

Report on Identified Skill Gaps and Needs

Deliverable 2.2

Deliverable Version:	D2.2, V1.0
Dissemination Level:	PU
Author(s):	Ivanka Pandelieva-Dimova, SEC
Contributors:	Padraig Lyons (UCC) Ruchi Agrawal (UCC) Nina Nickolova (CISB) Georgia Veziryianni (CRES) Efi Mavrou (CRES) Izabela Kuśnierz (PNEC) Dorota Guzik (PNEC) Olena Shelemanova (NUBIP) Svitlana Makarevych (NUBIP) Marjana Šijanec-Zavrl (ZRMK)

Contents

List of Acronyms.....	2
1. Acknowledgements	3
2. Executive summary.....	4
3. Methodology of data collection	5
3.1 Organisation of round tables	5
3.2 Organisation of an online survey	5
4. Main Results	7
4.1 Summarised results from the national round tables	7
4.2 National Round Tables: Country context.....	7
4.3 Summarised Results from Online Survey	14
4.3.1 Summarised Figures and Observations	14
4.3.2 Conclusions and Follow-up.....	23
5. Annexes.....	24
Annex 1: Reports from National Round Tables	24
Annex 2: Master Template of the Online Questionnaire	41
Annex 3: Country Specific Summary of Results and Links to Online Questionnaires in National Languages.....	43

List of Acronyms

BMF – Business Model Framework

EE – Energy Efficiency

GA – Grant Agreement

KPIs – Key Performance Indicators

MOOC- Massive Open Online Course

LMS – Learning Management System

OSS – One-Stop-Shops

PV – Photovoltaics

Q(x) – Question (number)

RE – Renewable Energies

SME – Small and Medium Enterprise

VR – Virtual reality

ZEB – Zero Energy Building

1. Acknowledgements

This document has been developed in the framework of LIFE23-CET-BUSHROSSs GA 101167619, within WP2 Mapping of local experiences and identification of skill gaps and needs, T2.3 Identification of skill gaps and needs. It was prepared by SEC in collaboration with IERC and with the involvement of all partners who provided country specific information about the activities performed (round tables and online surveys) and summarization of the achieved results.

2. Executive summary

The document has been prepared to present the outcomes of the performed activities to assess skill gaps and needs related to OSS for home renovation in participating countries. The main aim is to collect the opinion of the identified relevant stakeholders on the existing knowledge shortages, together with their comments and recommendations, and address them when preparing the training curricula and training modules (WP3 and WP4).

The report includes:

- 🏠 Information about the applied methodology for data collection, including the specific tools used, and the audience addressed with these tools.
- 🏠 Presentation of the summarized results of the activities performed.
- 🏠 Main findings and conclusions on how they will be reflected in the development of training curricula and the elaboration of training modules.
- 🏠 Three annexes, namely:
 - 📄 Annex 1 which contains individual reports from the six national round tables.
 - 📄 Annex 2 which provides the Mater Template (in English) of the questionnaire used for the online survey, and
 - 📄 Annex 3 which contains country specific summaries of results of the online survey together with links to the filled in online questionnaires in local languages.

3. Methodology of data collection

The methodology of data collection is based on addressing the identified in T2.1 relevant stakeholders in the participating countries, included in stakeholder databases, which were involved using a number of channels such as direct emailing, use of social media links, contacts and discussions on the phone and during events, etc. To this end two types of activities have been performed:

- 🏠 Round tables – six round tables were performed in the participating countries where the project, its main goals and methodology to achieve them, were presented to the stakeholders, who in their turn, were encouraged to provide feedback on specific issues to be addressed in the training activities.
- 📊 Online survey – an online survey was designed and performed according to a predefined methodology.

The next chapters present in more detail the methodology used to collect data about skill gaps and needs for OSS establishment in the participating countries.

3.1 Organisation of Round Tables

The main aim of the round tables was to contact the relevant local stakeholders in person, present to them the project, its goals and its intended outcomes, and gather first-hand opinion on what are the skill gaps and needs related to establishment and operation of OSS for home renovation. The round tables were organised between March 2025 and July 2025 in the six participating countries, their findings and outcomes were harvested and included in the present report (See 4.1 Summarised Results from the National Round Tables) with the main aim to be used in the development of curricula, training methods and certification schemes (WP3) as well as in the development of tailor-made training modules (WP4).

3.2 Organisation of an online survey

Within WP2 activities an online survey was designed and performed with the main aim to harvest stakeholders' opinion regarding the training gaps and needs for home renovation OSS establishment and operation. The methodology of the survey included preparation of a questionnaire as a master template in English, in Google forms, suitable to be distributed via email and answered online. The questionnaire was designed to address issues relevant to establishment and operation of home renovation OSS, and to reflect the stakeholder opinion on the most important aspects where skills were insufficient and needed improvements. The stakeholders to be surveyed were based on the entries in national stakeholder databases prepared under T2.2 Identification and mapping of relevant stakeholders. The questions in the survey were derived from previous experience with OSS establishment and operation in participating countries and were verified and fine-tuned through discussions held with stakeholders during round tables and other events (workshops, seminars, conference, fairs, etc.). The master template was prepared by SEC in collaboration with IERC, and was reviewed and approved by all partners, after which it was translated in local languages (Bulgarian,

Greek, Polish, Slovenian and Ukrainian) and distributed among 791 stakeholders from the six participating countries as follows:

In Bulgaria — 106 (through direct emailing);

In Greece — 159;

In Ireland — 77;

In Poland — 220 (reached directly through e-mail: 60, Facebook: 63, LinkedIn: 97)

In Slovenia — 159 (through targeted emailing)

In Ukraine — 70

The master template of the online questionnaire can be found in Annex 2.

In total for the whole consortium 246 answers to the questionnaire were received, which were summarised, and respective conclusions were made to be fed in WP3 “Development of curricula, training methods and certification schemes”, and WP4 “Development of tailor-made training modules”. The summarised results from the online questionnaire including distribution of answers by country, can be found in 4.3 “Summarised Results from Online Surveys”

4. Main Results

4.1 Summarised results from the National Round Tables

In order to present the project to local stakeholders and receive their initial reactions and comments, round tables on the identification of skill gaps and needs were organized in the six participating countries. The round tables were held in person (BG, IE, PL, SI) or in hybrid mode (GR and UA), and were adjacent to other events (BG, GR, PL, SI, UA) or in stand-alone mode (IE). The overall number of participants in all round tables is 162 people (BG-46, GR-17, IE-14, PL-11, SI-39 and UA-35).

The **main findings** from the discussions are as follows:

1. The need of comprehensive training of OSS staff applying holistic approach and reviewing home renovation as an integrated process with multifaceted citizen support, was widely recognized by the stakeholders.
2. The discussions resulted in outlining specific topics to be covered by the trainings, including the most advanced technical solutions, organisational and administrative issues, national legal and regulatory frameworks, and funding options and programs which ranked at the top of stakeholder priorities.
3. The proposed modes of training (digital training and modular system) were validated as appropriate and useful.
4. Suggestions were made on specific issues to be covered by the training programs such as
 - a. Citizen energy communities;
 - b. Smart readiness indicators (SRIs);
 - c. Building energy management;
 - d. RE technologies like Solar thermal and PV, and heat pumps;
 - e. Building trusted partnerships and relations with local contractors and service providers (contractors, ESCOs, banks/funding bodies, etc.)
 - f. Quality control and assurance system
 - g. Communication and dissemination – how to best approach citizens to promote OSS services;
 - h. Introduction to digital tools and AI to support OSS staff.

4.2 National Round Tables: Country Context

Following are short descriptions and the main findings of the six round tables (more detailed information incl. agenda, participant lists, etc., can be found in Annex 1 “Reports on the National Round Tables”):

-  **In Bulgaria** the 1st round table was held on 9 May 2025 in the framework of the Annual Meeting of Energy Agencies and Centre, titled “Energy Transition beyond Formalities: New Knowledge and Solutions for Citizens, Local Authorities and Energy Specialists”. It was attended by 46 people among which representatives of ministries, national, regional and

local authorities, energy auditors, VET providers, chambers of industry and commerce, energy agencies, consultancy centres, NGO, etc. The overall training approach, themes, materials and tools proposed in BUSHROSSs were presented and put to discussion, and **suggestions for enhancement collected** such as:

- Introduction to Citizen energy communities for multifamily buildings – the subject will be introduced under the legislation module and the experience of EnEffect with establishment of renewable energy community in a multifamily residential building in the town of Gabrovo will be followed and presented as a case- study
- Building Energy Management will be included in the technical module;
- RE technologies of solar thermal, geothermal and heat pumps will be added to the RES module;
- Introduction to Smart Readiness Indicators (SRI) for dynamic building shell will be added

• **In Greece** the round table was held on 9 May 2025, in Athens, as a hybrid event in an attempt to also offer the opportunity to the representatives of organizations and/or authorities located outside the prefecture of Attiki to participate. The event was organized in parallel with the Round Table of “SMAFIN Expanded – Smart Financing Implementation” project and was attended by 17 participants (13 in person and 4 online). The attendance was not very satisfactory based on the rather medium number of participants, nevertheless, the event managed to gather representatives from the major players and involved parties especially in this first phase of the project activities, i.e., ministries, municipalities, energy consultant agencies, VET providers, building sector representatives and this parameter proved crucial for the content of the discussion during the last part of the Round Table. The main **findings of the round table** were as follows:

- The social workers mainly employed in the municipalities seem one of the most competent categories of professionals that should be trained in the OSSs subjects, as they are usually working with socially and financially vulnerable families and they can have a more global profile of the households and its energy needs since they visit the members of a family in house.
- A special interest was expressed on the part of the municipalities’ representatives regarding the profile of the potential trainees and a short brainstorming concluded that the most competent “profiles” of persons employed are the ones that may be scientifically qualified, nevertheless, they miss some horizontal knowledge mainly addressing the financial and administrative aspects of an OSS establishment and operation. Additionally, the structure and level of maturity of each municipality is a very important criterion regarding the profile of the potential trainees.

- The structure of OSSs may also function as the tool for the municipalities to hold a coordinating role, when it comes to mapping the needs of the most vulnerable target groups (households in energy poverty, or with disabilities, etc.), since these persons don't have an immediate access to the tools and structures regarding renovations issues. The same stands for the homeowners who are neither vulnerable groups nor have they received any kind of funding through national programs/initiatives.
 - There is a clear need from the part of the relevant authorities (potential establishers of OSSs) on how to best approach the procedure of informing the citizens on the addressed topics. This was also confirmed by some of the attendants implementing a relevant project also addressing the OSSs. On the other hand, it is a fact that the relevant authorities (e.g., municipalities) are neither fully nor deeply aware of the utility and importance of the concept of OSSs for home renovations, as an important tool/bridge between the citizens/owners and the involvement in a renovation players. Thus, this consists of a barrier that needs to be overcome, as to attract the interest of more involved parties. The enhancement of networking is very important in order to attract more interested parties, both to fill-up the elaborated questionnaire and to get actively involved in the next activities in the frame of the project. Experience and the so far quantitative results show that more "personalized" approach is required.
 - Last but not least, the topic of the lack of "blue-collar" workers of the building sector, who could participate and contribute to the entire renovation procedure was also highlighted as a known and major problem.
- **In Ireland** the 1st round table was held in person on 02 July 2025 in Cork. It was a standalone dedicated roundtable event organized by IERC and Cork City Council. The round table was moderated by Dr. Padraig Lyons (IERC), and was attended by 14 participants, among which representatives of policy makers, local authorities, training providers, OSS service providers etc. were present. A physical copy of online questionnaire was also distributed among the participants to collect more responses on the questionnaire. To provide context of the discussion a quick overview of the BUSHROSSs project was presented by Michael Canny, Cork City Council. The roundtable discussion was organized as breakout sessions, where all the participants were divided into four groups, each group discussing one expert profile of OSS. An important point is that in Ireland the OSS is being referred to as the Advisory OSS (AOSS) to mark the distinction between already well-established OSS service provided by the Sustainable Energy Authority of Ireland (SEAI), which is the national energy authority of Ireland. The **main results and suggestions** are as follows:
- **Legal Training Needs:** The AOSS staff must provide non-binding, general legal guidance without assuming liability. Key training components include: Understanding liability boundaries for example – clear limits on what AOSS advisor

can recommend; Awareness of planning regulations, for example local planning laws for different types of buildings and permission requirements for external wall insulations or driveways for EV chargers etc.; Training in dealing with multi-owner or rental properties; Legal terminology used in the contractual agreement and clear demarcation of contractor agreements and customer responsibilities;

- **Social Training Needs:** Social factors significantly influence a homeowner's readiness to engage in retrofitting. OSS staff must be equipped to communicate sensitively and supportively, including: Understanding homeowners demographics including age profile, health considerations, financial ability, personality type etc.; Setting realistic expectations in terms of timeline, health & safety and level of disturbance caused by the retrofitting project; Training in aligning the customers' needs and identifying the key motivators (like comfort, health, cost savings etc.); Building trust and rapport by navigating complex emotions like fear, resistance, frustration, failure etc; Recognizing where additional support or referrals may be needed for example may be for disabled residents.
- **Technical/Environmental Training Needs:** Training on technical/environmental aspect of retrofitting is also important, so that the AOSS advisor can understand technical basics well enough to guide conversations and build confidence. Training should include: Overview of various type of retrofit measures for example – wall, attic, floor insulation, window & door replacement, heating system upgrades, RE systems like PV panels, Heat pumps etc.; Understanding technical terminologies like BER, HLI etc.; Training in using the available digital tools like DEAP and explain the report generated by such tools; Simple ways to make the customer understand about emerging technologies and best practices; Ability to create a link between technical and financial aspects of retrofit measures and methods to calculate energy, cost and carbon savings;
- **Economic Training Needs:** Understanding grants, costs, and financial planning is key to empowering homeowners. Training should cover: In-depth knowledge of SEAI and non-SEAI grants and financial supports available for residential renovation; Ability to explain upfront cost and associated savings; Knowledge of low interest loans and direct the residents to suitable institutes for such supports.
- **Delivery Mechanisms for Training:** Delivering high-impact, accessible, and scalable training to AOSS advisory staff is a cornerstone of the BUSHROSSs project. The roundtable participants explored various methods, challenges, and innovations for effectively training diverse stakeholders across countries, contexts, and capabilities. Participants broadly agreed that blended learning is

essential to accommodate different learning styles, regional access levels, and logistical needs. Combine self-paced e-learning or classroom learning with hands-on workshops, ideally via Education & Training Boards (ETBs) or mobile training hubs. Participants emphasized the need for modular training to support tailored learning paths as modularity enables flexible scheduling and micro-certification. The group stressed the importance of leveraging and enhancing existing education and vocational networks (like ETBs, universities, VETs etc.) across Ireland for AOSS staff education and training. Delivering common centralized training modules via decentralized institutions. Long-term impact requires mainstreaming retrofit and energy literacy. Participants highlighted that training delivery must consider real-world barriers, for example cost-free or subsidized training for AOSS recruits, flexible scheduling to accommodate other work or caregiving responsibilities, addressing psychological needs, remote delivery options and broadband or device support system for people in need

- **Challenges and Support for OSS Operation:** The roundtable participants identified a range of challenges that retrofit service providers (e.g., contractors, OSS operators, energy assessors) face when working with homeowners and residents. These challenges are often multifaceted and require OSSs to provide early-stage support, expectation management, and information access to mitigate risk, reduce inefficiencies, and increase project uptake;
- **In Poland** 1st Round table on identification of skill gaps and needs was held on 16 May 2025 in Jadwisin, as a part of 2-day seminar titled: “Cities and Municipalities in the Green Energy Transformation Process”. It was attended by 11 participants and discussed a wide range of practical challenges faced by municipalities and residents when implementing grant programs and conducting energy renovations. Participants emphasized the urgent need for a professional, trustworthy, and easily accessible support system – a One Stop Shop (OSS) – that would truly address the needs of local communities, particularly elderly citizens, digitally excluded individuals, and those mistrustful of formal institutions. Main results and suggestions include:
 - **OSS should be user-friendly and welcoming** – designed more like a shop than an office, located in central areas, with a non-bureaucratic atmosphere.
 - **Multifaceted resident support** – including energy education, technical and psychological guidance, financing advice, and contractor verification.
 - **Create contractor directories and “blacklists”** – developed in collaboration with municipalities to prevent fraud and ensure service quality.
 - **OSS funding models** – should include programs such as LIFE, “Mazowsze bez smogu,” and partnerships with WFOŚiGW, NFOŚiGW, and NGOs, offering flat-rate or per-client compensation.

- **Use of digital tools and AI** – to support OSS staff, provide electronic guidance paths, and streamline services while maintaining offline access.
- **Expand municipal housing stock** – enabling the city to buy out inefficient properties and offer residents affordable, energy-efficient alternatives.
- **Adjust program communication and eligibility criteria** – simplifying language, increasing flexibility, and aligning with real socioeconomic conditions.
- **Inspirations for effective OSS models: “Mazowsze bez smogu”** – as a good example of integrated awareness, advisory, and operational activities; **German “Energy Caravan”** – as a mobile solution to reach vulnerable or isolated groups more effectively.

● **In Slovenia** the 1st round table "Opportunities and challenges of setting up a one-stop shop for home renovation" took place on 7 March 2025, on the occasion of the DOM fair, in Ljubljana. The event was organized by Building Research and Construction Institute ZRMK in the frame of LIFE BUSHROSSs project and developed as a joint event with LIFE Renov-AID project (on development of OSSs in three Slovenian pilot cities). The 1st round table was attended by 39 experts, a good third of them designers, architects and engineers, a lesser third from the public sector, and the remaining participants were (energy) consultants, researchers and providers of products and services for building renovation. On the other hand, 38% of participants were responsible for organisation of OSS and its operation, 20.5% of participants were energy advisors and professionals, future collaborators of OSSs, and 38% of participants were future users of the OSS services. The round table discussion highlighted the key challenges and opportunities in the comprehensive renovation of buildings (from the decision of the owners, design, financing, implementation to quality control), which must be supported by services provided by qualified providers within the framework of a one-stop shop. The main results and suggestions are as follows:

- **Skill gaps:**
 - in the organisational field (establishment of OSS, business model, practical aspects of implementation) with 51.6% of opinions.
 - in the field of the legal framework for the operation of OSS and building renovation (relevant legislation – construction, local communities) with 61.3% support from participants.
 - on financing options and incentive programs for comprehensive building renovation, with 45.2% support.

- on technical aspects and solutions for renovation (energy efficiency and renewable energy measures, renovation planning, step-by-step renovation, renovation and energy management), with 48.8% support.
- Finally, it should be noted that a slightly smaller proportion (38.7% of participants) also identified soft skills in support of building renovation as a gap in knowledge and skills for OSS.

- Quality control and assurance system: Quality control and assurance are key elements of successful renovation. Owners often fail to recognise the importance of control, which leads to poorly executed renovations. It is proposed to establish a renovation quality assessment system that could become part of the OSS model, to establish a list of verified designers and contractors with defined quality standards, and to organise training for all stakeholders – designers, contractors, consultants and banks – on processes, standards and communication with owners.
- Training of stakeholders: only an integrated support service for building renovation can meet the homeowners' expectations and needs and thus increase the scale of renovation. Therefore, the round table focused on the knowledge and skills that OSS participants need to provide truly comprehensive advice. The OSS will include at least four professional profiles – legal, technical, social and economic – and organisational, soft and digital skills are also essential. The biggest gaps are in legal advice and financing, but there's also a big need for technical and organisational skills to help owners renovate their buildings. BUSHROSSs project will design targeted training programmes for staff at one-stop-shops to ensure that their assistance is tailored to the needs of citizens. The participants supported the plan of BUSHROSS project, that over the next two years the massive open online courses (MOOC) would be developed where the staff involved in the organisation and operation of OSS will acquire the key skills needed to successfully carry out advisory activities throughout the entire building renovation process, based on the modularity of curricula and the integration of contemporary digital forms of training.

• **In Ukraine** the 1st round table was held on 6 June 2025, in Kyiv, in the framework of the III International Scientific and Practical Conference "Digital Technologies in Energy and Automation". The event was in a mixed format. It was attended by about 35 participants (15 in-person and 20 online), including representatives of VET providers, energy agencies, consulting centres, local authorities, energy auditors, homeowners, etc. The main results and suggestions are as follows:

- Participants were unanimous in their opinion on the need to improve training programs to develop skills in housing repair and renovation in a "single window" package.

- The need to deepen the knowledge of experts on new technical solutions to increase the energy efficiency of buildings.
- Wider implementation of digitalization in the process of training and retraining of specialists.
- The need to revise the regulatory framework in terms of requirements for achieving regulatory comfort indicators when renovating buildings damaged by war.

4.3 Summarised Results from Online Survey

Online survey was performed in the six participating countries according to the methodology outlined in 3.2 Organisation of an online survey. Following are the main results and outcomes from the survey.

4.3.1 Summarised Figures and Observations

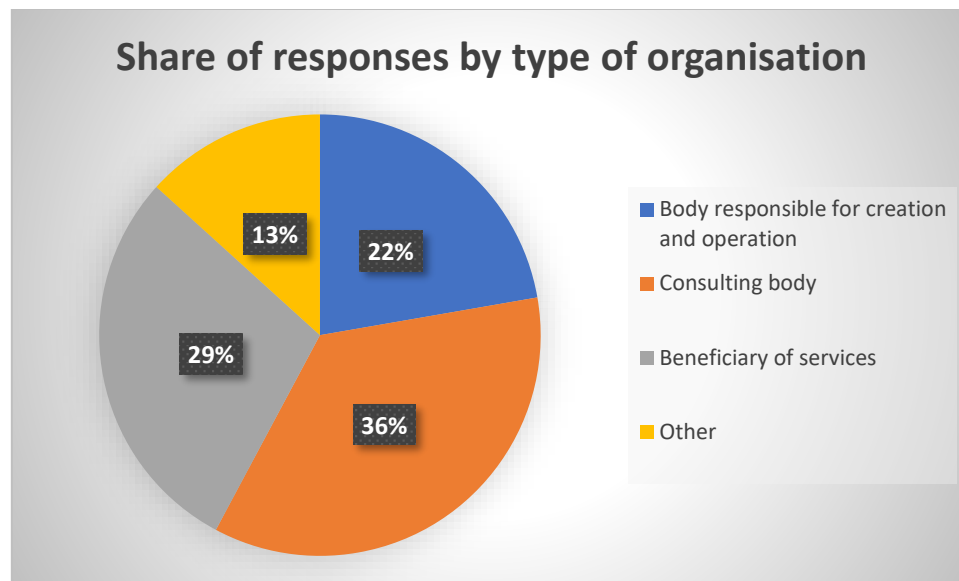
In total for the whole consortium **246** answers were received, out of **791** distributed questionnaires. The number of responses by country is as follows:

Bulgaria — 24;
 Greece — 24;
 Ireland — 25;
 Poland — 21;
 Slovenia — 99; and
 Ukraine — 53

Following are the main findings from the survey:

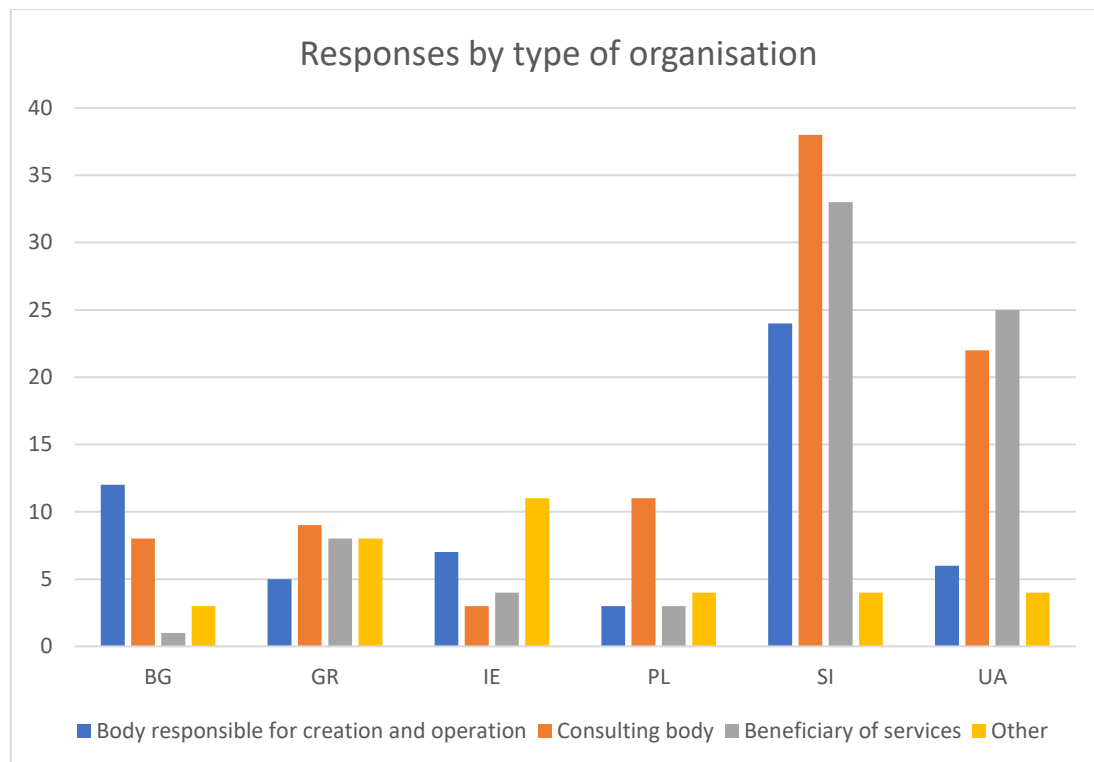
Respondents by type of organisation (Q2)

The biggest number of responses (91) was provided by consulting and advisory body. Next come organisations benefitting of OSS services (74), organisations responsible for OSS establishment and operation (57), and other types of organisations (34) – here it is included governmental institutions, contractors and industry representatives, educational institutions and VET providers, financiers, etc. It should be noted that the sum of the answers to this question (type of organisation) is higher than the total number of answers as in some cases the organisation plays more than one role – e.g. it is simultaneously a beneficiary of services and a consulting body. Below is given the share of responses by type of organisation:



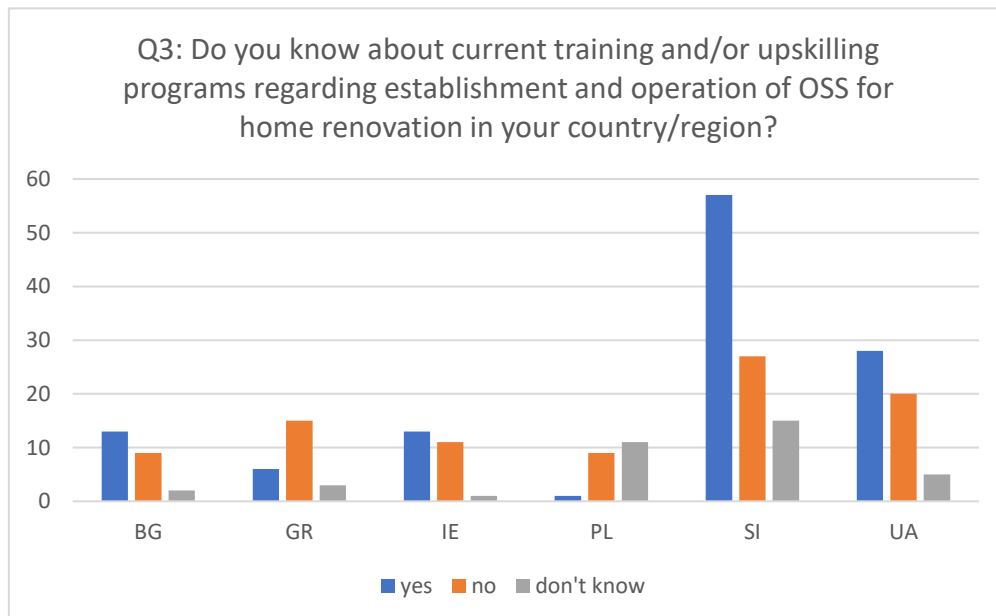
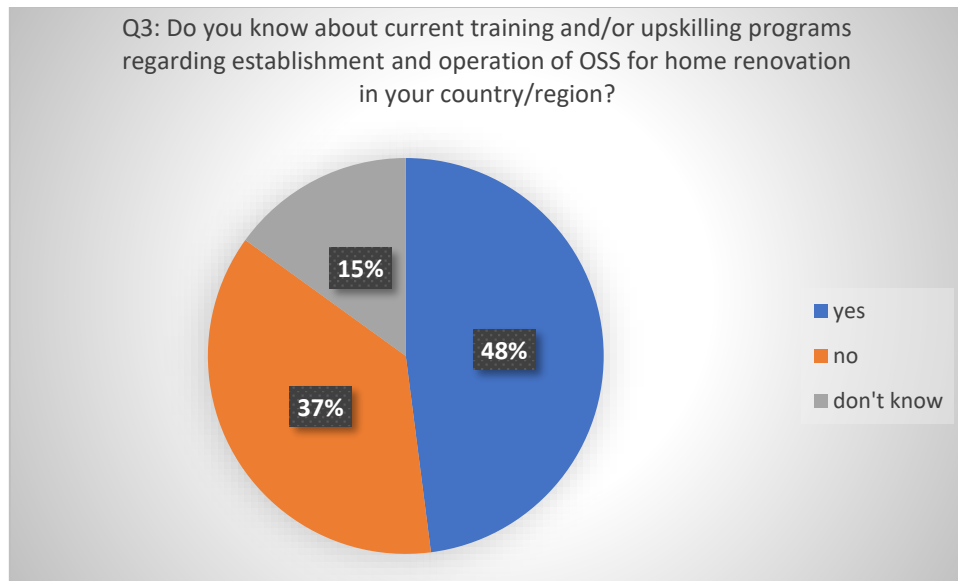
There are some variations of this distribution by country, for example in Bulgaria the biggest is the share of answers given by bodies responsible for OSS establishment and operation, while in Ukraine the biggest share of answers is given by beneficiaries of OSS services, and in Ireland – by other types of organisations. But overall, it can be assumed that the profiles of respondents are enough diverse to allow for representative and non-biased answers leading to meaningful conclusions about skill gaps and needs.

The following chart presents the distribution of answers by type of organisation in the six participating countries.



Knowledge about existing training/upskilling programmes and about the existing gaps in training/upskilling (Q3 and Q4)

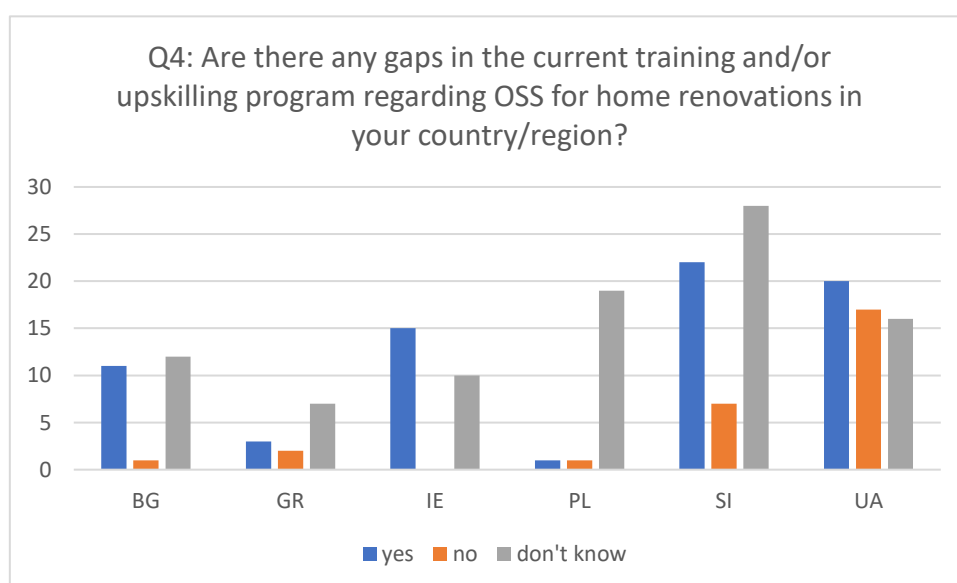
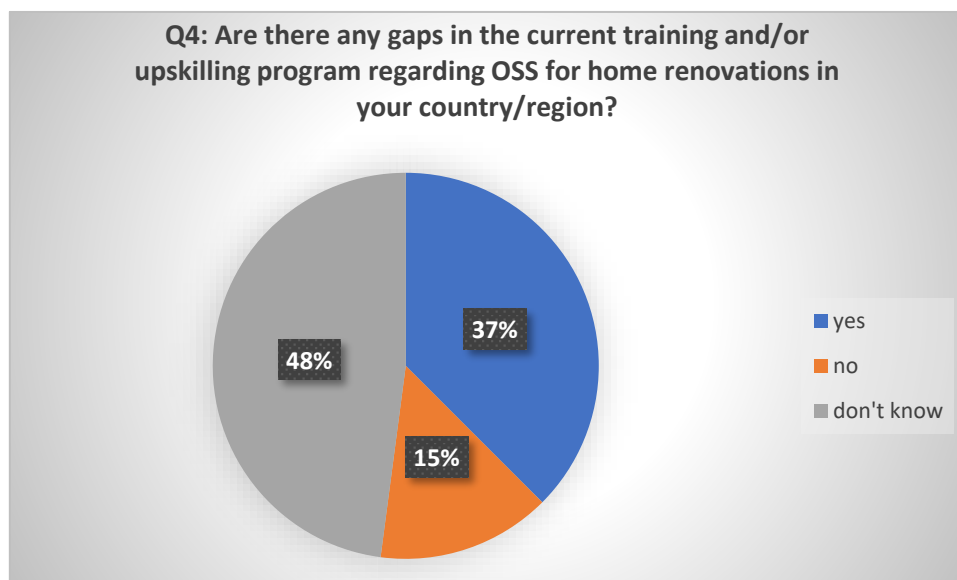
The following two questions from the survey (Q3 and Q4) were designed to assess the level of awareness of stakeholders about training programmes for OSS for home renovation in their countries. The answers show that the almost half of the respondents (48%) know about ongoing training and upskilling activities while 37% of them don't know about such activities. Following are two charts presenting the answers to Q3: the first chart gives the overall results in all countries while the second presents the observed results by country.



The analysis by country shows that stakeholders in Greece and in Poland are in a different situation – in Greece most of them are not aware about current training programmes while in Poland most of them don't feel competent enough to assess if there are such programmes. In the rest of the countries the respondents are mostly aware of the existing training programmes in their respective country.

Q4 is focused on the assessment of the respondents about the gaps and insufficiencies in the current training programmes. The results reveal that 48% of the respondents are not able to answer but still a significant share of them (37%) assert that there are such gaps. The analysis by country shows similar situations in the four out of six surveyed countries while in Ireland and in Slovenia the majority of the respondents think that there are gaps in current OSS trainings in their locations. Similarly, the conclusion from answers to Q4 is that there is knowledge and awareness on the subject among the

local stakeholders which is worth to be collected and can give valuable insights regarding the content of the training programmes under BUSHROSSs. Following are the results of Q4 (overall and country specific), presented visually as charts:

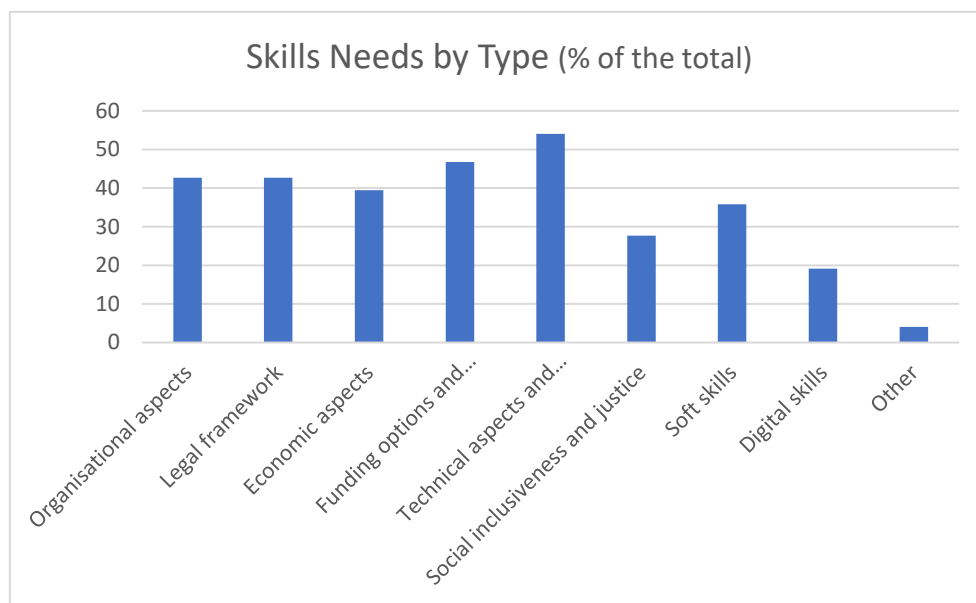


After establishing the landscape of awareness among the respondents regarding the existing upskilling initiatives, the following questions from the survey focused on the assessment of concrete subjects to be considered when preparing the training curricula and training modules.

Skill needs assessment (Q5)

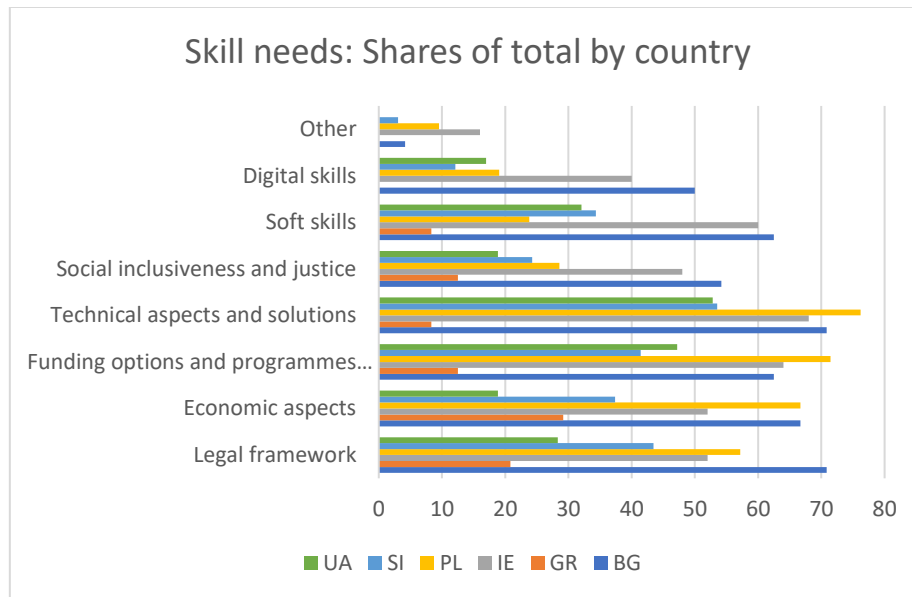
Q5 focused on specific topics to be considered while preparing the content of the BUSHROSSs trainings, such as technical aspects, legal aspects, economic aspects, etc. Answering to the Q5, the majority of responses (133 or 54% of the total) pointed at technical aspects as the most needed upskilling topic.

Funding options and programmes come second as a topic, requiring knowledge acquisition according to 47% of the responses. Organizational aspects and legal aspects share the same figure – 43% of answers and come next while improving of the knowledge about economic aspects follow them with 39%. Soft skills improvement are needed according to 36% of answers, while social inclusiveness and justice, and digital skills improvement were marked by 28% and 19% of the responses respectively. It should be noted that this question gave possibility for more than 1 answer so the sum of the responses is higher than the sum of the respondents. Following are the results to Q5 presented as charts:



If reviewed by country, the results show somewhat similar pictures with a few exceptions – in Greece and in Ireland the respondents consider organisational aspects as the most needed topic for upskilling while in Bulgaria the organisational and the legal aspects are almost equal to the technical aspects as training/upskilling needs. Particularly interesting is the opinion of the Greek stakeholders who rank technical aspects quite among in their lowest priority subjects while giving preference to organisational, legal and economic aspects as mostly needed to upskill.

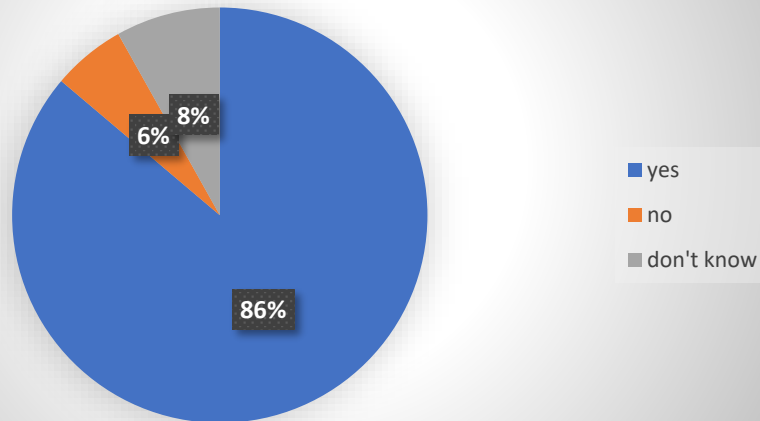
The results by country are shown on the following chart:



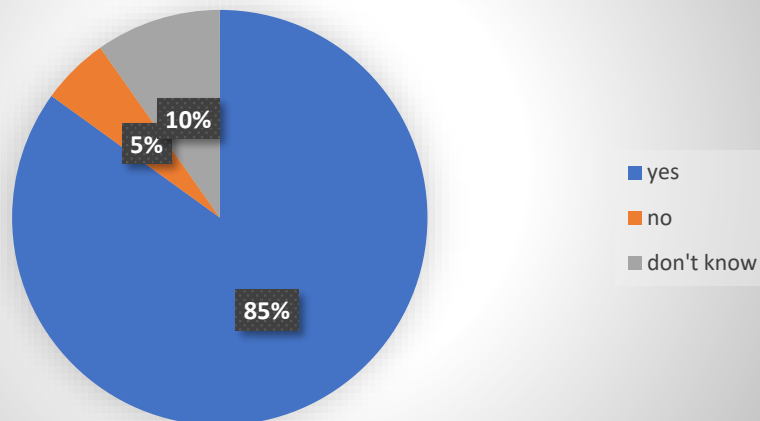
Assessment of training modes (Q6 and Q7)

Questions Q6 and Q7 from the survey focus on specific aspects of the training modes – digital training and modular training. The results are quite unanimous – the predominant number of responses (86% and 85% respectively) consider digital training and modular training as beneficial for the training results. Following are the charts representing the overall summary of answers to Q6 and Q7:

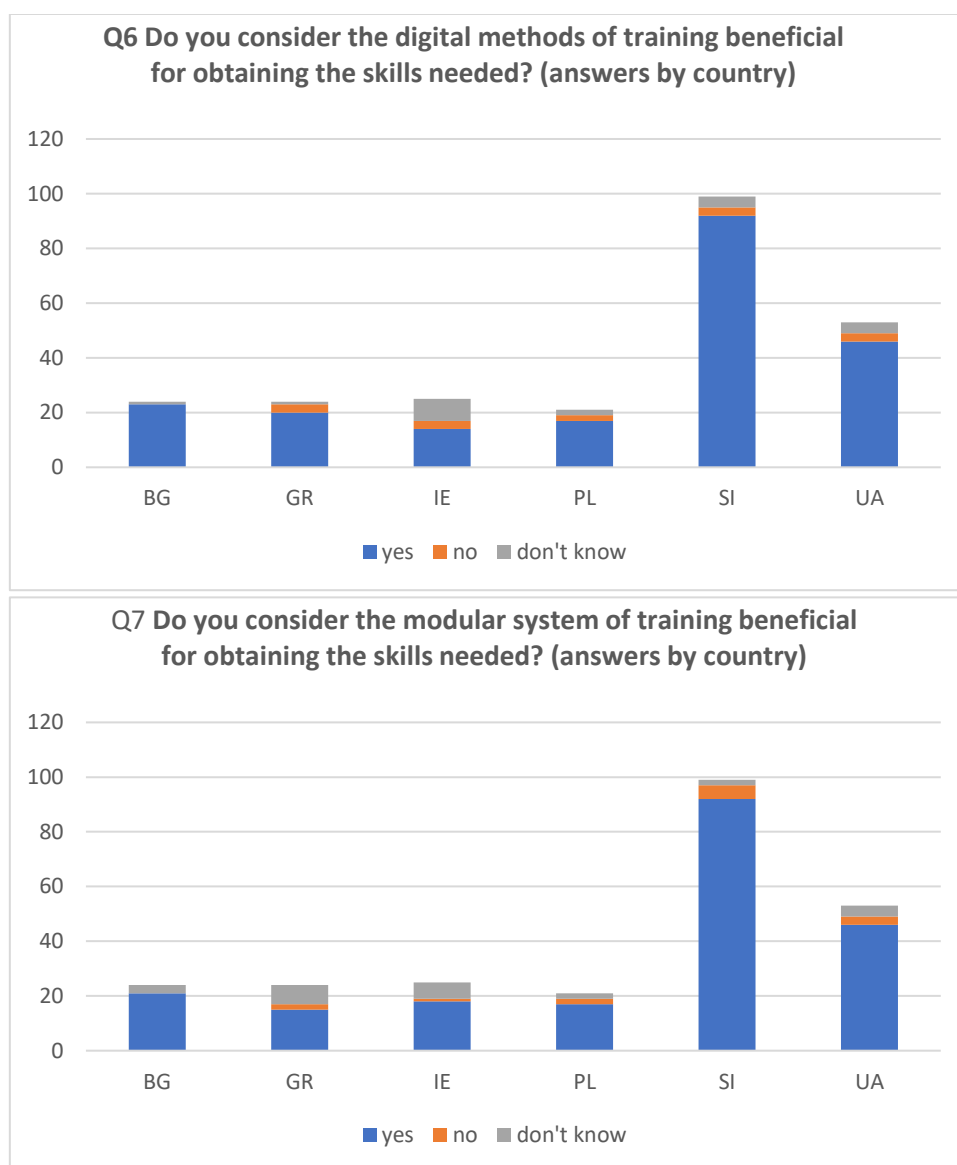
Q6 Do you consider the digital methods of training beneficial for obtaining the skills needed? (% of total)



Q7 Do you consider the modular system of training beneficial for obtaining the skills needed? (% of total)



No significant variations in answers are observed by country. Following are the answers to Q6 and Q7 by country, presented as charts:



Comments and suggestions (Q8)

Q8 is an open question which gives the opportunity to respondents to express their comments and suggestions related to training/upskilling of staff involved in home renovation OSSs. There are 43 separate entries giving stakeholders' observations, insights and ideas on various aspects of skill gaps and needs for home renovation OSSs staff. These observations, insights and ideas were collected and will be potentially used when designing the forthcoming BUSHROSSs trainings especially when adapting training materials to the country's specific conditions.

The full list of harvested comments and suggestions can be found in Annex 3: Country Specific Summary of Results and Links to Online Questionnaires in National Languages.

4.3.2 Conclusions and Follow-up

Several main conclusions can be drawn from the results of BUSHROSSs online survey, as follows:

- ❶ The overall number of distributed questionnaires (791) can be considered representative to the market of home renovation OSSs in the participating countries. It is much higher than the commitment made in GA (300), and the distribution list in each country also exceeds the promised in GA 50 recipients which provides a sound basis for the execution of the online survey;
- ❷ The number of received answers to the online questionnaire (246) makes an overall response rate of 31%, considered good enough for making valid conclusions.
- ❸ The profile of respondents is quite versatile which enables collecting of information from different viewing angles and provision of insights from various perspectives.
- ❹ As almost half of the respondents (48%) answer that they know about ongoing training and upskilling activities, it can be concluded that a significant share of the surveyed stakeholders have knowledge to assess and give valuable insights about the lacks and insufficiencies in the current OSS training programmes which can be harvested and fed into the process of development of training curricula and training modules. Additionally, a significant share of respondents (37%) assert that there are gaps in the current training programmes which can be used as a starting point when designing and developing the BUSHROSSs training curricula and modules.
- ❺ The assessment of skill needs (Q5) shows that the presented topics are considered important by the respondents and should be included in the BUSHROSSs training programme.
- ❻ The presented approach towards training modes (digital training and modular training) gains wide-spread approval on behalf of the surveyed and therefore is endorsed as beneficial for filling the skill gaps.
- ❼ The comments and suggestions, presented under Q8, give local stakeholders the opportunity to address country-specific issues and are a valuable source of information when adapting the overall training materials to various local contexts in participating countries.

The harvested results and insights from the online survey will be fed into the forthcoming activities and will be used as guidelines for the development of BUSHROSSs training curricula and training modules.

5. Annexes

Annex 1: Reports from National Round Tables

Bulgaria

BUSHROSSs 1st Round table on Identification of skill gaps and needs

Held in the framework of the Annual Meeting of Energy Agencies and Centre

“Energy Transition beyond Formalities: New Knowledge and Solutions for Citizens, Local Authorities and Energy Specialist”

09 May 2025, Hotel Hemus, Sofia, Bulgaria

Agenda

Panel 3: Skill Development Round table “Build-Up Skills of Specialists in Energy Efficiency and RES n Buildings” Moderator: Ivanka Pandelieva-Dimova, Sofia Energy Centre	
14:00 – 14:30	Part 1: Building up Skills of Experts in One-Stop-Shops (OSS) for Home Renovation – BUSHROSSs Project - Needs of training targeted to different expert profile – legal, economic, technical and social; - Digital Training Needs (MOOC, LMP); - Needs for Modular System ad Micro credentials ; - Other?? <i>Ivanka Pandelieva-Dimova, SEC</i>
14:30 – 15:00	Part 2: Training Methods, Materials and Tools for Specialists in Energy Efficiency and RES n Buildings –NS4nZEBs Project - Selected Training Methods - Training Programmes and Modules <i>Evelina Stoykova, SEC, Nina Nikolova, CISB</i>
15:00 – 15:15	Part 3: Training Materials Using Virtual reality <i>Alexander Stankov, Centre for Energy Efficiency EnEffect</i>
15:15 – 15:30	Discussion

Summary of the event

The 1st round table was held in person on 09 May 2025, in Sofia, Bulgaria, in the framework of the Annual Meeting of Energy Agencies and Centre under the title “Energy Transition beyond Formalities:

New Knowledge and Solutions for Citizens, Local Authorities and Energy Specialist. The round table was moderated by Ivanka Pandelieva-Dimova (SEC), and was attended by 46 participants, among which representatives of ministries, national, regional and local authorities, energy auditors, VET providers, chambers of industry and commerce, energy agencies, consultancy centres, NGO, etc. The main issues presented and discussed were focused on the skills needs in the field of EE and RE in buildings, and the training themes and methods offered by various ongoing actions (BUSHROSSs, NS4nZEBs, DiVirtue).

Main Results and Suggestions

The overall training approach, themes, materials and tools proposed in BUSHROSSs were presented and put to discussion, and suggestions for enhancement collected such as:

- Introduction to Citizen energy communities for multifamily buildings – the subject will be introduced under the legislation module and the experience of EnEffect with establishment of renewable energy community in a multifamily residential building in the town of Gabrovo will be followed and presented as a case-study;
- Building Energy Management will be included in the technical module;
- RE technologies of solar thermal, geothermal and heat pumps will be added to the RES module;
- Introduction to Smart Readiness Indicators (SRI) for dynamic building shell will be added.

Participant List *(will be provided scanned with signatures upon request)*

Selected photos *(will be provided upon request)*

Greece

BUSHROSSs 1st Round table on the Identification of skill gaps and needs

Held in parallel with the Round Table of “SMAFIN Expanded – Smart Financing Implementation” project, also implemented by CRES, as a parallel session with different target group

09 May 2025, “Amalia Hotel”, Athens

Zoom link: <https://us06web.zoom.us/meeting/register/lwgbm93YT9G2JnxD5i7HNg>

Agenda

12:15 - 12:30	Attendance / Registration of participants
Moderator	<i>Vassilis Kilias, Director of Energy Policy Division, CRES</i>
12:30 - 12:45	Brief presentation of BUSHROSSs project – <i>Georgia Veziryianni, Training & Communication Department, CRES</i>
12:45 - 13:15	Digital methods of training – MOOC and LMS – <i>Efi Mavrou, Training & Communication Department, CRES</i>
13:15 - 13:45	Modular trainings and microcredentials – <i>Kostas Sioulas, Head of Training & Communication Department, CRES</i>
13:45 - 14:00	Identification of skill gaps and needs for home renovation OSSs Up-skilling for home renovation OSSs for the four identified expert profiles – legal, technical, economic and social – <i>Georgia Veziryianni, Training & Communication Department, CRES</i>
14:00 - 14:30	Discussion & Conclusions

Summary of the event

The “1st Round Table on the identification of skill gaps and needs”, being the first Round Table implemented in the frame of the project, as the initial step towards the mapping of the current status, was organized on the 9th of May 2025. The event was actually implemented as a hybrid event, in an attempt to also offer the opportunity to the representatives of organizations and/or authorities located outside the prefecture of Attiki to participate. This was decided mainly addressing the municipalities - being a main target group, especially critical during the first phase of the project activities - since in the case of Greece CRES representatives have contacted a large number of municipalities not located in the strict area of Attiki (the link of the Zoom is provided in the agenda (<https://us06web.zoom.us/meeting/register/lwgbm93YT9G2JnxD5i7HNg>)).

Thus the 1st Round Table took place in Athens, and more specifically in hotel “Amalia” located in the city centre, while it was co-organized together with the Round Table (plenary session) of another project, (“SMAFIN Expanded – Smart Financing Implementation”) project, also implemented by CRES, as an afterwards parallel session with different target group. This option was decided so as to offer the opportunity to a common category of participants to benefit of both events.

The Round Table was moderated by Vassilis Kilias, Director of the Director of Energy Policy Division (CRES), and it was attended by 13 participants with physical attendance and 4 more who followed the event online, among which representatives of ministries, municipalities, energy agency consultants, federations of building workforce.

The main issues presented and discussed were focused on the general frame of the required training as well as the most suitable target group to update their skills regarding the OSSs addressing the topic of home renovation. Nevertheless, according to the structure of the “common” agenda for the 1st Round Table, as suggested by SEC (WP2 Leader), in the beginning of the Round Table a brief presentation of the project concept, scope, and main activities was implemented. During the first part of the event, a special focus was made on the overall training approach, the digital methods of training used for the project scopes (MOOC and LMS), as well as the tools proposed in BUSHROSSs. The first part closed with a brief presentation of the concept of the modular training and the micro-credentials as an added value as a certification means.

The last part of the Round Table was dedicated to the presentation of the – so far – answers received through the especially elaborated questionnaire, addressing the skill gaps and needs for home renovation OSSs. This part indeed proved the one to attract the most the interest of the participants, as the answers and statistical results to all the addressed questions were presented and commented by the attendants.

Main Results and Suggestions

The attendance in the 1st Round Table was not very satisfactory based on the rather medium number of participants, nevertheless, the event managed to gather representatives from the major players and involved parties especially in this first phase of the project activities, i.e., ministries, municipalities, energy consultant agencies, VET providers, building sector representatives and this parameter proved crucial for the content of the discussion during the last part of the Round Table.

The main topics and or issues discussed were as follows:

The social workers mainly employed in the municipalities seem one of the most competent category of professionals that should be trained in the OSSs subjects, as they are usually working with socially and financially vulnerable families and they can have a more global profile of the households and its energy needs since they visit the members of a family in house.

