

D3.6

REPORT ON THE SELECTION, ENGAGEMENT AND SERVICES PROVIDED TO PADOVAFIT PIONEERS



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1. INTRODUCTION

Deliverable 3.6 is a report about the selection, engagement and services provided to PadovaFIT Pioneers.

The first issue to be addressed concerns the selection of the pioneer beneficiaries in Padova and Timisoara, based on considerations regarding both the possibilities provided by the national regulatory and financial contexts and the diversified needs of the population.

The Italian regulatory-financial context of recent years has certainly seen the so-called Superbonus as the almost absolute protagonist of all energy efficiency works in the country. Here, therefore, is where a key strand of the One-Stop-Shop has targeted the segment of the population that has benefited and needed support in managing the entire renovation process.

On the other hand, if we go to look at the need for energy efficiency in buildings of the different segments of the population, there is no doubt that the fragile and low-middle income groups should be prioritized by upgrading interventions, as they are the most vulnerable to extreme events and to the increase of energy prices. With this in mind, the One-Stop-Shop has been advising on what actions to take on behalf of those most in need and how to make the most of current funding opportunities.

The situation in Romania is very similar to that in Italy. Property renovation is in fact very much dependent on the availability of financial resources provided through municipal or national funds. The One Stop Shop in Timisoara therefore supports homeowners in accessing these funds by providing information.

Timisoara opted for a model of developing its OSS in incremental stages: a start-up and study phase, based mainly on the case of Padua, was followed by the launch phase of its OSS, consisting of a virtual and a physical counter. A large number of citizens have already been contacted and informed about this service, also through the distribution of ad hoc information material, such as the step-by-step guide for energy requalification. In the start-up phase, the municipality of Timisoara identified a few pilot buildings (demonstration buildings) on which to test its approach.



2. THE SELECTION OF PIONEERS IN THE MUNICIPALITY OF PADOVA

The italian regulatory-financial context: the Superbonus mechanism

With decree law n. 34/2020 the Italian Government established the so called “Superbonus”, the tax relief which consists of a deduction of 110% of the expenses incurred starting from 1 July 2020 for the implementation of specific interventions aimed at energy efficiency and static consolidation or the reduction of the seismic risk of buildings.

The driving eligible interventions are:

- thermal insulation interventions on the enclosures
- replacement of winter air conditioning systems
- anti-seismic interventions.

In addition to those listed above, the costs for other refurbishment works carried out together with at least one of the driving interventions are included in the “Superbonus” as well. These are:

- other energy efficiency measures (e.g. replacement of windows)
- installation of photovoltaic solar systems and storage systems
- electric vehicle charging infrastructures
- interventions to eliminate architectural barriers.



As an alternative to the direct use of the deduction, it is possible to opt for an advanced contribution in the form of a discount applied by the suppliers of the goods or services (invoice discount) or for the transfer of the credit corresponding to the due deduction.

The transfer can be arranged in favour of:

- the suppliers of the goods and services necessary for carrying out the interventions
- other subjects (natural persons, also self-employed or entrepreneurial, companies and entities)
- credit institutions and financial intermediaries.

In the two tables below it is possible to see the number of investments and buildings involved in the Superbonus, both in Italy and in Veneto (the region where Padova is located). The data are provided by ENEA, the National Agency for New Technologies, Energy and Sustainable Economic Development, and date back to October 31, 2022.

(link here: https://www.energiaenergetica.enea.it/images/detrazioni/Avvisi/Dati_mensili_31_10_2022.pdf)

SUPER ECOBONUS 110% IN ITALY

| | NATIONAL TOTAL | | | |
|--|--------------------|---------------------|----------------|-----------------|
| | | % of work completed | % of buildings | % of investment |
| Number of affidavits | 326.819 | | | |
| Total investments eligible for deduction | 55.025.068.368,87€ | | | |
| Total investment for completed work eligible for deduction | 38.361.618.456,38€ | 67,70% | | |
| | 60527575205,76€ | Burden on the State | | |
| | 42.197.780.302,05€ | | | |
| Of which apartment buildings | | | | |
| No. of condominium asseverations | 40.552 | | 12,40% | |
| Total condominium investment | 24.104.717.678,32€ | | | 43,80% |
| Total condominium work completed | 16.334.958.550,84€ | 67,80% | | |
| Of which single-family buildings | | | | |
| No. of asseverations in single-family building | 191.031 | | 58,50% | |
| Total single-family buildings investment | 21.675.784.708,43€ | | | 39,40% |
| Total single-family buildings work completed | 15.039.628.780,64€ | 69,40% | | |
| Of which functionally independent units | | | | |
| No. of asseverations in functionally I.U | 95.230 | | 29,10% | |
| Total functionally I.U. investment | 9.243.725.573,03€ | | | 16,80% |
| Total functionally I.U. work completed | 6.986.356,77€ | 75,60% | | |
| Average investment | | | | |
| Apartment buildings | 594.415,01 € | | | |
| Single-family buildings | 113.467,37 € | | | |
| Functionally independent units | 97.067,37 € | | | |



