded in making the process smoother, to the point of qualifying as a **replicable and exportable service**, applicable to other scenarios in which the "human factor" plays a major role and requires specific handling.

4 FEASIBLE in support of Nursing Homes

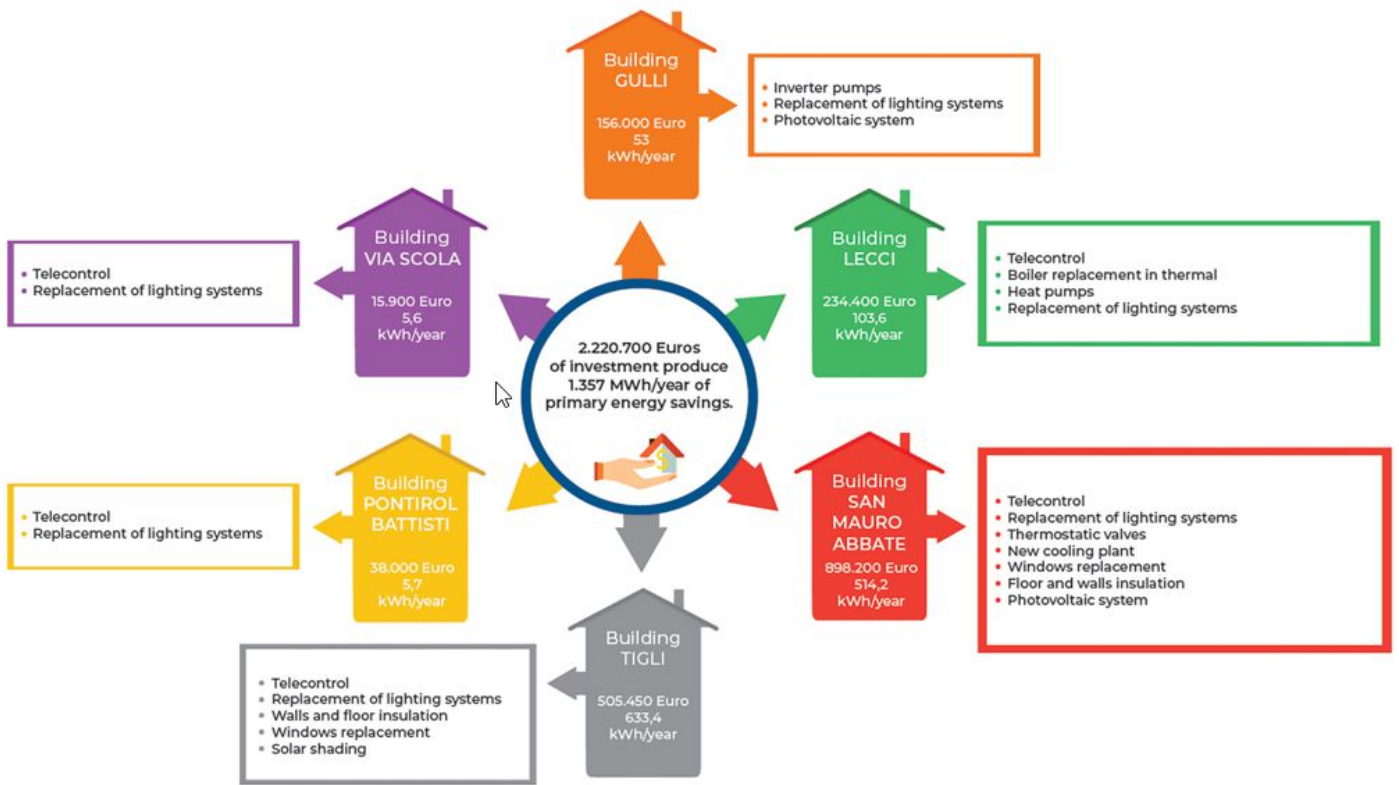
4.1 *The work carried out and the final results.*

As part of the FEASIBLE project, the local public body ASP Parma carried out energy renovations in 6 Nursing Homes for the care and hospitality of elderly people.

The project has contributed to support the technical and administrative activities aimed at the development of the complex procedure related to the setting up and implementation of a tender for the award of a service concession for the building's energy efficiency improvement through a process of Public Private Partnership. The contract to be concluded with the winning company-envisaged the carrying out of the refurbishment works and the long-term management of all the buildings energy services.

Thanks to this perspective of a long-term contract, that was eventually awarded to an ESCO, additional plans concerning further improvements of the buildings energy efficiency have been planned and already partially launched, both within the context of the contract itself and in parallel with it.

The following figure shows in detail the types of interventions envisaged and already partially carried out on the nursing homes that have been renovated and the corresponding savings (in final energy):



All in all the main planned energy saving interventions concerned:

- ✓ Insulation of outer walls and roofs (in 2 buildings).
- ✓ Renovation of the heating and cooling systems.
- ✓ Energy optimization and upgrading of lighting systems.

The total investment was EUR 2,220 million, with total expected savings in final energy of 1.357 MWh/year (+ **23% of savings** compared to initial levels of energy consumption).

4.2 The effect of the behaviour on the building energy consumption: a conference addressed to the ASP managers and operators.

On June 9, 2022, a conference on conscious and energetically sustainable behaviour was held for the managers and operators of the nursing homes for the elderly managed by the Parma ASP. The conference was held at the San Mauro Abate residence located in Colorno near Parma. This residence was chosen as the building refurbishment works envisaged by the ASP intervention plan had just been completed at that time. It was in fact considered useful to point out, looking at the interventions just carried out, how the behaviour of the operators is an essential and not unavoidable component to achieve and maintain the energy savings foreseen in the design phase.

The conference was attended by 15 executives and operators from the various residences of the ASP, including the CEO himself. All the participants expressed considerable interest on the covered topics, recognizing their importance in order to recommend energetically sustainable behaviours to the operators directly involved in the canteen, cleaning, and care services of the guests, as suggested by the topics covered in the conference itself.

The speech started then from the general theme of the energy transition and its importance for environmental sustainability and then focused on the interventions to be carried out to increase the energy efficiency of the buildings and, in particular, on those implemented at the residence of San Mauro Abate. Then, going to the heart of the matter the speech focused the actions to be carried out to save or do not waste energy in the various management services of the residences, from cleaning, to the kitchen service and meal distribution, to the care of the guests and the use of sanitary hot water and leisure and entertainment appliances. Examples, figures and pictures showed concretely what to do and what to implement to achieve a sustainable and energy efficient behaviour.

The conference then closed by discussing, albeit briefly, on the possible organizational and managerial interventions to be undertaken to introduce and develop in a more formal way an effective sensitivity towards the management of energy services within the various residences.

5 The results from the interventions on the condominiums

In its almost two years of operation, the Desk has so far reacted to all requests coming from citizens, professionals and condo managers, delivering:

- ✓ retrieval and verification of construction and urban documentation for **48 buildings** of which: **12** resolved to start the energy renovation works and **36** followed thorough. Of these **36**, at the end, **20** abandoned and **16** are still deciding if to continue (situation at the end of 2022).
- ✓ processing of **18 pre-feasibility studies**,
- ✓ active input in **40 condo meetings**,
- ✓ **37 commissioning requests** coming from as many condos



In summary:

