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Consolidated Situation Analysis: A starting point for development of a model for providing integrated services for renovation of multifamily residential buildings

REPORT



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List of Acronyms

AA	Apartment Association
AO	Association of Owners
D	SHEERenov Deliverable/Report
EE	Energy efficiency
EEA	Energy efficiency audit
ERBH	Energy Renovation of Bulgarian Homes Project
ERDF	European Regional Development Fund
ESF	European Social Fund
ESM	Energy-saving measures
EU	European Union
HA	Housing Association
MAS	Municipal Administration of Sofia
MFRB	Multifamily residential buildings
MRDPW	Ministry of Regional Development and Public Works
NPEEMFRB	National Programme for the Energy Efficiency of MFRBs
PBoQ	Priced Bill of Quantities
RES	Renewable energy sources
SOFM	Sofia Municipality
SME	Small and medium-sized enterprises
TP	Technical Passport
WP	Work Package (part of SHEERenov Work Programme)



1. Introduction

This Report is the third and final deliverable from Work Package 2 (WP2) of the SHEERenov project. The report consolidates the analysis of the information collected and the results from the surveys carried out (WP2, D.2.1 and respectively D2.2) as well as the Database on Good European Practices (WP3/D3.1).

In the context of this analysis, the system for the provision of an integrated multifamily residential building renovation service is outlined through a systemic description of the processes involved. The concrete solutions through which SHEERenov will address the identified barriers (administrative, financial and technical) are presented and their rationale is explained.

The topics are presented in the order listed below:

- **Information services and awareness raising of homeowners;**
- **Develop alliances between EE consultants and professional building managers which will provide a ‘specialised intermediary’ integrated service;**
- **Preparatory activities – testing the model in the field (under the project);**
- **Financing;**
- **Execution of the renovation works. Quality assurance system.**

For consistency with the previous products (D2.1 and D2.2 of WP2) of the Project, below are defined the concepts used in this Consolidated Situation Analysis:

➤ ONE STOP SHOP

The one-stop-shop concept is a model (virtual or physical) through which homeowners can get the information and services they need throughout the process of implementing ambitious energy renovation projects. There are two, conditionally speaking, established business models of one-stop-shop service in European practice - **All-inclusive one-stop-shop**, performed by entirely private entities (e.g. through ESCO) or **Coordination one-stop-shop**,



i.e. in coordination between the public and private sectors, with each entity carrying out its inherent/ proper activities.

SHEERenov adopts the **Coordination one-stop** model. Each process involves certain actors and stakeholders - representatives of the private or public sector. The intensity of intervention of each actor and the interaction between them are determined by the supply and demand of the energy renovation market.

The organigram below process describes the process through which the integrated service is delivered. The organigram provides a consolidated view of the business chain in the and demonstrates that the endeavour is to provide appropriate conditions for the creation and acceleration of demand and supply in the MFRB energy renovation market and to ensure that the model is economically viable.

In order to fulfil the described objectives, the one-stop shop assistance covers a set of services along the entire project implementation chain:

1) Information services and awareness raising of homeowners/ citizens, as a necessary condition for increasing the energy efficiency "demand".

The information services and awareness raising include:

- Raising awareness of the energy renovation benefits,
- Explaining the possibilities for financing such initiatives;
- Information for the participants provided by the private businesses on the market of energy renovation - designers, providers of energy efficient services, professional management, quality assurance, etc.

The information activities under the SHEERenov project are publicly provided services and will be carried out by the local authorities, in this case by the Sofia Municipality and the district administrations through responsible municipal officials.

To increase their capacity, with project funding will be implemented activities for standardization and optimization of the holistic renovation process: Procedural Manual; Engagement and Technical Toolkits; Trainings for the designated employees to work with the toolkits.



2) Structuring and providing financial support

The necessary public financial support is to ensure the efficient use of public resources, while at the same time providing the necessary prerequisites for the participation of all owners, including those with low incomes, from the groups of vulnerable owners.

Project SHEERenov will develop and propose a concept of a 3-component financing model based on a combination of:

- **A grant** - to cover part of the costs and make it possible to repay the loan at the expense of the realized energy savings within a reasonable time,

- Financing on behalf of the owners **backed by facilitated access to credit resources** secured by guarantees provided free of charge to final recipients

- **Additional targeted assistance** provided for socially vulnerable owners.

For this purpose: a financial product will be developed by a commercial bank/s with the help of a guarantee from EERSF; proposals for legislative changes will be made to promote credit products for Homeowners Associations and proposals for legislative changes in order to provide 100% targeted support for socially vulnerable owners.

3) Technical assistance, in the form of consulting services provided by the private sector – it is related to the preparation of individualized technical proposals, planning (including financial plan, with regard to owners' financial capabilities as part of the structuring of financial support under item 2), coordination of the renovation process on behalf of the owners, in order to obtain results during the implementation of and monitoring thereafter, including the quality of work and energy savings, monitoring of savings.

The planned activities under the SHEERenov project are fully in line with the policies and measures set in the Long-Term National Strategy for renovation of the national building stock of residential and non-residential buildings by 2050. In structuring a nationally spread one-stop-shop model, MRDPW will use the developed SHEERenov project's products and tools, Sofia Municipality's experience, the lessons and recommendations from the implementation of the project.



➤ **MIDDLE-MAN (SPECIALISED INTERMEDIARY)**

Project SHEERenov introduces the figure of "the middle-man" precisely in the context of one-stop-shop model. This is a figure combining complex expertise that is needed to guide owners through the entire process, covering the entire "customer journey".

Generally, the middle-man is represented by the business alliance between a Professional Manager and a Company providing EE services and registered as per Art. 44 of Energy Efficiency Law. The chosen approach is part of the project proposal, but it is also flexible enough to allow the replacement/ inclusion of additional/ other competencies within the current legislation. In addition, the figure of the "middle-man" upgrades the experience from the implementation of "Energy Renovation of the Bulgarian Homes" Project and other good applicable European practices.

The following activities will be implemented under the project:

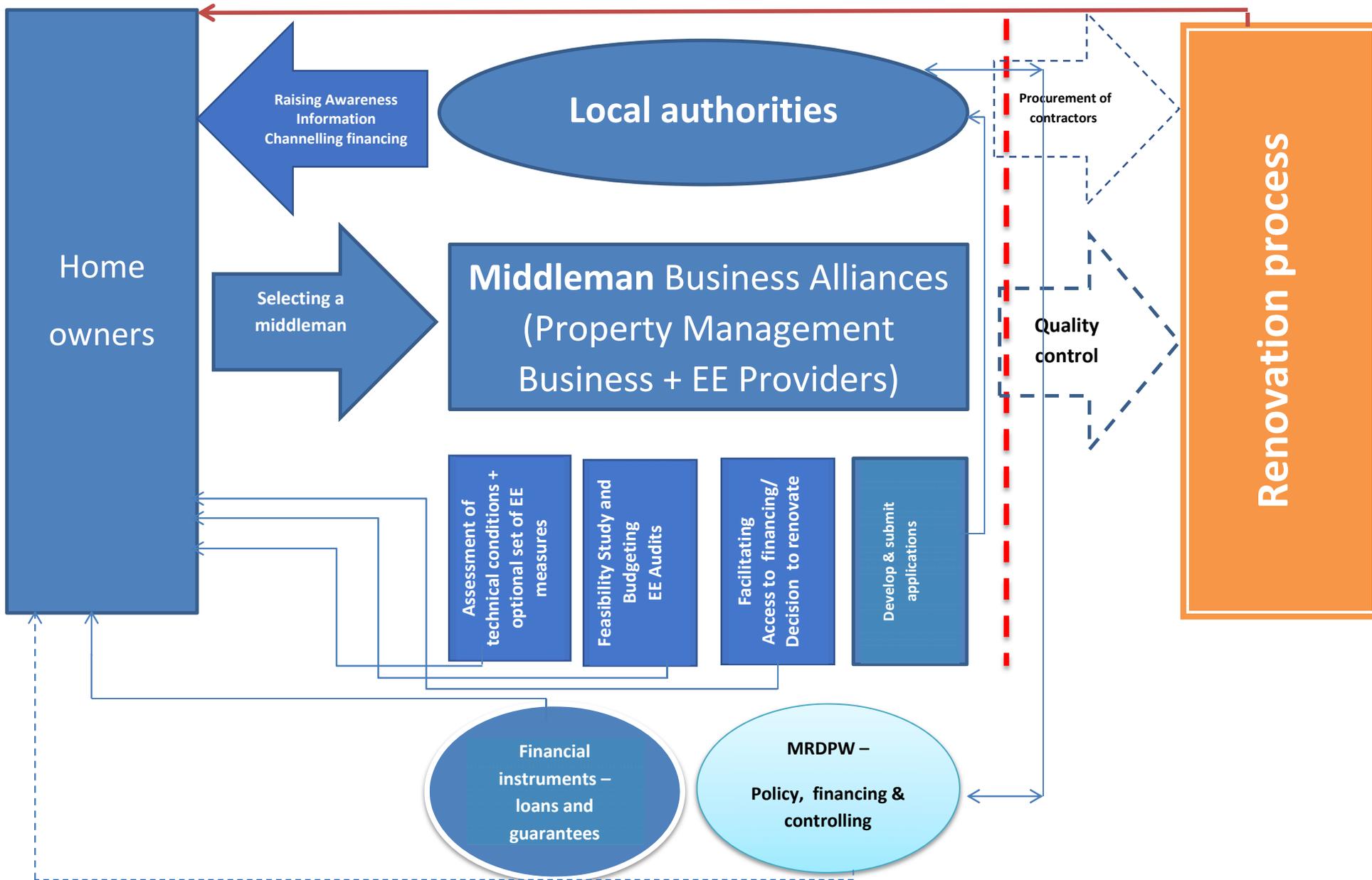
- Development of Guidelines on how to develop successful business alliance for MFB holistic renovation;
- Conducting a tailored workshop and match-making meetings to facilitate business alliance between the two businesses;
- Conducting modular based trainings programs for implementation of the function of the "middle-man";
- Support to MRDPW for regulation of professional management of renovation of multi-family buildings, through recommendations with regard to introduction of minimum requirements to the scope and level of quality of services offered to condominiums, required staff and competences, other appropriate rules and requirements.

➤ **RESOURCE AND INSTITUTIONAL SUSTAINABILITY**

Each of the project impacts/ interventions described below is followed by the planned measures to ensure resource (time, financial, human resources) and institutional sustainability – to preserve of the results and achievements after the completion of the project activities.



Integrated service for home renovation of residential buildings



2. Information services and awareness raising of homeowners

2.1 Objective

The objective is to create enabling conditions for information environment. Combined with other project interventions/ incentive instruments (OSS; availability of a "middle-man" to facilitate the whole renovation process; access to funding/ three-component financial mechanism - grants, loans, assistance for the insolvent, participation of the owners in the organization and control of the renovation activities), it should provoke demand for the integrated building renovation service for EE.

The specific objectives are as follows:

- continually raise homeowners' awareness of the need for energy-efficient renovation of residential buildings and encourage them to proactively look for EE renovation solutions;
- explain the funding opportunities available for EE initiatives; and
- provide information about the private business actors in the EE renovation market.

2.2 Needs and attitudes of homeowners – weaknesses (barriers) in the process

The survey carried out by the SHEERenov project shows that as a result of programs, initiatives and information campaigns implemented in recent years, owners are informed and demonstrate understanding of the benefits of EE measures (incl toward reducing household consumption for heating / cooling, hot water and electricity – according to 93.1% of the respondents).

However, as also noted in the Report on the analysis of the information collected and the results from the studies carried out, while the target population demonstrates a good level of general awareness, the huge majority of condominium buildings have not taken any steps for a full-scale renovation and EE improvement. Many condominiums have not even discussed the possibility for EE renovation due to a variety of reasons, including financial issues, organisational difficulties or lack of agreement among the individual owners.



Therefore, the information about the benefits of EE renovation cannot find its way to all potential users of the service. But even if the information reaches some potential users, additional obstacles can emerge and paralyse the initiatives undertaken by owners. Clearly there is a need for providing structured and continual information on all aspects of the renovation process – on the general benefits of EE renovation as well as on the specificities and on the organisational, administrative, financial and technical steps to be taken in each phase of the process.

Rather than through campaigns, information should be provided **on a continuous basis and by a well-established entity/unit** which has earned the trust of citizens/service users.

The home owners asked in our survey were very clear about what they perceive as a **trusted source of information** – Sofia Municipality and the administrations of Sofia’s districts through their respective websites, printed materials/newsletters and dedicated events at which the contact persons can be met live. Face-to-face meetings with the responsible municipal officials are important for a significant number of respondents.

On the other side, in response to our survey staff members of the administrations of Sofia Municipality and of Sofia’s districts identified the tools they would prefer to use in carrying out their duties related to the EE renovation of residential buildings:

- **toolkit with detailed (step-by-step, chronologically) information as regards the technical implementation**, including energy audits, renovation packages, role of stakeholders and organisation of the process;
- **manual for assisting citizens**, including access to funding/loans, support for target groups, etc.;

as well as clear and comprehensively described rules for interaction between the administrations at central and district level.

2.3 Good examples and relevant practices from Europe

As regards the overarching framework of good European practices, an important element are the recommendations of the European Commission in its recent guidance on the Recovery and Resilience Facility. In respect of EE renovation and in order to encourage



citizens' involvement in a wide-scale EE process, the recommendation is to set up one-stop shops (OSS). OSSs are expected to undertake **the important task of increasing the trust among the various stakeholders by providing high-quality information**, mediation services and support for the renovation at local level. These OSSs provide consultancy across a range of renovation aspects **as they bring together building owners, households and businesses** (in particular SMEs specialised in the provision of professional services) and ensure that the desired results can be achieved.

The analysis of good practices in the Member States represented in the SHEERenov project (Hungary and Estonia with their recognized success in delivering wide-scale renovation aimed at improving energy efficiency) demonstrates that in both countries information about the benefits of EE renovation is provided through a plurality of approaches.

Hungary has adopted a market-based approach to EE renovation which has worked well. Demand is driven by the obligation of Owners' Associations (OA) to maintain the residential buildings as well as by the major savings achieved through the implementation of EE measures. Supply is guaranteed by the well-developed and self-regulated market (the main regulatory factor is the existence of CV/ portfolio/ quality references) with specialised consultants who are the link between owners, institutions (municipalities, banks) and various contractors/service providers such as energy auditors, builders, supervisors, etc.

In Estonia, the OSS functions are performed by KredEx – a financial institution with a diverse portfolio of which the housing sector is only one component. Part of the functions of KredEx is raising the awareness in the area of energy performance of buildings, including residential buildings. The institution carries out this function by working to increase citizens' awareness with the aim to promote adequate management and foster the improvement of the energy efficiency of Estonia's housing stock. KredEx conducts analyses and studies and at the same times disseminates good practices and information. In addition, KredEx offers information materials dedicated to the improvement of energy efficiency of existing buildings as well as for the construction of new, nearly zero-energy buildings. Unlike Hungary, the selection of technical consultants is regulated so that Estonian apartment associations (AA) are required to select their technical consultants from a list published on the KredEx website.



The technical consultants are individuals (natural persons) who have acquired recognised competences in the area of building renovation by taking modular training to a curriculum approved in advance by the Ministry of Economic Affairs and Communications and successfully passing an examination. They provide their services on the basis of a written agreement with the apartment association. The consultant cannot have economic interest /conflict of interest with the businesses which bid for design and/or construction work or with those who perform owner (investor) supervision of construction works.

The technical consultant for the building is selected from the list published on the KredEx website (the list currently holds details of 180 technical consultants). The technical consultant is responsible for the following tasks (depending on the agreement with the apartment association):

- preparations for the commissioning of the technical/detailed design documentation (Terms of Reference) and conduct of the procurement procedure for the selection of the designer;
- advising and communication on the entry into a contract with the entity compiling the building design documentation;
- coordination with the designer and expert assessment of the design;
- preparation and conduct of the procurement procedure for selection of the building contractor;
- advising on the entry into a contract with the building contractor;
- advising on the preparation of the documentation necessary for the grant application;
- coordination of the construction works;
- verification of the compliance of the invoices and statements submitted by the builders with the concluded contracts, with the degree of completion and with the agreed volumes of works;
- exercising owner (investor) supervision, subject to the existence of the required qualifications;
- organising inspections during the warranty period and assessment of the condition of the building, the executed construction and the materials used.



2.4 The contribution of the SHEERenov project for creating an environment to enable the successful implementation of the process

- i. Pilot application of methods and techniques for raising homeowners' awareness in the area of EE renovation of multifamily residential buildings*

The SHEERenov project will launch the continuous process for raising the awareness of homeowners.

The exercise will demonstrate activities which can be feasibly used to draw the homeowners' attention to this topic. Regular meetings/information days will be organised at the premises of (Sofia) district administrations (incl formats such as „electronic outlet/counter"/ online platforms/ virtual rooms/ open telephone lines) dedicated to various aspects of energy efficiency, including why is renovation necessary and what benefits does it bring, and what financing mechanisms and target support measures are available.

Where the owners of a building are particularly interested to take part in the project on a pilot basis, SHEERenov experts will visit the building and provide advice on-site. Consultative meetings can also be organised at the initiative of professional managers of multifamily residential buildings (see also section 4.4 of this report).

- ii. Engagement Toolkit as part of the planned toolbox for end-to-end standardization of the EE renovation process:*

The Engagement Toolkit will be designed so that to support both home owners (introduction to the process and what should they expect from a professional manager) and professional managers, local authorities, experts and other stakeholders.

The goal of the document is to raise awareness of the benefits entailing energy efficiency investments and provide help to individuals and business operators who want to launch such investments, but do not know where to start or how to persuade and motivate residents.

The key issues which will be addressed in the Engagement Toolkit include:

- The most important steps of the planning and decision-making process;; and



- Challenges and difficulties which may arise in the preparation and execution of the renovation project.

The Engagement Toolkit will offer possible solutions based on best practices and will provide recommendations aimed to facilitate the decision-making process.

Standard document templates will be developed for:

- Organizational and decision-making phase – protocols, decisions, declarations;;
- Evaluation of owners' financial capabilities and accessibility – questionnaires, declarations;.
- The stage of implementation of EE measures - etc.

iii. *Develop a Procedural Manual designed to help local authorities efficiently support citizens in the process of implementing EE measures in residential buildings*

The procedure manual will provide guidelines and information for local authorities on how to assist citizens/homeowners in the process of introducing energy efficiency measures in residential buildings.

The Manual will focus primarily on the initial phase of the process, i.e. at the time when home owners become interested and request information and support from the ‘one-stop shop’ of the most trusted (according to the surveys) source of information – the Municipal administration (the city) and/or the administrations of the city districts.

The manual will also provide essential information on the nature of energy audits and on the possible technical solutions for EE renovation.

The subsequent information, awareness, advisory and motivation activities of the ‘one-stop shop’ will be undertaken by the specialised middleman who will operate amidst the target population – in the community of condominium owners.

iv. *Trainings intended for non-professional condominium managers and local authorities*

A key topic will be the new role of local authorities in the renovation process as they will be expected to organise the renovation at a local level, function as a source of information



and motivation, work as a coordinator and facilitator, and maintain a database of ready-to-finance projects.

2.5 The solutions proposed by the SHEERenov project

The information-related activities will be carried out by municipal administrations - in this particular case Sofia Municipality (the city) and/or the administrations of the Sofia's districts through the **focal points** at the district administrations.

The information will be disseminated through various channels, including direct outreach materials (leaflets, brochures, video clips, etc., incl online formats), printed and electronic media, public events, posters or billboards.

From the **Municipal focal points** at the district administrations home owners will also be able to receive information about the specialised middlemen who can successfully guide them through the subsequent stages of the EE renovation journey (as detailed below).

2.6 Resource and institutional sustainability

Resource sustainability will be ensured through the manuals, toolkits, educational materials and document templates which the SHEERenov will develop to support local authorities in their daily interactions with citizens.

Institutional sustainability could be ensured by means of:

- mainstreaming the activities for continuous improvement of citizen information and awareness levels by including them in the Statutes of Sofia Municipality and of the administrations of Sofia's districts as well as in the job descriptions of the staff members involved, and/or
- designation of functional units/positions (focal points) at district administrations in charge of EE renovation activities, and/or
- assigning the OSS functions of the municipal administrations to one of the functional units of the proposed focal points at the district administrations.

For fulfilling the above goals, allocation of financial means is necessary for performing the obligations related to EE renovation of residential buildings, including for information and awareness activities;



3. Selecting an EE consultant and developing alliances for the provision of the ‘specialised intermediary/middle-man’ integrated service

3.1 Objective

The EE renovation of a multifamily residential building requires a combination of professional competences and a driver of the process – elements which condominium communities typically do not have. This is exactly why a ‘specialised intermediary/ middle-man’ should step in and perform these functions.

The objective is to:

I. Engage the expertise of an EE consultant in order to:

- carry out an assessment of the eligibility of the building (can the building apply for financing from the project);
- search and find (where possible) the original plans of the building in the relevant municipal administration;
- perform an energy audit and prescribe appropriate energy-saving measures (ESM) in accordance with the regulatory/minimum energy efficiency requirements;
- draw up an indicative budget for the renovation of the building (design, construction and supervision costs) and an allocation of the costs among apartment owners. The indicative budget should also reflect the results from the feasibility study (preliminary study) on the available EE renovation options and on the ways in which these options can be adapted in case that innovative EE renovation measures will be applied;
- perform an assessment of the conformity of the technical designs with the essential requirement set out in Article 169(1) of the Spatial Planning Act (SPA). This assessment is to be carried in accordance with the rules laid down in Ordinance No 7 on the energy efficiency, heat conservation and energy saving in buildings; and
- help the association of owners (AO) exercise control during the execution of the EE measures. Compliance with i) the regulatory requirements, ii) the execution technology prescribed in the technical specification and iii) the terms of the accepted offer of the builder and of the contract concluded with the builder will be certified by endorsing all acceptance reports/certificates issued by the AO at each of the following



phases of the execution of the construction works: site hand-over, confirmation that the site is fit for the intended use, acceptance of the completed construction works (for each type of works, including the volume/amount of the completed works) and exercising day-to-date control on the execution of the construction works.

II. Engage the expertise of a professional housing manager order to:

- help apartment owners reach an agreement to renovate the building;
- facilitate the establishment of an association of owners;
- support the AO in selecting the contractors for the preparatory activities – technical design and conformity assessment of the design;
- help the AO complete the application form;
- identify the extent to which each apartment owner will need a loan;
- ensure that the condominium’s financial contribution to the renovation project is available in due time;
- identify any insolvent owners and apply measures to resolve the problem;
- help the owners complete loan applications;
- keep track of the timely repayment/installments of loans;
- facilitate the communication with other stakeholders/contractors in line with their role in the process and during the time of their involvement in the process.

3.2 Needs and attitudes of the business partners – the EE consultant and the professional manager

The Report on the analysis of the information collected and the results from the studies carried out (D2.2) examined the rationale for introducing the ‘specialised middleman’ integrated service in the EE renovation market. The report arrived at the following conclusions:

- homeowners recognise they need the professional assistance of a specialised middleman throughout the EE renovation process – from reaching an agreement to apply for a project and drafting a project proposal/financing application; through obtaining a loan or target support for socially disadvantaged households; and to



controlling the execution of the construction works, reporting, monitoring of energy savings and repayment of the loans;

- at present most of the existing expertise for the provision of these services is distributed in two types of businesses – those of professional property managers and energy efficiency consultants. The present fragmentation of the service can be addressed by building (flexible) alliances between these two businesses. The survey confirmed that these two businesses are willing to enter in such alliances and provide a ‘specialised middleman’ integrated service;
- the benefits for homeowners (the service users) include minimising the use of resources (time, human, financial) for organising the management and maintenance of the structural condition of the building and for increasing its energy efficiency, defusing potential conflicts between neighbours and obtaining a professional level of service; and
- both business feel the need for continual improvement of skills and knowledge in their core business as well as in the additional activities comprised in the specialised middleman’s profile.

3.3 Good examples and relevant practices from Europe

Estonia

On 1 January 2018 Estonia enacted a new Apartment Ownership and Apartment Associations Act which introduced **mandatory management** through apartment associations (associations of apartment owners) established on the basis of law (*ex lege*).

As regards professional management, the model based on management by a trained and certified professional manager is becoming increasingly popular. Although this option is not mandatory, it is used by an increasing number of apartment associations (AA) as the owners are unwilling and/or unable to undertake extraneous and resource-intensive management functions.

The qualification, training and education framework in Estonia includes professional and qualification standards for multifamily residential building managers, technical facilities managers, and technical facilities specialists/technicians. Educational and training courses are



offered by universities, centres of excellence, private schools and lifelong learning institutions. Regardless of the training services provider, the gist of the model is that professional management requires training and certification according to rules established by the state.

In the area of EE renovation, the use of a certified professional – **technical consultant** – is mandatory if the AA wishes to use a state grant for full-scale renovation. The technical consultant will develop an indicative budget for EE measures, design and construction works, make preparations for the selection of the designer, builder, etc., draw up schedules and ensure that these schedules are complied with. The main task of the technical consultant is to advise the AA on technical matters, in particular before the beginning of the renovation activities but also during the subsequent phases of the renovation process. In fact it is for the AA to determine the scope of the services provided by the technical consultant. The technical consultant:

- is a natural person who has undergone competence training in the renovation of apartment buildings on the basis of a training curriculum approved by the Ministry of Economic Affairs and Communications and has passed an examination which allows him to act as a technical consultant;
- is included in the list published on the KredEx website;
- provides his/her services on the basis of a written agreement with the apartment association;
- provides his/her services in an independent and impartial manner, and avoids potential conflict of interest.

Hungary

Hungarian law requires home owners to form or join either a housing association (HA) or an owners' association (OA), which must be registered with the tax authority and possess a tax number. This legal status of the association means that it has to plan maintenance, repair and investment activities as a single legal entity.



As regards professional management, since the year 2000 the majority of associations prefer to hire a professional manager to run the affairs of their building. In certain cases, smaller residential buildings may opt for a non-professional manager.

Before a sole trader or a company can apply for a professional manager, the sole trader or company must be accredited by State after successfully passing an examination preceded by training courses. The training courses take typically 6 months with one day of teaching per week. The program qualifies as an independent vocational training, which can be used either as a standalone qualification, or as a specialization in addition to whatever qualification one may have. Professional managers need to prove that they are both qualified and capable to manage the building in question and they are liable under the law for any mismanagement.

The CO appoints the professional manager on the basis of his/her portfolio/references, and can equally dismiss a manager whose performance does not satisfy the requirements or the owners' expectations.

Hungarian experience has shown that professional management of residential buildings is both a need, an opportunity and a mandatory condition for accessing public support for EE renovation projects. A need - because owners need a common single voice to represent their interest. An opportunity - because the owners can miss out on emerging opportunities by not having anyone specialised that can keep an open eye on it, and by not having a single designated point of contact with others, for example the specialised consultant (as described below). A mandatory condition - because the owners need to be educated and sometimes even exercise control after the renovation is finished. Correct behaviour after the renovation has finished is very important if the energy saving is planned to make a return on the investment, e.g. adjusting the temperature controls and avoiding loss of heat thorough opened windows/ infiltration. Furthermore, the renovated building needs to be maintained, this requires skills as well as time that ordinary owners typically do not have.

As regards EE renovation, Hungarian experience has shown that professional managers typically do not possess the specific capacity and skills required to plan and implement a full renovation project. For this reason, and as a matter of efficiency, a large number of SMEs were created from 1995 onwards whose main service was to act as consultants for professional managers not only in terms of providing them with the best



available technological advice, but most importantly by putting on the table all major options through educational/promotional campaigns, presentations, etc., by acting as intermediaries between the OA/HA and the banks if loans are needed, developing projects, finding alternative income streams, etc.

These specialised project management companies or specialised consultants are in general SMEs and as such they are flexible and able to adapt to a continually changing landscape of challenges, given that each renovation project can have its own issues. These companies operate in a market-driven environment; hence as a matter of surviving in the market they endeavour to offer the best advice and best project management, which in turn allows them to build their business network on the basis of good working relationships with banks, grant providers, auditors, contractors, etc. It is this endeavour and need of theirs to invest heavily in maintaining such a valuable network based on trust and professionalism that makes them so indispensable on the EE market. Larger companies that have higher fixed costs, higher turnout of personnel, etc. are at a disadvantage when it comes to building such an efficient as well as cost-efficient network.

The one-stop shop in Hungary is in fact a multitude of SMEs/specialized consultants – all of them offering the same services in a competitive environment defined by the free market.

Where an opportunity for EE renovation appears, the professional manager is the one to bring it to the attention of the owners through mail or at their next meeting. This often happens after the specialized consultant (basically EE consultants are those who sell the idea of renovation) approaches a given building manager with their offer.

3.4 The contribution of the SHEERenov project to creating an environment which enables the successful implementation of the process

i. *Guidelines on how to develop a successful business alliance for MFBS' holistic renovation*

The Guidelines will describe the manner in which successful alliances could be built to offer technical solutions, support to access financing, marketing and promotion among homeowners, aimed to overcome the existing behavioural, organizational, legal and social



barriers to sustainable renovation. Recommendations will be provided on how to implement quality assurance specifically aimed at increasing consumers' confidence.

ii. *Workshop and ad-hoc meetings to help the two types of businesses find a common ground (business matchmaking meetings)*

In the framework of these events:

- each business will understand the specificities of the other business;
- the businesses will agree on the most efficient communication channels;
- the businesses will work together to optimise the renovation process clearly distinguishing the functions and distribution of responsibilities from the outset;
- the businesses will work together to outline the cost structure and the expected financial flows;
- the businesses will engage homeowners to validate the agreements reached between them.

iii. *Modular trainings to ensure highly professional management of the renovation process*

The trainings will address all aspects of the renovation process, including financial, organisational, etc. A module focused on access to funding will also be included.

The training will be delivered in two phases: training of trainers and pilot training for companies from the two business sectors.

iv. *Support the Ministry of Regional Development and Public Works to develop necessary legislative changes in order to improve the organization of the process on the basis of good European practices:*

- To raise the responsibility of the owners in the condominium;
- To establish a regulatory regime for businesses which provide management services on a professional basis.

Recommendations will be formulated for changes in Condominium Management Law (based on the studied European practices) – changes that will lead to better organization of the management of the condominium, maintenance and repairs of the multi-family buildings. The



recommendations will be related to increased responsibility of the owners, control over the implementation of the decisions of the general meeting and sanctions for non-compliance.

SHEERenov will also formulate recommendations related to i) introduction of minimum requirements to the scope and quality of the services provided to condominiums; ii) minimum requirements to the profile and competences of the staff assigned to the provision of these services and iii) other appropriate rules and requirements to ensure the interests of the condominium are adequately protected.

3.5 The solutions proposed by the SHEERenov project

The one-stop shop model includes arrangements which enable the condominium to make an informed choice of an EE consultant. In doing so the condominium community will be supported by:

- the professional manager by offering several candidates, including evidence of experience gained and proof of good performance in similar projects;
- the information received from the ‘Homeowners information and awareness raising’ process.

3.6 Resource and institutional sustainability

Resource sustainability will be ensured by the SHEERenov guidelines and by the alliances created in the aftermath of the business matchmaking meetings, by the modular trainings dedicated to the functions of the ‘specialized intermediary’ and by the follow-up trainings which will add further knowledge and insight in the intricacies of EE renovation projects.

Institutional sustainability will be ensured by:

- **Support for introducing a regulatory regime** for the ‘professional manager’ service.
- Putting on the table a recommendation for making professional management mandatory for condominiums/AOs to ensure that the associations of owners are successfully steered through the entire EE renovation process as demonstrated by good practices in other EU Member States, including Hungary and Estonia.



- Enabling the facility management industry (the Bulgarian Facility Management Association) to provide modular trainings to strengthen the qualification and skills of businesses in their role of **‘specialised middleman’ so that they can improve their service portfolio and become a proactive driver and catalyst of the multifamily residential buildings renovation process.**



4. Preparatory activities and submitting an application. Testing the model in the field

4.1 Objective

The objective of this highly important phase of the project cycle is to reach through coherent and synchronized work on site across all aspects of the process (organisational, technical, financial and social) the following:

1) the condominium community arrives and stays committed to at an informed and legally compliant decision to renovate;

2) reaching the required level of preparedness (of resources and design documentation) for moving ahead with construction works and for the actual implementation of the energy-saving measures. The preparatory activities will build on and unfold in an appropriate information environment which will be developed in advance.

The support rendered to owners during the preparatory activities phase should **demonstrate the major benefits of the one-stop shop (OSS) principle:**

- support is available as close as possible to the community, in situ and on a continual basis;
- the OSS accelerates the building renovation activities by informing, motivating and supporting the owners from the very onset and throughout the process;
- the OSS helps owners who have become interested but are still uncommitted at the initial phase to research and find practical, cost-efficient and sustainable energy-saving solutions;
- the OSS facilitates access to financial resources and advantageous financing terms.

The preparatory process will typically include the following activities:

- identify the EE renovation requirements and arrive at the consent required by law;
- establish the technical condition of the building;



- draw up an indicative budget for the renovation of the building (design, construction and supervision costs) and an indicative allocation of the costs among apartment owners.
- perform an energy audit and prescribe appropriate energy-saving measures (ESM) in accordance with the regulatory/minimum energy efficiency requirements;
- look through financing/borrowing opportunities and make financial arrangements;
- have the technical designs prepared and approved;
- complete an assessment of the conformity of the technical designs with the essential requirement set out in Article 169 (1) of the Spatial Planning Act (SPA); and
- exercise quality control.

4.2 Needs and attitudes

The survey carried out by the SHEERenov project among potential beneficiaries in multifamily residential buildings revealed that, as indicated by the responses from many owners, the building renovation theme has not been discussed at any length within the community. Among all identified barriers, the most significant are financial hurdles, organisational difficulties and lack of agreement among the individual owners (indicated respectively by 50.7%, 45.2% and 35.4% of the respondents) – these are exactly the issues to be addressed in the context of the preparatory activities. These responses indicate that owners need and expect timely information and advice on the aspects of the renovation process, including on details of the related organisational, administrative, financial and technical issues at each phase of the process, but especially during the preparatory phase before taking an informed decision to renovate. Timely information and communication is a step towards overcoming exactly those obstacles to the multifamily buildings renovation process which are most widespread and are perceived as most important.

The level of motivation to invest and the presence of renovation drivers are decisive for the initiation of the entire building renovation process. Precisely the difficulties related to self-organisation and joint application have been identified as a major barrier.

Report 2.2 concludes that the most significant difficulties are encountered in the following areas: **preparing the documents and convincing the owners; reaching the**



necessary level of agreement, including in respect of the renovation method and the appearance of the shared/common areas of the building; organising meetings and ensuring that the owners attend personally the meetings; contacting the owners who do not live in the building. These are all problems which can be resolved through an appropriate ‘driving force’.

A significant percentage of the respondents to the SHEERenov survey are convinced that ‘organisational difficulties/ lack of initiator and driver’ are the major bottleneck. This indicates an unfolding process of understanding and recognising the complexity and the major difficulties to be encountered by the community in its efforts to initiate and complete a renovation project – from taking a decision to renovate and all the way through fundraising, execution of the renovation works and to quality assurance. Therefore, there is a genuine need for a ‘driving force’ capable to lead the process and provide strategic and operational support to owners in every aspect of the process.

4.3 Good examples and relevant practices from Europe

Estonia:

Estonian law provides that the lawful decisions taken by the majority of apartment owners (at the general meeting of the apartment association – the official institution authorised to adopt decisions, including for renovation of the building) are binding.

As already indicated in this report the one-stop shop function in Estonia is embedded in the public financial institution KredEx (at central level). KredEx raises the awareness of citizens (including by information materials dedicated to improving the energy efficiency of existing buildings), performs analytical work, conducts studies and disseminates good practices.

The apartment associations select their technical consultants from the KredEx list of certified technical consultants. The selected technical consultants perform to a large extent the role of a ‘specialized middleman’. They provide advice and technical assistance in estimating the budgets for design and construction works, compiling implementation schedules and conducting the required procedures. The main task of the technical consultant is to advise the apartment associations on technical matters in particular before the beginning of the



renovation works but also during the next phases of the project. The exact scope of the technical consultant's service is determined by the apartment association.

Hungary:

As a general requirement, homeowners must form an owners' association (OA), or join a larger network of a housing association (HA), with the difference that the OA refers only to the body that governs a single building, while HA refers to a professional body that manages and governs several buildings that are often adjacent or connected to each other. Whether the owners are organised in an OA or HA, the highest body is the council of owners (CO) and must always reach 50% +1 of the votes in order to pass decisions which are then executed by a building manager or professional management team.

As regards EE improvement projects, these OA/HA act as a single legal entity to hire the EE consultants, energy auditors, building companies, they can apply for loans to commercial banks, for state subsidies or for assistance from local authorities. The decisions taken by the OA/HA are mandatory for all owners and can be enforced either

- 1) directly through the building manager and the rights and obligations laid down in their founding documents;
- 2) through mediators or
- 3) through court action/court judgements.

The CO takes its legally valid decisions with a simple majority, while the manager executes the detail of these decisions in practice. The CO should meet at least once a year, but can meet several times a year when more important decisions need to be taken that are not in the mandate of the professional manager.

The professional manager submits a report to the CO once a year and keeps the owners informed of all the important aspects of the condominium building; the manager executes the decisions taken by the CO and before outsourcing works to external contractors (e.g. relating to renovation) the manager must present to the CO at least three independent bids. The CO also selects its professional manager by considering two/three alternatives.



The role of the ‘specialized middleman’ is performed by a large number of companies (SMEs) formed from 1995 onwards exactly for this purpose: act as consultants for professional managers and OAs/HAs not only in terms of providing them with the best available technological advice, but most importantly by helping them make important choices through presentations, brochures or advertising materials, and acting as an intermediary between the banks and the OA/HA, writing loan applications, writing grant proposals, finding alternative sources of income, etc.

The majority of specialized companies are SMEs due to their more flexible organisation, ability to adapt to the various challenges that come with each renovation project and competitive pricing. These companies are market based, and as such in order to prosper or even survive they have to offer the best service and best project management, which in turn allows them to build their network across the supply chain, creating good working relationships with banks, grant providers, energy auditors, contractors, etc. Their willingness and need to invest intensively in maintaining such a network of contacts based on trust and professionalism has made them the most important factor in the EE market. In Hungary a ‘one-stop shop’ is in fact the wide network of SMEs all offering the same services in a very competitive environment.

The professional manager is responsible for bringing the possibility of EE renovations to the attention of the owners. This most often happens by the specialized consultant approaching the building manager and presenting his renovation offer. The managers working for the OA/HA are interested in promoting renovation ideas, which in turn improves their own portfolio – managers that have delivered a portfolio of building renovation projects are highly valued on the market.

4.4 The contribution of the SHEERenov project to creating an environment which enables the successful implementation of the process

The support which SHEERenov plans to provide to the owners at the preparatory phase essentially tests the model in the field in order to address the identified organisational, technical and financial barriers. The municipal administration will provide information and communication support as soon as condominium owners indicate their interest while the



specialised middleman will be responsible for providing holistic support through coordinated action. The focus will be on the specific needs of home owners in order to build trust in the community – experts with proven knowledge and experience with this type of activities will be involved.

i. *Project toolbox for standardized activities – Procedural Manual, Engagement Toolkit and Technical Toolkit*

The Procedural Manual will be used by local authorities to provide guidance and information to citizens who have expressed interest and seek information and assistance from the ‘one-stop shop’ (OSS). The Engagement and Technical Toolkits will provide detailed descriptions of standardized procedures and steps for the following phases:

ii. *Preliminary identification of buildings/condominiums*

Group consultations will be carried out in situ with the condominium communities which have expressed interest as a result of the improved awareness and knowledge of home owners (WP7). The timing of these meetings and consultations will be convenient for the home owners. The owners will be advised on all key aspects of the renovation (starting with the benefits that come with a renovated building, including lower energy bills, improved comfort of living and higher value of the property); the necessary steps of the process and the support which will be available from the project team. The discussions will address issues related to the most significant bottlenecks of the process and will involve owners who may initially oppose the idea of renovating their building.

iii. *Preliminary assessment of the technical conditions of buildings and proposal of optional sets EE measures*

Condominiums where at least 50% of the owners agree to proceed with the next steps of the process will benefit from a technical assessment of the technical condition of the building and a proposal consisting of possible packages of EE measures for them to choose the package which fits best their needs and financial capabilities.

iv. *Feasibility study of the measures and budgeting*



The objective of the feasibility study is to assess the technical, energy and economic characteristics of a particular EE investment. This technical and economic study will include an assessment of the condition of the building in terms of energy efficiency, cost calculations of the possible energy-saving measures as well as the results from the implementation of each proposed measure. The indicative budget will give the owners an estimation of the costs of each package and accordingly of the allocation of the investment costs among the owners.

v. Facilitation of reaching an informed decision to renovate

The decision to renovate is based on access to information about funding through public grants and loans.

vi. EE audit

Each condominium which has reached an agreement and has taken a decision to renovate will receive a free (under SHEERenov project) energy audit of the building on the basis of the already developed budget. This expenditure is and will be eligible for a grant, and the homeowners' share is a subject of clarification depending on the financing scheme.

As the issuance of TP of the building is not eligible under the Project, and at the same time the technical condition of the building should be assessed in terms of its structural stability, a constructive assessment will be made upon an inspection on the site for buildings with no TP available.

4.5 The solutions proposed by the SHEERenov project

While information-related activities will be carried out by the local authorities, i.e. Sofia Municipality and the administrations of Sofia's districts through the **focal points at the district administrations**, on-site consultations (technical, legal and financial) and planning at the condominium community will be carried out by **the specialised middleman** – jointly by professional housing managers and energy auditors.

4.6 Resource and institutional sustainability

Resource sustainability will be ensured through the standardized documents and trainings of specialised middleman teams delivered by the SHEERenov project.



Institutional sustainability will be ensured by proposing changes of the legal framework (the Condominium Buildings Management Act) (to the extent they are deemed necessary) aimed at simplification of the decision-making process when it comes to renovation, in particular by addressing the following elements:

- the quorum and the majority required for the adoption of a decision to renovate;
- the requirement for physical attendance (of the owners in person or through representatives) when decisions are being taken; and
- finding a practical solution concerning uninhabited apartments – how to obtain consent from the owners and access to their apartments to apply the ESM.



5. Financing

5.1 Objective

One of the objectives of this project is to propose and test a sustainable model for financing energy efficiency improvements in the Bulgarian housing sector. This means:

- Create enabling conditions for replacing the model which relies on 100% public funding with a model which is based on co-financing arrangements;
 - Taking into consideration the identified challenges:
1. Deep renovation is expensive and as such demands significant costs which many owners in a building cannot afford. The comparison of the revenues and expenses of Bulgarian households (divided in deciles¹) versus the amount of the potential investment in renovation demonstrates that only three or four deciles can afford these costs (without serious difficulties). However, having regard to the social and financial mix in the buildings, the subsidy should be available to all so that all owners join their efforts to renovate the entire building.
 2. Furthermore, many households are underheated mainly due to financial reasons. This conclusion is based on data of the Bulgarian Sustainable Energy Development Agency (SEDA) on the energy performance of residential buildings audited between 2015 and 2019: the analysis reveals that the actually consumed heat is nearly two times less than the heat needed to maintain the standard parameters of the indoor environment due to the low average temperatures maintained in air-conditioned spaces of the residential buildings (underheating).
Consequently, the actual investment payback period is too long which is a strong disincentive for the owners as well as for commercial banks that may be asked to provide loans.
 3. In every building there are owners who cannot afford to invest in energy efficiency. According to the poverty assessments of Eurostat (EU-SILC) and of the Bulgarian National Statistical Institute (NSI) based on perceived material deprivations of

¹ Deciles are formed through statistical distribution by the criterion 'gross revenue per person' which results in ten decile groups with an approximately equal number of persons.



households, around 30% of Bulgarians believe they are facing material deprivations. These are households which, due to financial hardships, impose self-limitations on the heating of their homes, struggle to pay on time their utility bills (electricity, water, heating) and do not have enough own money to meet unexpected financial expenses (as is the case with those schemes for EE in residential buildings which require financial contribution/co-financing by the owners). On this basis it can be presumed that about the same percentage of owners would not be in a position to allocate money for purposes other than their daily needs, due to their financial situation. Without additional, targeted public support for their participation, the renovation of the building is likely to fail - this is what international experience tells us.

In order to address these challenges in an effective and efficient manner, the financing scheme should be based on a combination of:

- Grants designed to i) cover part of costs and ii) ensure that **the energy savings achieved are sufficient for repaying the loan in reasonable time²**,
- Own contribution supported through simplified access to **loans secured by guarantees** provided at no costs for the final beneficiaries;²
- **Additional support** targeted to financially disadvantaged owners.

The objective is, with the assistance of the “middle-man” to evaluate the capability of the condominium/association of owners to cover the full amount of its own contribution and in particular:

- assess the extent to which owners are capable to contribute their own money;
- identify the borrowing requirements and assess the credit capacity of the owners; and
- resolve the issues related to insolvent owners.

5.2 Needs and attitudes of owners and financial institutions

The Report on the analysis of the information collected and the results from the studies carried out (D2.2) indicates that financial issues are perceived by home owners as one of the

² In the context of the European Commission’s guidance document to Recovery and Resilience Plans, Examples of Reforms and Investment, COMPONENT 1: Renovation wave aimed at enhancing energy and resource efficiency https://ec.europa.eu/info/sites/info/files/component_renovation.pdf



major bottlenecks in the EE renovation process. The inability of a condominium community to cover its own contribution stems from two root causes:

- low credit capacity in the present market conditions of part of the building owners; and
- insolvent owners, i.e. those owners who are unable to sustain an additional burden on their budget. Such owners can be found in almost every multifamily residential building.

Low credit capacity

The SHEERenov survey revealed that the number of owners who are prepared to contribute their money to the renovation of their building is not insignificant. According to the owners who indicated that they would use bank loans to cover their own contribution, the perception of a preferential loan is that it should be a combination of several factors: 1) the loan repayment period should begin after the completion of the building renovation project; 2) the lender should not require any guarantee from sureties; and 3) the loan repayment period should be ideally up to 120 months long with a monthly instalment of not more than 50 Bulgarian Lev (BGN).

At the same time, the monthly utility bills (for heating/cooling, domestic hot water and electricity) of a large majority of respondents (more than two-thirds) amount **above BGN 100**.

Report 2.2 has identified a **correlation between the average value of the monthly utility bill** per household and **the level of the expected energy post-renovation savings** – the owners intend to repay their loans exactly within the energy savings achieved:

For nearly 70% of the respondents the average monthly value of the household expenditure for heating/cooling, hot water and electricity is within the range of BGN 150-160 (for 35.3% - between BGN 101 and 150; 32.2% indicate an expenditure over BGN 150). BGN).

It is also found out that, when applying even only the traditional EE measures (for building's walls, windows, roofs and ground floors + measures for lighting and electrical



systems) the percentage of energy savings varies between 35% - 55%. When applying other appropriate ESMs - up to 60% (Report D 2.1 - "Review and analysis of the national housing stock" 2020).

There is potential for even more significant energy and cost savings. For Bulgaria, out of nearly 2,200 EE renovated multi-family buildings, 91% of which with energy performance class "E", "F" or "G" (the worst energy performance) before the application of the measures, after the implementation of the measures reach class of energy consumption "B" - for 14% of the buildings, and class "C" - for 86%. For the territory of Sofia Municipality, respectively: renovated nearly 200 multi-family buildings; of which with energy consumption class "E", "F" or "G" before the implementation of the ECM - 90%; after implementation of the measures - achieved energy consumption class "B" - 16%, and class "C" - 84% (information from D 2.2. based on analyzed data of SEDA).

Considering the statistics above, it could be assumed that at the indicated average cost of BGN 150 - 160 for the majority of households, the average energy savings per month will be around BGN 50 (with energy savings in the lower part of the cited range 35-55 to 60%) and even up to 1.5-2 times more (at the top part). This explains why many owners are in favour to the possibility of providing access to credit resources on preferential terms (repayment period up to 120 months with a monthly installment of up to BGN 50, or close to that).

The above calculations are made on the basis of baseline consumption, in accordance with the regulations, taking into account the fact that many owners are underheated (respectively, the monetary value of real savings may be lower, reflecting the need for grants).

As regards access to borrowing, Report D2.2 analysed the financial scheme of the Energy Renovation of Bulgarian Homes (ERBH) Project applied in the period when owners were required to co-finance. The report concludes that the scenario of individual loans based on an individual assessment of each applicant by the commercial bank has been inefficient and dysfunctional. In the general case, the owners who needed a loan could not meet the requirements of the bank.



Practices in EU Member States have demonstrated that collective loans are a working solution and even more so when it comes to a wide-scale process of EE renovation. The benefits of this solution are:

- Owners who cannot meet the formal requirements of commercial banks for individual lending, but are otherwise credit-worthy, can have access to lending;
- Commercial banks are spared the cost of making multiple individual credit capacity assessments, which in turn may encourage them to pay a commission to middlemen who bring new clients in.

While commercial banks in Bulgaria lend to individual and corporate clients, they do not recognize condominium communities/associations of owners as eligible applicants for loans. The banking community explains its reluctance with legal obstacles, namely that **AOs lack adequate legal personality**.

Providing security/collateral in order to obtain a loan is yet another challenge to condominiums/AOs insofar as they do not possess common assets. While the situation in the other EU Member States is very similar, solutions have been found on the basis of the bank accounts of the AOs. However, according to the Condominium Buildings Management Act (CBMA), AOs do not have the right to maintain accounts with a commercial bank. If this were not the case, this would be an indirect indication of the credit capacity of the condominium community.

Insolvent owners

The fact that there are insolvent owners in almost every multifamily residential building is a serious barrier to a wide-scale EE renovation process. The analysis in D2.2 indicates that:

- The existing forms of social assistance cannot meet the financial requirements for a wide-scale EE renovation process;
- The centralized mechanism for providing additional targeted support at the initial phase of the ERBH project (when the owners were required to co-finance) has been resource-intensive and inefficient. The approval procedure dragged on for months and involved multiple experts from various institutions, while the result was insignificant when compared to the resources used.



As housing policy is essentially a local policy, consideration should be given to mainstreaming the target subsidies for renovation in the overall social policy of the municipality so that these subsidies can be disbursed by or through the local authorities.

5.3 Good examples and relevant practices from Europe

In all EU Member State the financial schemes for EE renovation includes a ‘grant’ component and an ‘access to preferential loans’ component.

Estonia

The renovation grants are available for apartment buildings constructed before 1993. The grant amounts to 30% of the total cost of the renovation works in Tallinn and Tartu and to 40% in the rural municipalities neighbouring Tallinn and Tartu. In the rest of country the grant amounts to 50% of the total cost of the renovation works.

The policy at national level allocates more funds for reconstruction grants and loans to regions with lower income.

In the past there were financial schemes where the grant rate was dependant on the achieved energy performance of the buildings.

All major private banks in Estonia offer loans for the renovation of residential buildings. The borrowers are the apartment associations.

In case the commercial bank decides that a loan to particular apartment association involves higher risk, the KredEx guarantee scheme is invoked.

Overall, apartment associations are regarded as reliable clients. Very few apartment associations have had difficulties to repay their loans.

Hungary

The grant rate never exceeded 60% of the total costs and was often within the range of 30-40%. The remaining part of the total costs was covered by preferential bank loans. 60% grants were approved for projects which included renewable energy and/or deeper EE measures.

At a later stage EE renovation was financed with entirely subsidized-interest loans where the subsidy covered 35 to 70% of the interest rate.



The loan was provided to the OA/HA which was responsible for its timely repayment. Owners who default on their instalments would be subject to the same measures which would apply to them if they defaulted on any other payment to the OA/HA. In case the payment of the instalments was a burden for certain owners, the specialised consultant would also help resolve the problem with or without assistance from social institutions.

A commercial bank would provide an preferential loan to the OA/HA even without state-subsidized interest rate or intervention by a guarantee fund as long as long as the OA/HA has been managed well for at least two years, does not have outstanding payments and maintains a deposit account at the bank with savings covering 20% of the renovation costs. The reason is that through maintaining the bank account the bank obtains visibility to the financial standing and the daily cash flows of the OA/HA. The requirement for at least 20% savings is an in-house guarantee of sorts which the bank can access should the OA/HA become incapable to service the loan.

The subsidized interest rate and the guarantees make the loan product even more attractive. Over the years similar financial instruments have been offered by various institutions, including the Global Facility Fund, the World Bank and the International Finance Corporation, and, in the past 7 years, the European Union through the EBRD and ESF.

So far the combination of a grant up to 30% of the total cost and a preferential loan (provided by commercial banks on the back of loan guarantee instruments) has been the best and most efficient one. A combination of a loan and 20% grant is also a working option. Banks can manage the risk as long as they deal with a single legal entity in the face of OA/HA rather than with multiple owners.

Lithuania

Multi-apartment buildings modernization programme in Lithuania

Energy efficiency in multifamily residential buildings in Lithuania is financed through a combination of financial instruments and grants. The Lithuanian scheme is examined in greater detail below since the scheme a) has deserved recognition as best practice in the EU and b) is in many aspects applicable in the Bulgarian situation.



FINANCIAL INSTRUMENTS

Through the **financial instruments the final beneficiaries receive long-term, low-interest loans without having to provide security/collateral.**

The government agency VŠĮ ‘Būsto energijos taupymo agentūra’ (**Housing and Energy Saving Agency – BETA**) provides advice and support to the owners in multi-apartment buildings, represented by their Administrators (selected on market basis or appointed by the municipality), so that they can complete a Renovation Application Form.

The construction works are executed in a single package for the entire building and the financial intermediary pays the Contractor on behalf of all final beneficiaries.

Facilitation in the form of legal and technical support has been a key factor for accelerating the renovation process. Renovation has been fostered through adopting relevant **legislative changes.**

The **guarantee instrument** provides a portfolio-based first-loss guarantee which covers 80% of the loss incurred by the participating commercial banks in each outstanding loan, but not more than 25% of the cumulative loss in the portfolio.

With regard to the limited capacity of the market to support the guarantee instrument, a pre-study carried out in 2019 established that there is scope for developing a **three-tier investment platform** so that the risk can be shared among the various financing institutions involved:

- **the primary risk** (first loss) is covered by contributions from the EBRD and the financial intermediary (on a *pari passu* basis). This tier incurs the highest risk since all defaults in the underlying portfolio of modernisation loans will immediately generate loss at this funding level;
- **subordinate (junior) debt** (e.g. from international financial institutions). This tier is less exposed to risk, but nevertheless functions as an additional protection against the primary risk; and
- **main (senior) debt** (e.g. from commercial banks). This tier is least exposed to risk since it may incur loss in the unlikely event that defaults in the loan portfolio exceed both the first-loss and the subordinate (junior) debt tiers.



The main purpose of the platform is to attract in the market several new public and private investors so that they can provide funding through the platform using the expertise of a financial intermediary specialised in the creation and management of EE renovation loans.

GRANTS:

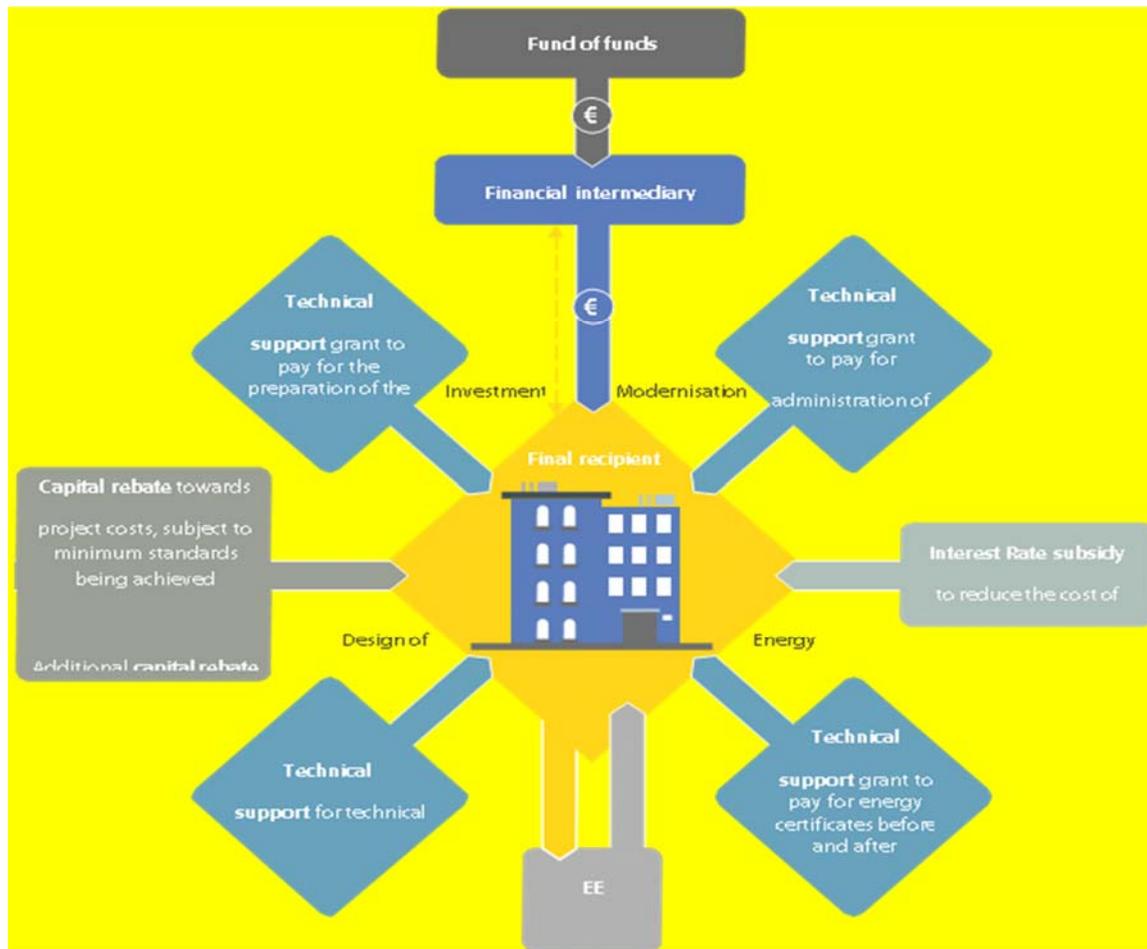
Grants are provided through separate operations for two branches of activities: a) preparation of the project, organisation of the process, etc. and b) construction works. Projects which meet specified EE targets are encouraged.