SUPER ECOBONUS 110% IN VENETO REGION

| | VENETO | | | |
|--|-------------------|---------------------|----------------|-----------------|
| | | % of work completed | % of buildings | % of investment |
| Number of affidavits | 40.095 | | | |
| Total investments eligible for deduction | 5.379.850.570,16€ | | | |
| Total investment for completed work eligible for deduction | 4.009.636.767,10€ | 74,50% | | |
| | 5.917.835.627,18€ | Burden on the State | | |
| | 4.410.600.443,81€ | | | |
| Of which apartment buildings | | | | |
| No. of condominium asseverations | 2.563 | | 6,40% | |
| Total condominium investment | 1.483.468.595,94€ | | | 27,60% |
| Total condominium work completed | 1.052.270.642,56€ | 70,90% | | |
| Of which single-family buildings | | | | |
| No. of asseverations in single-family building | 20.027 | | 49,90% | |
| Total single-family buildings investment | 2.236.884.478,97€ | | | 41,60% |
| Total single-family buildings work completed | 1.659.497.495,25€ | 74,20% | | |
| Of which functionally independent units | | | | |
| No. of asseverations in functionally I.U | 17.505 | | 43,70% | |
| Total functionally I.U. investment | 1.659.497.495,25€ | | | 30,80% |
| Total functionally I.U. work completed | 1.298.132.977,48€ | 78,20% | | |
| Average investment | | | | |
| Apartment buildings | | | | 578.801,64 € |
| Single-family buildings | | | | 111.693,44 € |
| Functionally independent units | | | | 94.801,34 € |



Vulnerability of the population and energy poverty

While climate change and its consequences affect everyone, it is also true that some areas and some segments of the population are more exposed and vulnerable than others, both globally and within Italian and European borders.

Globally, developing countries are particularly affected by the impacts of climate change, due to greater exposure to extreme weather events and less capacity to cope with the damage they cause. But in addition to the difference in impacts in different regions of the planet, there is another kind of inequality, one in which the weakest segments of the population within each country suffer more than others from the impacts of climate change.

In particular, children, the elderly, women and generally people with low incomes are particularly affected, in terms of health, rights and social status. Among the main critical issues we can mention increased suffering in the face of extreme weather events, such as heat spikes or very cold temperatures, the inability to heat or cool their homes properly, especially in the case of low-income people, and job loss, which predominantly affects women and the least protected people in society.

As well exposed in the “Energy Poverty in Europe and Germany - A Gender-Sensitive Report¹”, it is possible to explain the energy poverty concept as “*the inability to afford energy costs due to a convergence of low household income, high energy prices, and inadequate level of energy efficiency*”. The inability to adequately heat in winter and cool in summer has inevitable negative health consequences.

The same Report, as a matter of fact, explains that “*living in cold temperatures has adverse effects on people’s health. It has been proven to facilitate the onset of cardiovascular and respiratory diseases, and to be linked to minor illnesses such as a cold and the flu. Additionally, it can aggravate health risks of those affected by chronic and severe illnesses*”.

An opposite dimension of energy poverty is the inability to keep the household adequately cool during the summer. The phenomenon is owed to two main circumstances: the poor level of insulation in buildings and the inadequacy of/lack of access to cooling services. With climate change, Europe is warming faster than the global average, with an increase in temperature between 1.7 and 1.9° compared to the pre-industrial period. The increasing number and intensity of heat waves exacerbates the issue of energy poverty in summer, especially in urban areas. Older people are particularly sensitive to heat stress.

It is estimated that Italian households at risk of energy poverty are about 4 million; therefore, they are in this condition of difficulty more than 9 million people. In 2020 in the Veneto region, as described in a CGIA Studies Office elaboration on Istat data and OIPE 2020 Report, the population at risk of energy poverty was between 6 and 8 percent, meaning that between 125,122 and 208,537 households were in this condition, with a total of between 292,748 and 487,913 people.

In light of this data, it has been a priority for the Municipality of Padova to act for the benefit of the less affluent classes of the population, especially to prevent the exacerbation of energy poverty due to high prices in recent years.

¹ <https://www.wecf.org/de/energy-poverty-in-europe-and-germany-a-gender-sensitive-report/>



Anti-poverty policies can be classified into two categories: policies of "protection" and of "promotion" (as defined by Jean Drèze and Amartya Sen in their study: *Hunger and Public Action*, Oxford University Press, 1989) . The former are short-term and aim to preserve a minimum level of energy access and include energy bonuses that aim to reduce spending on electricity and gas of vulnerable households. The second group of policies, on the other hand, has a longer breath and aims at a structural improvement of the condition of fragile individuals, making them emerge from situations of destitution. Among these policies there are those that improve the housing conditions with interventions:

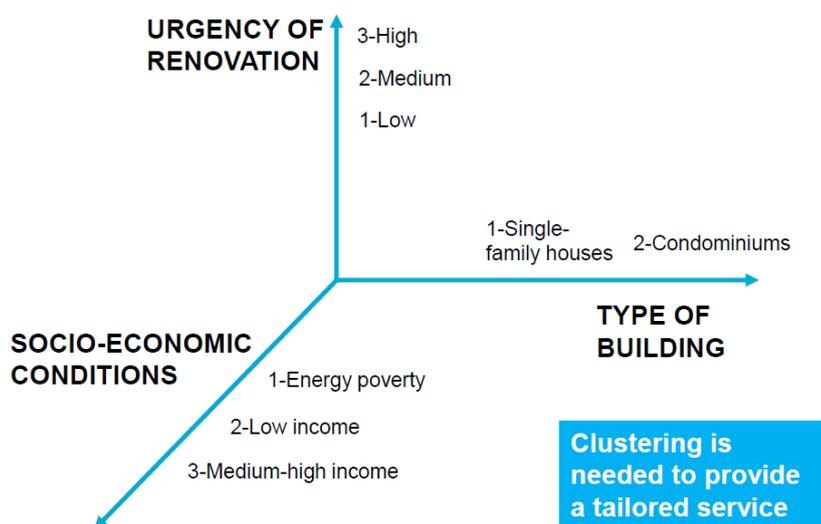
- to increase household awareness in the uses of energy services,
- to improve the energy efficiency.

The activities of the Padova One-Stop-Shop have focused on these two strands, helping people learn about and better manage home energy maintenance works, and taking active action to make the municipal public housing stock more efficient.

The one-stop shop in Padua is the main point of contact for all property owners to tackle the delicate path of energy retrofitting their building.

In the initial contact phase, the One Stop Shop's technicians try to identify the client/citizen's needs and requirements and direct them towards the service they need. This phase is particularly delicate because it involves the clustering of users. A schematic representation of the main clusters identified is given in the graph below. As anticipated, some of the services offered by the One Stop Shop (also in the future) will focus on households in energy poverty.

ONE SOLUTION DOESN'T FIT ALL



The engagement and services to citizens in Padova

THE TECHNICAL CONSULTANCY WITH THE ENERGY DESK

As explained in the previous paragraph, the main purpose of the One-Stop-Shop in Padova was to help citizens who intended to carry out energy efficiency works in their homes, trying to provide them with support along all stages of the complex home renovation process. The Energy desk/OSS has therefore been designed to provide technical and financial consultancy services. These services are provided with several means, but the most effective was the phone call appointment.

The Energy desk/OSS service intends to solve one of the main problems of the process of energy refurbishment of buildings: the lack of knowledge of the existing opportunities both at a technical level (“what interventions can I take to reduce the cost of the energy bill?”), and at the financial level. This information channel made available by the Municipality should increase the interest and awareness of citizens, favoring more interventions on the territory.

Citizens can make an appointment through the iCUP service of the Municipality of Padova, without time constraints. The Service is active with two days a week: Tuesday, from 9.00 to 14.00; Thursday, from 12.00 to 17.00.

The Energy Desk/OSS service was activated on February 02, 2021 and is a totally free service aimed at resident citizens and active operators within the Municipality of Padova. The main objective is to make citizens and businesses aware regarding the issues of energy saving and rational use of energy from a technical-regulatory, fiscal and procedural point of view.

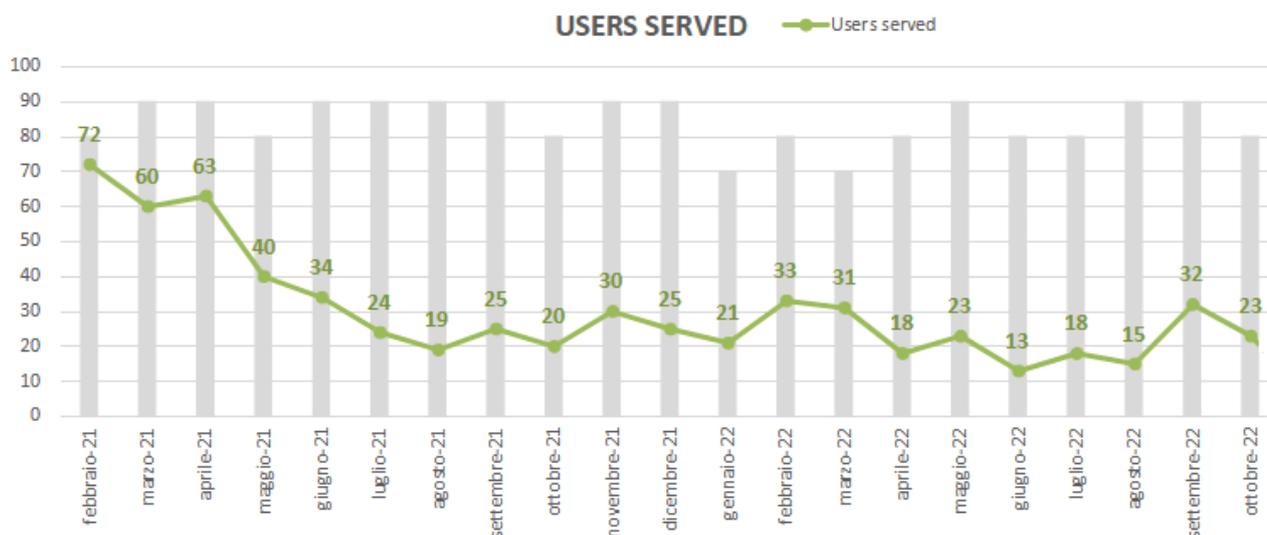
This support is specific to each user, analyzes case by case, giving concrete and personalized answers to those who want to undertake energy upgrading interventions on their homes, invest in the production of energy from renewable sources, choose innovative technological solutions and at the same time reduce their energy consumption in the bill.