BETA transfers the construction grant directly to the banks so that it can be used for prepayment of the loan;

The grants cover the following types of expenses:

- **Technical assistance** which covers the costs for:
 - development of an investment plan and project proposal;
 - energy audits before and after modernisation;
 - technical design; and
 - administration of the project for EE renovation of the building.
- **Subsidized interest rates** to help the final beneficiaries reduce their borrowing costs;
- **Capital discounts** amounting to 30% of the project costs (grant) to enable early repayment of the loan if the project achieves minimum energy performance standards; and
- An additional discount amounting to 10% of the capital expenditures of the project (grant) applies if additional EE measures are implemented.





Technical support for organising the process

Responsibility for the implementation of the programme rests with the government agency **BETA** which is under the umbrella of the Ministry of Environment.

Projects are initiated by the **Administrator of the residential building**. The Administrator submits the project application on behalf of the condominium owners. The Administrator is selected on a market basis by the condominium owners or is appointed by the municipality (under certain conditions and if the owners cannot get themselves organised).

Grant applications are submitted to BETA which in turn assesses and approves the proposals on the basis of their **conformity** with the requirements of the national grant package, the requirements of the financial instrument and the business plan submitted by the applicant for the relevant condominium building.



Subsidized interest rates

The State allocates funds from its budget earmarked for subsidizing the interest rate with the aim to reduce the borrowing costs. The low price of the loans is an important element which makes the EE Loan attractive to apartment owners. In the first phase of the programme the loans were financed with public funds and borrowers benefited from loans provided at a low, fixed rate for the **entire period of the loan agreement**. Following the extension of the scheme and the mobilization of private finances the scheme maintains a fixed interest rate of **3% per annum for the first five years of the loan**.

The subsidizing of the interest rate is managed by BETA while the financial intermediary is responsible for calculating the amount of the subsidized interest due. Payment requests for each eligible loan are submitted to BETA on a monthly basis.

Capital discounts (construction grants)

The EE loan combines financial instruments with a capital discount programme which subsidizes part of the final beneficiary's loan provided that the project achieves specified minimum standards for efficient use of energy.

A certified expert performs an energy audit after the completion of the construction works. Once BETA is convinced that the specified energy performance targets are achieved, the Agency will make a lump-sum payment amounting to **maximum 30%** of the cost to the financial intermediary, who in turn will write off the same amount from the final beneficiary's debt. **An additional 10%** discount from the capital is triggered if the project undertakes additional EE measures.

A separate capital discount programme is managed by the local authorities. This programme is designed to **support the low income households** which participate in an energy efficiency scheme backed by an EE loan. The low income households which qualify for this aid are entitled to a 100% discount from the cost of construction works and other related expenses. Similar to the scheme managed by BETA, once the energy audit confirms that the energy performance targets are met, the local authority will make a payment to the financial intermediary which will then be applied for early repayment of the loan.



By providing for more flexibility and simplicity of the rules, the new CPR 2021–2027 strongly encourages the use of capital discount grants in combination with financial instruments as part of a single operation.

STATE AID

The financial instruments and the related grants are intended to finance housing improvements. As a general rule the prevailing majority of final beneficiaries are **natural persons**. These natural persons are not regarded as economic operators and therefore do not come in the scope of State aid rules.

Any specificities, to the extent they exist, are addressed in the design of the programme. The aspects relating to State aid are managed by BETA which collects from the Administrator information about the owners, issues certificates which confirm that the aid is under the *de minimis* threshold and is responsible for submitting the required information to the National State Aid Register.

A very important aspect of the design/terms of EE loan is that if the property is sold to a third party then the borrower's benefits and liabilities/outstanding payments will also be transferred to such third party.

AN INTEGRATED EE RENOVATION CONCEPT

An integrated service concept has been developed in order to reflect the local specificities and address potential barriers in Lithuania.

The measures applied by BETA ensure that residents can rely on a clear and structured procedure **supported by legislation** designed to facilitate the implementation of the programme.

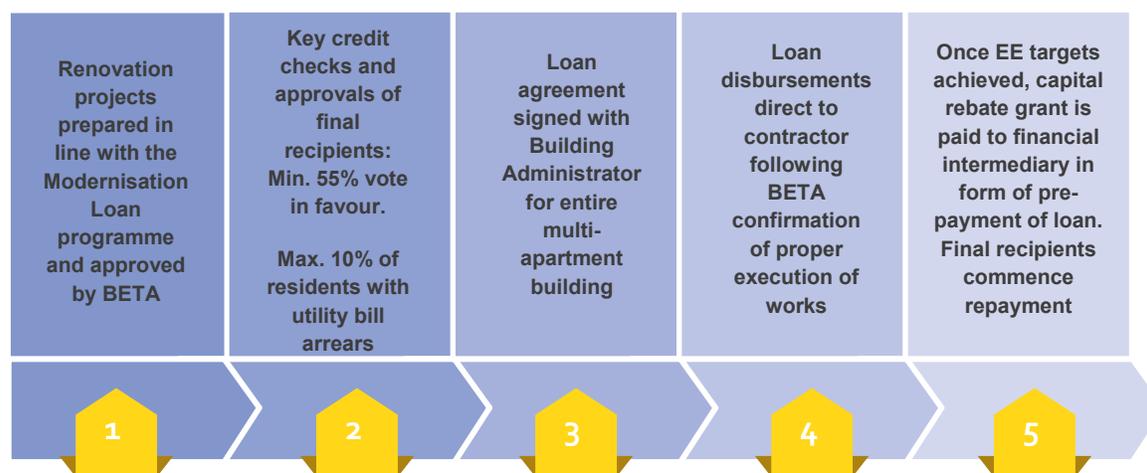
An important part of the integrated concept is the support provided by the Central Procurement Office (CPO) – a government agency under the umbrella of the Ministry of Economic Affairs. The CPO provides a platform of experienced contractors which is accessible by home owners and administrators. This provides assurance to the owners that the



EE measures will be designed and executed in accordance with the best practices in the EE area.

To ensure that residents have flexibility enough to respond to the specific market conditions in various parts of the country, owners/administrators can also 1) resort to an independent procurement process if the CPO process fails and 2) conduct an additional procedure through the CPO in order to obtain other offers.

The next chart provides an overview of the project implementation sequence.



Where the Administrator of the building wishes to initiate a project, the Administrator will apply to BETA for an initial eligibility assessment. Projects which pass this phase will receive free of charge technical advice and support from BETA in order to draft a project proposal which will then be consulted with the owners in the multifamily residential building.

A crucial step is the approval of the project by the general meeting of apartment owners. **The legislation, which has been amended so that to support** the programme, provides that if the majority of owners (**50%+1**) vote in favour of the project, the Administrator of the building can proceed with obtaining the loan in the name or on behalf of all owners in the apartment building. According to the lending criteria of the financial instrument, the scheme must be approved by at least 55% of the owners.

Once the project is approved, the condominium should submit a separate loan application to the financial intermediary. Meanwhile BETA will collect the **information necessary for State aid purposes** from the apartment owners.



A single loan agreement for financing the project is signed with the Administrator of the building and a **bank account** to which the loan will be disbursed is opened in the name of the Administrator. The Administrator concludes the construction contract with the Building Contractor. Payments to the Contractor are effected directly by the financial intermediary from the account of the Administrator after each phase of the works is completed and verified by BETA.

Principal and interest instalments for the repayment of the loan are paid by the Administrator to the financial intermediary on a monthly basis wherein **the Administrator of the building is responsible for collecting** the amounts due from each final beneficiary. In practice this is made through the ‘service fee’ which the Administrator charges to the residents. Since the service fee includes energy costs while the energy savings typically outweigh the loan repayment costs, residents benefit from a net reduction of the service fee.

As this section is dedicated to good European practices, we will also outline the updated recommendations in the **guidance document from the Commission services concerning the Recovery and Resilience Plans – COMPONENT 1: Renovation wave aimed at enhancing energy and resource efficiency** (https://ec.europa.eu/info/sites/info/files/component_renovation.pdf).

The recommendations can be used as inputs to the financing mechanisms currently developed by the SHEERenov project insofar as both relate to the support for the renovation of residential buildings provided in the form of a guarantee component and a grant component, and are in line with the national long-term renovation strategy.