In 21 months of activity, 652 appointments were made through the iCUP booking service. At the time of booking, each user, in addition to indicating cell phone number, date and day on which to be contacted by phone, briefly describes the topic of interest and, based on this, the technician to be entrusted with the consultation is selected. In order to cover a wide range of topics and to be able to process technical requests in the best possible way, the staff of the Desk/OSS consists of a group of four experts: an architect, an energy engineer, a surveyor, and a doctor of environmental sciences.



KEY FIGURES (from 2 February 2021 to 8 November 2022)

| | | |
|--|--|--|
| <p>185 counters days</p> | <p>548 distinct users followed by the Energy Desk for energy saving</p> | <p>652 phone calls Total of appointments phone executed</p> |
| <p>≈ 322 hours Total of phone calls made in hours</p> | <p>29 users/month Monthly average of telephone contacts</p> | <p>81 mails Total mails sent to users for further information</p> |



In parallel with the telephone desk activity, an email counseling service was initiated at rismparmio.energetico@comune.padova.it. Through the email service we processed consultations that required a greater degree of detail, for example:

- urban planning framing of buildings aimed at accessing the tax incentive called "Bonus Facades 90%";
- analysis of interventions from an economic point of view through the vision of estimates and metric calculations;
- analysis of specific energy consumption through electricity and methane gas bills;



- analysis of specific cases through research and reading of interpellations and questions to the Internal Revenue Service.

Type of users

Users of the Energy Desk/OSS can be divided into 4 main categories:

- private citizens;
- condominium administrators;
- appointed technicians (architects, appraisers, surveyors and engineers)
- companies operating in the construction and plant engineering sector.

During 2021, most of the users of the Energy Desk/OSS belonged to the first and second category. They were private citizens, in particular apartment owners or condominium managers, interested in energy upgrading their apartment building through the use of the tax incentive called "Superbonus 110%". During 2022, there was progressively a change in the type of users who approached the Energy Desk/OSS. Technicians commissioned by private citizens to initiate building practices and construction companies in charge of carrying out energy upgrades began to see the Energy Desk/OSS as a useful technical-informative tool.

Specifically, the data recorded were as follows:

- February 2021 to February 2022: 65% private users + 35% industry technicians and businesses
- from March 2022 to November 2022: 26% private users + 74% sector technicians and businesses

Main topics covered

The main inquiries received from users of the Energy Desk/OSS concerned the technical, regulatory, fiscal, and procedural areas within the energy field. Specifically, the 3 macro-topics covered were:

- **The implementation of renovation, energy and seismic upgrading of single-family, multi-family and condominium buildings.** The questions received concerned:
 - the authorization process (what is the correct building file to be submitted, updating of the file for access to deeds, need to apply for landscape authorization, etc.),
 - regulatory references (for example, in the last two years 20 legislative/ministerial decrees concerning the access to the "Superbonus 110%" incentive were submitted),
 - the fiscal sphere (access to national and local tax incentives, payment and deduction methods, cumulability of incentives, transfer of credit and invoice discount, etc.),
 - the technical sphere (best technology on the market, technological innovation, plant specificities, most appropriate insulation material, etc.),
 - the economic sphere (economic feasibility of the intervention, possible cost of the intervention, payback period of the intervention, market price trends, etc.).

All the cases followed were fiscally incentivized through the following benefits:



- "Superbonus 110%" facilitation: 450 appointments (70%),
 - "Home renovation Bonus 50%, Ecobonus 65% and Furniture Bonus" facilitation: 65 appointments (10%),
 - "Bonus Facades 90%" facilitation: 28 appointments (4%),
 - "Seismic bonus" facilitation: 21 appointments (3%).
- **News and information related to the world of energy and environmental sustainability**, e.g., some consultations dealt with sustainable mobility systems, air pollution reduction systems, limitation to the use of wood biomass heating systems, energy communities, etc.: 49 appointments (8%)
 - **The analysis of energy rates and bills** with price comparison through the ARERA portal <https://www.ilportaleofferte.it/portaleOfferte/> : 32 appointments (5%).

With regard to renovation, energy and seismic upgrading of single-family, multi-family and condominium buildings, the technical issues mainly concerned:

- the installation of photovoltaic systems with storage, including in condominiums and preparatory to the installation of charging systems for electric vehicles,
- thermal insulation of the envelope, with particular attention to the choice of material meeting the minimum environmental criteria (MEC),
- the renovation of the winter and summer air conditioning system through the installation of centralized heat pumps to replace more traditional systems such as natural gas boilers.

These were joined by requests for technical information regarding less common systems such as thermal insulation with nanotechnology, home automation systems, domestic micro wind and domestic geothermal systems.

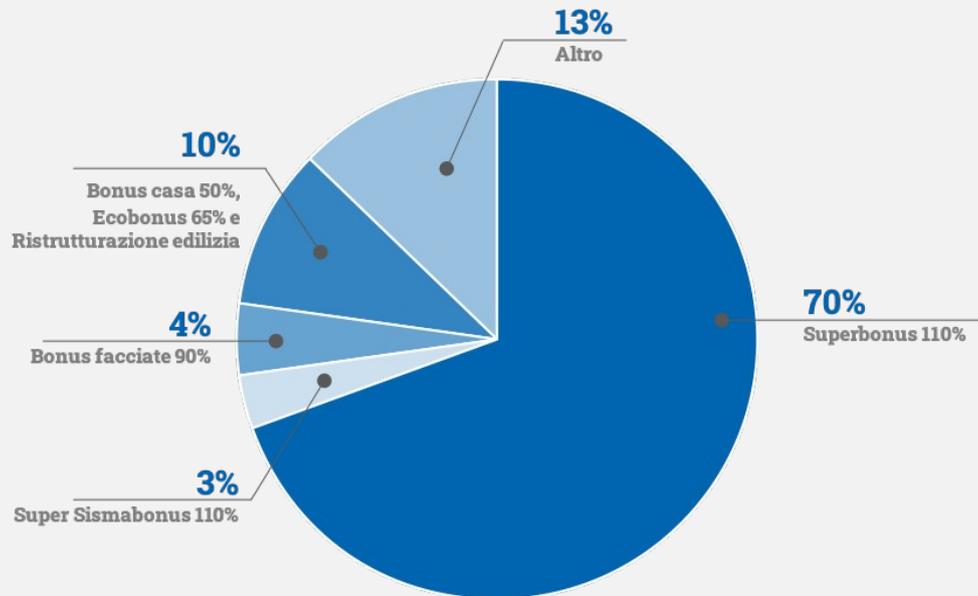
Finally, during the last few months of the Energy Desk/OSS, users have expressed a great deal of curiosity about two new topics:

- renewable energy communities (RECs) and collective self-consumption in which citizens, businesses, local public administrations, and small/medium enterprises decide to join forces with the aim of producing, exchanging, and consuming energy from renewable sources on a local scale.

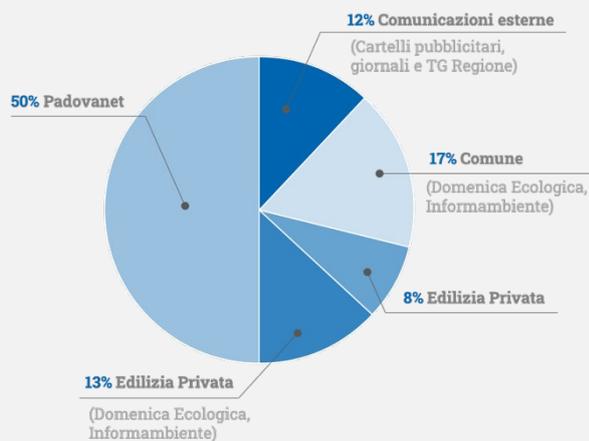
A recurring and cross-cutting request, of high interest to the users of the Energy Desk/OSS, concerned the possibility of having available a list of names, drawn up directly by the Public Administration and relating to construction companies, companies supplying building materials and technology, professionals such as surveyors, engineers and architects, and institutions for the transfer of credit (e.g., banks). This request stems from the difficulty of independently finding trusted and certified local companies and suppliers and seeing the PA as a reliable entity, close to the citizen and able to guarantee quality.



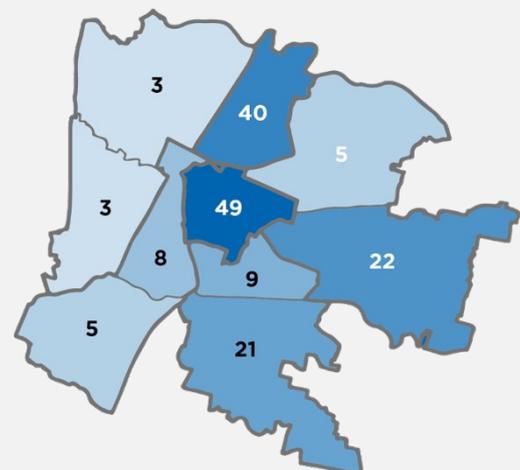
MAIN TOPICS ADDRESSED (February 2021, up to 8 November 2022)



DISSEMINATION CHANNELS
(from February 2021 to 8 November 2022)



CITIZENS DIVIDED BY NEIGHBORHOOD OF PADOVA
(from February 2021 to 8 November 2022)



Consultants for the entire process: from design to construction site

Out of the total number of users who approached the OSS/Energy Desk service, amounting to 548 people, 84% (459 people) did so once, requesting a single consultation in order to answer a very specific doubt. The remaining 16% of users approached the Help Desk several times (from 2 to 8 separate consultations) in order to further investigate the topic and address different stages of the energy efficiency process or, in the case of technicians, to analyze different cases together.

The OSS/Energy Desk helped users at different stages recorded as follows:

| PHASE | Nr. consulting | % out of the total |
|--|----------------|--------------------|
| 1 Information and pre-feasibility analysis of the intervention | 443 | 68% |
| 2 Submission of the authorization file to the Municipality | 163 | 25% |
| 3 Construction site of the intervention | 33 | 5% |
| 4 Financial reporting of the intervention | 13 | 2% |
| TOTAL | 652 | 100% |

In particular, we report the example of two users of the OSS:

- USER 1:** he approached the Energy Desk from April 2021 to January 2022 for four telephone consultations and two via e-mail. The energy upgrading intervention, in which the user was involved, involves a condominium building consisting of 6 housing units from 5 different owners. The user approached the OSS/Desk already in possession of a feasibility analysis of the intervention, which certified the improvement of the building's energy class, from class G to class C thanks to the following works: thermal insulation on three facades, thermal insulation of the roof, installation of a photovoltaic system on the roof with storage batteries, installation of a heat pump for the production of domestic hot water, and the replacement of windows and doors only inside some building units. To these, were added some ancillary interventions including a new elevator and the installation of a charging station for electric vehicles. The intervention, as a whole, amounts to 450,000 euros. In particular, the Desk supported the user during the initial phase with regard to the analysis of some of the economic offers received by comparing them with the reference price list and average market prices; explaining the credit transfer process; and checking the maximum expenditure ceilings related to individual interventions.
- USER 2:** semi-detached building located in the Arcella neighborhood of Padova. The owners interested in upgrading the building, including from an energy point of view, decided not to make use of the so-called "110% Supebonus" tax incentive but to support individual and punctual ordinary and extraordinary maintenance work such as: replacing the boiler with a high-efficiency condensing boiler, cleaning and painting the exterior facade, ornamental work and friezes on balconies, and re-roofing. Therefore, they contacted the OSS/Desk for four different consultations. During the pre-feasibility analysis phase (March 2021), the user requested information from the OSS/Desk regarding the possibility of cumulating different building tax bonuses Ecobonus 65%, Bonus Facciate 90% and Bonus Casa 50% and provided advice regarding the choice of boiler model to be installed; in order to take advantage of Bonus Facades 90%, the OSS/Desk performed the verification of belonging to homogeneous territory zone B (October 2021). In December 2021, the renovation works started and the OSS/Energy Desk supported the citizen to correctly make the payment of the works and the different progress payments. Finally, in February 2022, the user

again approached the service for clear information regarding the registration and declaration to be made on the ENEA portal of the Revenue Agency.

THE RENOVATION OF SOCIAL HOUSING BELONGING TO THE MUNICIPALITY OF PADOVA

As described in the report “*Unequal exposure and unequal impacts: social vulnerability to air pollution, noise and extreme temperatures in Europe*”, published by the European Environmental Agency, there is a need for action against climate change in Europe as well, implementing policies and initiatives that support the well-being and health of all citizens, and with a focus on the most vulnerable.

Most of the measures implemented to improve livability in urban settings benefit the entire population, while only a few have a particular focus on the most vulnerable citizens. Some measures, however, partly preventive and partly in response to an existing problem, are particularly beneficial, especially for the most vulnerable. These include mapping the most fragile people and devising plans for responding to heat or cold waves, active mobility initiatives, so-called nature-based solutions, and the upgrading of residential buildings.

For this very reason the Municipality of Padova had and has every interest in exploiting the Superbonus mechanism to refurbish its real estate assets from a structural and energy point of view, with the aim of improving the quality of life of the tenants of the apartments involved, and to reduce the environmental impact of the energy consumption of public housing properties. From a legal point of view the Italian Revenue Agency confirmed with circular 8 August 2020 n. 24/E that local public bodies that intend to carry out public housing projects can be beneficiaries of the “Superbonus”, so the Municipality had the chance to concretely decide to act for a massive refurbishment of public houses.

In order to be able to carry out these interventions, it was first of all necessary to sign an agreement with A.T.E.R. Padova, the Territorial Residential Construction Company of the Province of Padova.

As indicated in article 7 of the regional law n. 37/2017, as a matter of fact, the Territorial Residential Construction Companies provide (among others) for:

- implementing interventions of subsidized and affiliated residential construction through the purchase, construction and recovery of homes and related properties also through integrated programs and urban regeneration programs, using own financial resources or coming for the same purpose from other public entities;
- design complex programs of urban recovery and regeneration;
- design and carry out building works as well as infrastructural and service urbanization works of the residence, on behalf of public bodies;
- carry out activities for new buildings and for the recovery of existing real estate assets related to public housing programs;
- manage its own assets and those of other public entities however created, acquired or conferred at any title, as well as to carry out any other public residential building activity falling within the institutional scope and compliant with state and regional legislation;
- enter into agreements with local authorities and other sector operators for planning and the execution of the actions referred to the previous points.



Therefore, given the primary role of Territorial Residential Construction Companies in public construction, the Municipality of Padova has entrusted A.T.E.R. Padova with the extraordinary maintenance activities connected with the implementation of interventions, making use of the Superbonus reduced taxation on municipally owned properties (social housing). An agreement has been signed between the Municipality and ATER on December 21, 2021.

In particular, the buildings affected by the interventions of refurbishment are 580.

The Municipality and A.T.E.R. have agreed on the use of the instrument of public private partnership with the collection of private proposals through the mechanism of the project financing. A.T.E.R. has issued a notice for the presentation, by economic operators, of proposals on the properties involved.

The call for tender was won by ASE ApAceAmga Servizi Energetici S.p.A, a multiutility specialized in the provision of services to citizens, in particular in the energy field.

Thanks to the agreement between the Municipality and A.T.E.R. and to the partnership with ASE a well of:

- **580 apartments**, placed in different neighborhoods of the city, will be energetically renovated (this apartments have been divided into two homogeneous groups: group A with 36 buildings comprising 379 residential units built between 1930 and 1997; group B with 35 buildings comprising 201 residential units built between 1935 and 1990)
- **by 31.12.2023**, with an
- expected energy saving of **2,944 MWh/year** and
- **50,982 square meters** of renovated dispensing area
- about **27.5 million Euros** of investments.

The verification of the results achieved will be performed by means of thermo-flowmetric measurement to all the walls of buildings subject to thermal insulation installation.

This basically means improving the life quality of almost six hundreds families at risk of energy poverty, reducing the impact of bills related to electricity and heating and with a considerable cut in climate-changing emissions associated with private residence.

The following types of interventions are going to be performed:

- thermal insulation of facades and other opaque surfaces;
- replacement of windows and doors, including frames with the exclusion of buildings subject to recent interventions;
- other intervention, aimed at the energy renovation of the buildings (such as PV panels and charging systems) or the seismic improvement;
- maintenance interventions, to be financed with operating savings and/or covered by the Municipality itself; in any case not exceeding the 3% of the overall amount of the works.

In this case, the role of the One Stop Shop was not to provide advice directly to citizens, but rather to help building relationships related to energy efficiency among important stakeholders in the area.

As an example, ATER and ASE have been involved several times during the project lifespan to discuss about the main problems of the renovation sector and to identify solutions to close the renovation process.

This collaboration should also not be seen as an isolated case, but as the beginning of a new *modus operandi* among public and private actors in Padova, all of whom have a key role in the areas of residence, energy and citizen services. Currently, the Municipality of Padova and APS Holding, for example, are considering



strengthening collaboration in the One Stop Shop, increasing the services offered to citizens and continuing in a shared way the work begun with PadovaFIT Expandend.

The start of this collaboration is planned in 2023, precisely with an intention of continuity and increase of the activities initiated during the European project.



3. THE SELECTION OF PIONEERS IN THE MUNICIPALITY OF TIMISOARA

The Municipality of Timisoara decided to opt for testing the OSS approach in two different phases. In the first phase, five demonstration buildings have been identified and refurbished thanks to the resources made available by the thermal rehabilitation program. Since the objective of the PadovaFIT Expanded project was to launch the OSS of Timisoara at the really end, it was necessary to deeply understand the real needs of the building owners. As a result of this first phase, which is described in the following paragraph, the OSS has been launched as an Information HUB (virtual and physical).

The procedure for the renovation of the demonstration buildings

The whole procedure was developed by the Timisoara Municipality staff. During the implementation of the thermal rehabilitation program, there was a fruitfully collaboration with the:

- Legal Service department,
- Public Procurement Office,
- Economic Service department,
- Urban Planning Department,



- Fiscal Department,
- Citizen Information and Counseling Service - Community Relations Department (which is now hosting the One Stop Shop of Timisoara);
- Participatory Governance and Neighborhood Management Service – Community Relations Department;
- Owners' Associations Department - General Secretariat Directorate;
- Blocks Energy Efficiency Office - Technical Directorate;
- Public Buildings Rehabilitation Service, Monuments Department - Technical Directorate;
- Office for the Rehabilitation of Historic Districts and Monuments - General Directorate of Urbanism and Territorial Planning;
- Department of Urbanism Workshop - General Directorate of Urbanism and Territorial Planning;
- Construction Discipline Office - Authorization and Control Directorate;
- Quality of Life Directorate - Environmental Protection Service;
- Project Incubator Directorate;
- other structures involved, and other members of the specialized apparatus within the municipality.

For the implementation of the procedure, the Municipality has collaborated with the following companies:

- designers, certified project verifiers, site managers,
- energy auditors at the end of the works.

The way the Municipality of Timisoara provided services for the 5 demonstration buildings was according to the Emergency Ordinance no. 18 of March 4, 2009 updated, regarding the increase in the energy performance of housing blocks. The five buildings were included in a seven-stages process, necessary for the implementation of thermal rehabilitation program:

1. Identification and inventory of housing blocks built according to projects that were already developed before the 31 December 2005;
2. Identified and inventoried blocks are grouped by height regimes up to P+4 floors and above P+4 floors and according to the design periods by block types with similar constructive solutions of the envelope;
 - residential blocks technically expertized and classified as seismic risk class I by the expert report are included in the local program only after the execution of consolidation works in order to increase their level of safety in the event of seismic actions;
 - notification of the Owners' Associations by the local coordinator regarding enrollment in the program;
 - for blocks consisting of several stairs, separated or not by joints, the technical solution adopted must be uniform throughout the construction, in terms of the appearance and color of the block envelope, regardless of the number of Owners' Associations;
3. Decision of the General Assembly of owners to enroll in the local program and sign the mandate contract
 - owners' agreement in different proportions: 2/3 or 100% or (50% +1) depending on the rehabilitation categories
4. Design of works;
 - in order to adopt unitary technical solutions and shorten the design periods of the intervention works, the design contracting is organised and carried out in groups of blocks: up to P+4E or over P+4E;



- the technical-economic documentation is done on each block ensuring the necessary conditions to reproduce the architectural aspect of the envelope, without altering the decorative elements;
 - the developed technical-economic documentation is signed in accordance with the law by the architects with the right to sign, in compliance with Law 50/1991;
5. Execution of works;
 - the executors of the works have the obligation to comply with the provisions of the building permit, the technical project and the execution details, as well as to ensure the performance levels provided by the legislation on construction quality, the aesthetic, architectural and environmental quality of the buildings, in order to protect the safety and health of people, the safety of the use of public space and the quality of the natural and built environment;
 - the intervention works are carried out with construction products placed on the market according to the legal provisions in force and whose performances declared by the manufacturer in the accompanying documents are in accordance with the performances provided in the technical-economic documentation;
 6. The reception at the end of the work and issuance of the energy performance certificate highlighting the annual specific energy consumption calculated for heating;
 - establishing the amounts for the rehabilitation of the glazed part that must be paid by each owner who benefited from the replacement of the carpentry and the transmission of the amounts due that will be recovered through the rehabilitation fee by the Fiscal Directorate;
 7. The final reception after the expiration of the warranty period of good execution;
 - the work is guaranteed for 5 years;
 - during this period, no work is done to modify facades, terraces, basements, carpentry, etc.
 - any intervention was done by the work executor following the notification by the Owners' Association of the PMT Implementation Team.