The main parameters of the support scheme as per the recommendations of the Commission services are:

Guarantees should cover 80% of the loans and should be provided free of charge (for the final beneficiaries).

The grant amount should be calculated so that the estimated repayment of the loan is limited to 90% of the estimated energy savings. The grant component aims at covering part of the upfront costs and **ensuring that repayments for the loan will not exceed the energy saving**, in particular for low-income households.



The renovation support scheme should benefit from one-stop shop and from proposals for a legislative package, including reforms aimed at facilitating the decision-making process in multifamily residential buildings.

5.4 The financing solutions proposed by the SHEERenov project

i. Develop a sustainable banking product

The aim is to address the financial challenges:

- for home owners – difficult access to loans due to the lack of appropriate financial products;
- for commercial banks – lack of a risk sharing mechanism; and
- in general – a legal framework which in its present form does not encourage lending to condominiums.

The product will be a prototype of a Collective loan intended for associations of owners. The financial products for partnering with commercial banks developed by the Bulgarian Energy Efficiency and Renewable Sources Fund (EERSF) will be used as a basis of portfolio guarantee for renovation of multifamily residential buildings.

Furthermore, through mediation by SHEERenov and in partnership with potentially interested commercial banks, conditions acceptable to all stakeholders should be specified, as follows:

- for the condominiums in the capacity of final beneficiaries/users (on the basis of ex-ante and ex-post attitude surveys);
- for the EERSF in the capacity of a guarantee provider (on the basis of EERSF proposals which will be submitted for approval by the Managing Board);
- for the individual commercial banks which have expressed interest; and
- for the State in relation to the funding required to support the scheme.

If appropriate, the stakeholders will work to formulate a joint proposal for legislative changes which enable the lending to condominiums through this market-based financial instrument.



Several versions of a sustainable bank loan product will be examined and assessed in the light of the Hungarian experience. To this end, the project will aim to engage as many banks as possible in multiple discussions, including banks which operate both in Hungary and in Bulgaria since SHEERenov intends to adapt the Hungarian model.

An optimised and working version of the financial product will be fine-tuned in consultation with stakeholders.

The product will also be consulted with national institutions which have experience with the implementation of financial instruments. The EERSF resources and flexibility will be in help for piloting a product to be used within the frame of financial mechanisms, inl the Decarbonization fund and international financial institutions.

The project development will be coordinated with the national structures with experience of applying financial schemes.

ii. *Develop a concept for a new financing model*

The following aspects will be taken into account in developing the concept:

- the level of the grant component as will be proposed by the Government;
- the proposed solution of the issue related to insolvent owners; and
- a financial product anchored in a risk sharing guarantee.

5.5 Resource and institutional sustainability

Resource sustainability will be ensured through the three-component model developed in the framework of the SHEERenov project.

Institutional sustainability will be ensured by:

- Proposal for legislative amendments designed to encourage lending to condominiums/associations of owners.
- Proposal for legislative amendments designed to ensure 100% target support for socially vulnerable owners – an approach successfully applied in other European countries.



6. Execution of the renovation works. Quality assurance system

6.1 Objective

Ensure that all prerequisites for achieving the intended energy performance of residential building are in place, namely:

- execution of the construction works to high quality standards and in accordance with i) the regulatory requirements, ii) the execution technique prescribed in the technical specification and iii) the terms of the accepted offer of the builder and of the contract concluded with the builder;
- exercising independent supervision on the construction works in the meaning of Article 168 of the Spatial Planning Act (SPA) and in accordance with the construction contract;
- supervision of the construction works by the designer in the meaning of Article 162 of the SPA and in accordance with the construction contract;
- ongoing control by the investor (owner) during the execution of the construction works.

The quality assurance system should provide for:

- verification of the required competences and qualifications at all phases and levels;
- certainty that the system is respected by all stakeholders (including by documentary checks) and appropriate coordination among different systems; and
- final verification of the completed renovation process, sustainability.

6.2 Needs and attitudes/barriers

The analysis of the results from the satisfaction survey conducted among participants in the National programme for the energy efficiency of multifamily residential buildings as presented in the Report on the ongoing evaluation of the implementation of the Programme indicates that the level of satisfaction is high as the quality of the construction works has been rated as 'Good'. Again in relation to the quality of the construction works, owners have noted



they had to maintain active direct communication with the Contractor, which had been a frustration.

The proposals/recommendations for future programmes of this type include:

- apply more stringent and efficient control on the quality of the activities carried out;
- simplify the defect liability process.

In addition to the feedback from owners; the above-cited report assessed the quality of execution by two indicators:

- Conformity of the construction products with the essential requirements, established on the basis of verification and analysis of the related documentation; and
- Feasibility of the measures prescribed in the TP and by the EE auditors.

As regards the first indicator, the construction products were found to be in conformity with the regulatory requirements. The identified imperfections are not infrequent in the construction business – the presented certificates of conformity pertain to the product in general rather than to the particular lot.

As regards the second parameter, there have been differences between the technical characteristics of the windows/glazing packages prescribed and those of the glazing actually installed, as seen from the construction papers.

Accordingly, the following recommendations have been formulated in order to address the identified imperfections:

- Lay down rules for control and accountability in respect of the certification of the conformity of the construction products and include similar clauses in the contract for supervision of the construction works to ensure that each individual lot satisfies the essential requirements and the technical specifications;
- In the Terms of Reference for design work and for supervision by the designer, include a requirement which mandates the designer to revise the recommendations given by the EE auditor and/or the way these recommendations are applied, provided however that the required energy consumption class is achieved in any case; and
- Strengthen the control on the conformity of the execution (the Contractor's technical plan and Priced Bill of Quantities) with the instructions given in the technical passport and in the EE audit documents.



6.3 Good examples and relevant practices from Europe

Estonia

In the area of EE renovation, the use of a certified professional – **technical consultant** – is mandatory if the apartment association wishes to use a State grant for full-scale renovation. The technical consultant will perform all or some of the following tasks, depending on the agreement with the apartment association:

- preparation of the required documentation and conduct of the procurement procedure for the design work;
- advising on the entry into a contract with the designer;
- coordination of design work and assessment of conformity;
- preparation and conduct of the procurement procedure for construction works, and for supervision of the construction works;
- advising on the entry into a contract with the building contractor and with the supervisor of the construction works;
- coordination of the renovation activities;
- verification of the conformity of the executed works with the invoiced volumes of works and with the contract;
- exercising owner (investor) supervision on behalf of the apartment association;
- organising inspections during the warranty period and advising on the acceptance of warranty works.

Hungary

From 1995 onwards, a large number of specialised middlemen have been successfully operating in the energy renovation market. These are mainly SMEs whose main service is to act as consultants for professional housing managers not only in terms of providing them with the best available technological advice, but most importantly by putting on the table all major options, including during the execution of the renovation activities. These specialised middlemen organize and control the execution of the works and the related activities.



6.4 The contribution of the SHEERenov project to creating an environment which enables the successful implementation of the process

i. *Create a toolbox for end-to-end standardization of the EE renovation process – Technical Toolkit for the execution of renovation activities*

The Technical Toolkit will cover the energy efficiency and sustainability standards laid down in the legislation. Its content will include:

- Description of each phase of the process and definition of the responsibilities of all parties involved in the process;
- Appropriate energy-savings packages for the various types of buildings – 1) standard measures for the building envelope; 2) measures related to installations; 3) RES and so forth;
- The measures which are not intended for achieving energy savings, but are nevertheless required to ensure the sustainability of the EE measures or are mandatory according to the applicable regulatory framework in the case of full-scale renovation;
- Measures leading to deep renovation;
- Methodology for the execution of the renovation activities: step-by-step guide, roles and responsibilities, key aspects to be taken into account when selecting a contractor; etc.; and
- Overview of relevant technologies and methods for the energy renovation of multifamily residential buildings.

A separate section will be dedicated to the quality assurance system. The main objective will be to ensure that the results achieved are optimized in terms of improved indoor environments as well as in terms of energy performance.

ii. *Modular trainings to ensure highly professional management of the renovation process*

These trainings will be targeted to the ‘specialised middlemen’ and will cover all aspects of the renovation process, including the technical aspects.



The training will be delivered in two phases: training of trainers and pilot training for the two types of businesses – professional housing managers and EE auditors.

6.5 The solutions proposed by the SHEERenov project

Firstly, the association of owners should be required to perform owner (investor) supervision of the construction works, which in turn requires the use of professional services. These services can be performed by service providers pursuant to Bulgarian law in the capacity of ‘specialised middlemen’ or by other selected providers with the professional support of the specialised middleman. The specialised middleman should possess the technical knowledge and education background needed to function as trusted participant in the renovation process on behalf of the condominium/association of owners. The functions of the specialised middleman in relation to performing owner (investor) supervision in the course of the construction works include:

- Facilitate the communication with municipal authorities in relation to the issuance of a building permit;
- Perform permanent control on the execution of the works during the entire construction process – from site opening to commissioning – in respect of: 1) the conformity of the types and amounts of executed works with the construction papers and with the Priced Bill of Quantities (PBoQ); 2) the conformity of the materials used with the design/pricing documentation as appended to the construction contract, i.e. with the technical specification, the PBoQ, the contractor’s offer, etc.; 3) compliance with the linear schedules as presented by the contractor and accepted by the client, which form an integral part of the construction contract;
- Ensure that the information in all standard forms relating the investment process is complete and correct and approve these forms before they are signed by an authorised representative of the association of owners.

6.6 Resource and institutional sustainability

Resource sustainability will be ensured by providing toolkits for both service providers and for condominiums/associations of owners enabling them to make an informed choice of a consultant.



Institutional sustainability will be supported by creating a more market-driven environment and by fostering service demand and supply.



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