The following works were carried out to increase energy efficiency:

- thermal rehabilitation works:
 - thermal insulation of the opaque part of the facades;
 - replacement of the existing external carpentry, including the one related to the block access, with heat-insulating carpentry; the carpentry must be equipped with devices/slits/grills for ventilation and avoiding condensation;
 - closing balconies and/or loggias with heat-insulating carpentry, including thermal insulation of parapets or replacing them with PVC panels;
 - thermo-hydraulic insulation of the floor above the last level;
 - thermal insulation of the floor above the basement;
- Related works: repairs, perimeter pavement, finishes, etc.
- Repair work: carbonated concrete, with segregation or other degradation, cracks caused by seismic activities or other causes, unsealed joints, etc.

Timișoara started working on 5 representative buildings in different neighbourhoods and conditions. Analysing the data coming from the municipality it is possible to detail each of the interventions.

The 5 representative buildings that the pilot municipality used as a sample were totally refurbished. 261 dwellings were renovated in total, using Lei 3.794.893,40 which equals €769.755,25 (mostly funded with national programs funds), with a primary energy savings of 1.214.419 kWh/year = 1,21GWh/year.

One of the actually missing points in the scenario was the absence of renewable energy production.



Find reported below the detailed data for each refurbished building:

1. Invățătorului St., No. 3, bl. B53, sc. A+B , S+P+4

Level building built in 1979 with util area (heated) of 1.570,55 m²: in this first case the **dwelling refurbished were 22**, spending Lei 376.013,46

From a C level certificate in 2016, using 220,6 kWh/m² year became a B level certificate in 2020 using 142,5 kWh/m² year, means a **77,17 kWh/m² year energy saving**. In this building, it results a primary energy savings of 122.660 kWh/year

2. Mareșal Alexandru Averescu St., No. 51, bl. E14/2, S+P+4

Level building built in 1980 with util area (heated) of 970,03 m²: the **dwelling refurbished were 20** with an expenditure of Lei 321.446,12

From a C level certificate in 2016 = 225,26 kWh/m² year became a B level certificate in 2021 = 148,03 kWh/m² year, means a **78,1 kWh/m² year energy saving**. In this building, it results a primary energy savings of 74.857 kWh/year

3. Aleea F. C. Ripensia St., No 4, 6, 8, S+P+10

Level building built in 1980 with util area (heated) of 8.293,92 m²: the **dwelling refurbished were 132**, using Lei 1.421.267,37.

From a C level certificate in 2016 = 207,8 kWh/m² year the building became a B level certificate in 2020 = 135,79 kWh/m² year, means a **72,01 kWh/m² year energy saving**. In this building, it results a primary energy savings of 597.245 kWh/year

4. Bd Corneliu Coposu, No. 18, S+P+8

Level building built in 1980 with util area (heated) of 3.822,90 m²: the **dwelling refurbished were 68**, using Lei 1.356.730,04

From a C level certificate in 2016 = 202,2 kWh/m² year the building became a B level certificate in 2021 = 131,67 kWh/m² year, means a **70,53 kWh/m² year energy saving**. In this building, it results a primary energy savings of 269.531 kWh/year

5. Intrarea Iulia Simu St., No. 12, S+P+4

Level building built in 1980 with util area (heated) of 1.026,08 m²: the **dwelling refurbished were 19**, 319.436,41 Lei,

From a D level certificate in 2017 = 295,1 kWh/m² year the building became a B level certificate in 2021 = 148,79 kWh/m² year, means a **146,31 kWh/m² year energy saving**. In this building, it results a primary energy savings of 150.126 kWh/year

The virtual and physical information hub

The one-stop-shop has been launched by the Municipality of Timisoara at the end of the project, as initially expected. It has been developed as part of the local public administration apparatus, as a component of the Citizens Information and Counselling Service - Community Relations Department.

The OSS is therefore an “in-house branch of the Municipality with own resources and competencies in public services”, fully public.

Two types of costumers' relationships are taken into consideration:

- Self-service: costumers can acquire all information by themselves visiting the OSS website.
- If required, customers can ask for personal assistance provided by OSS technicians which will support homeowners in getting information about the steps in this process and how to start a home renovation project.

In November 2022, the Municipality started a massive communication campaign to make citizens aware of the new web portal (<https://oss.primariatm.ro/>) and the services provided. Promotional material has been produced and distributed to 780 beneficiaries, with a door-to-door and email campaign. Moreover, the physical desk has been activated to provide direct answers to the homeowners.



The physical information desk of the OSS of Timisoara



The OSS website (virtual OSS) that reached the number of about 1,000 visits in just one month