A special interest was expressed on the part of the municipalities’ representatives regarding the profile of the potential trainees and a short brainstorming concluded that the most competent “profiles” of persons employed are the ones that may be scientifically qualified, nevertheless, they miss some horizontal knowledge mainly addressing the financial and administrative aspects of an OSS

establishment and operation. Additionally, the structure and level of maturity of each municipality is a very important criterion regarding the profile of the potential trainees.

The structure of OSSs may also function as the tool for the municipalities to hold a coordinating role, when it comes to mapping the needs of the most vulnerable target groups (households in energy poverty, or with disabilities, etc.), since these persons don't have an immediate access to the tools and structures regarding renovations issues. The same stands for the homeowners who are neither vulnerable groups nor have they received any kind of funding through national programs/initiatives.

There is a clear need from the part of the relevant authorities (potential establishers of OSSs) on how to best approach the procedure of informing the citizens on the addressed topics. This was also confirmed by some of the attendants implementing a relevant project also addressing the OSSs. On the other hand, it is a fact that the relevant authorities (e.g., municipalities) are neither fully nor deeply aware of the utility and importance of the concept of OSSs for home renovations, as an important tool/"bridge" between the citizens/owners and the involvement in a renovation players. Thus, this consists of a barrier that needs to be overcome, as to attract the interest of more involved parties. The enhancement of networking is very important in order to attract more interested parties, both to fill-up the elaborated questionnaire and to get actively involved in the next activities in the frame of the project. Experience and the so far quantitative results show that a more "personalized" approach is required.

Last but not least, the topic of the lack of "blue-collar" workers of the building sector, who could participate and contribute to the entire renovation procedure was also highlighted as a known and major problem.

In general, the 1st Round Table was implemented with somehow limited attendance, nevertheless the discussion that took part especially during the presentation of the so far received answers to the questionnaires was vivid and "touched" critical issues that characterize the concept of OSSs.

Participant List *(will be provided scanned with signatures upon request)*

Selected photos *(will be provided upon request)*

Ireland

BUSHROSSs 1st Round table on Identification of skill gaps and needs

02 July 2025, UCC Centre for Executive Education, 1 Lapp's Quay, Cork, T12 VF82

Agenda

9:30–9:50 – Coffee & Networking
9:50–10:00 – Completion of Questionnaire
10:00–10:30 – Project Introduction
10:30–11:55 – Breakout Session – Identifying training needs
11:55–12:00 – Wrap-up & Group Photo

Summary of the event

The 1st round table of Ireland was held in person on 02 July 2025 in Cork, Ireland. It was a standalone dedicated roundtable event organized by IERC and Cork City Council. The round table was moderated by Dr. Pdraig Lyons (IERC), and was attended by 14 participants, among which representatives of policy makers, local authorities, training providers, OSS service providers etc. were present.

A physical copy of online questionnaire was also distributed among the participants to collect more responses on the questionnaire.

To provide context of the discussion a quick overview of the BUSHROSSs project was presented by Michael Canny, Cork City Council. The roundtable discussion was organized as breakout sessions, where all the participants were divided into four groups, each group discussing one expert profile of OSS.

An important point is that in Ireland the OSS is being referred to as the Advisory OSS (AOSS) to mark the distinction between already well-established OSS service provided by the Sustainable Energy Authority of Ireland (SEAI), which is the national energy authority of Ireland.

The following questions were discussed among the participants –

Q1- What are the gaps in training targeted to different expert profile – Legal, Economic, Technical/Environmental and Social?

Q2 - What are the needs in terms of delivery mechanism for training targeted to different expert profiles – Legal, Economic, Technical/Environmental and Social?

Q3 - What challenges do retrofit service providers face when dealing with residents/customers? What challenges do residents present? What help do they need in terms of different expert profiles - Legal, Economic, Technical/Environmental and Social?

Main Results and Suggestions

1. Training Needs Assessment

The central theme of the BUSHROSS Roundtable was identifying **training gaps and requirements** for Advisory One Stop Shop (AOSS) staff. AOSS personnel are not contractors, engineers, or commercial entities, instead, they act as **neutral guides** for homeowners on their energy retrofit journey. Therefore, their training must blend not just technical, legal, social and financial but also digital and interpersonal skills. The roundtable explored this in depth, organizing training needs –

- **Legal Training Needs**

The AOSS staff must provide **non-binding, general legal guidance** without assuming liability. Key training components include:

- i. Understanding liability boundaries for example – clear limits on what AOSS advisor can recommend.
- ii. Awareness of planning regulations, for example local planning laws for different types of buildings and permission requirements for external wall insulations or driveways for EV chargers etc.
- iii. Training in dealing with multi-owner or rental properties.
- iv. Legal terminology used in the contractual agreement and clear demarcation of contractor agreements and customer responsibilities.

- **Social Training Needs**

Social factors significantly influence a homeowner's readiness to engage in retrofitting. OSS staff must be equipped to communicate sensitively and supportively, including:

- i. Understanding homeowners demographics including age profile, health considerations, financial ability, personality type etc.
- ii. Setting realistic expectations in terms of timeline, health & safety and level of disturbance caused by the retrofitting project.
- iii. Training in aligning the customers' needs and identifying the key motivators (like comfort, health, cost savings etc.)
- iv. Building trust and rapport by navigating complex emotions like fear, resistance, frustration, failure etc.
- v. Recognizing where additional support or referrals may be needed for example may be for disabled residents.

- **Technical/Environmental Training Needs**

Training on technical/environmental aspect of retrofitting is also important, so that the AOSS advisor can understand technical basics well enough to guide conversations and build confidence. Training should include –

- i. Overview of various type of retrofit measures for example – wall, attic, floor insulation, window & door replacement, heating system upgrades, RE systems like PV panels, Heat pumps etc.
- ii. Understanding technical terminologies like BER, HLI etc.
- iii. Training in using the available digital tools like DEAP and explain the report generated by such tools.
- iv. Simple ways to make the customer understand about emerging technologies and best practices.
- v. Ability to create a link between technical and financial aspects of retrofit measures and methods to calculate energy, cost and carbon savings.

- **Economic Training Needs**

Understanding grants, costs, and financial planning is key to empowering homeowners. Training should cover:

- i. In-depth knowledge of SEAI and non-SEAI grants and financial supports available for residential renovation.
- ii. Ability to explain upfront cost and associated savings.
- iii. Knowledge of low interest loans and direct the residents to suitable institutes for such supports.

2. Delivery Mechanisms for Training

Delivering high-impact, accessible, and scalable training to AOSS advisory staff is a cornerstone of the BUSHROSSs project. The roundtable participants explored various **methods, challenges, and innovations** for effectively training diverse stakeholders across countries, contexts, and capabilities.

Participants broadly agreed that blended learning is essential to accommodate different learning styles, regional access levels, and logistical needs. Combine self-paced e-learning or classroom learning with hands-on workshops, ideally via Education & Training Boards (ETBs) or mobile training hubs.

Participants emphasized the need for modular training to support tailored learning paths as modularity enables flexible scheduling and micro-certification. The group stressed the importance of leveraging and enhancing existing education and vocational networks (like ETBs, universities, VETs etc.) across Ireland for AOSS staff education and training. Delivering common centralized training modules via decentralized institutions. Long-term impact requires mainstreaming retrofit and energy literacy.

Participants highlighted that training delivery must consider real-world barriers, for example cost-free or subsidized training for AOSS recruits, flexible scheduling to accommodate other work or caregiving responsibilities, addressing psychological needs, remote delivery options and broadband or device support system for people in need.

3. Challenges and Support for OSS Operation

The roundtable participants identified a range of challenges that retrofit service providers (e.g., contractors, OSS operators, energy assessors) face when working with homeowners and residents. These challenges are often multifaceted and require OSSs to provide **early-stage support, expectation management, and information access** to mitigate risk, reduce inefficiencies, and increase project uptake.

In terms of challenges for AOSS advisors' level of knowledge and preconceived ideas of customers' needs to be addressed. Managing expectations of the customers, and compliance with GDPR could be other challenges for AOSSs advisors.

For technical expert profile of AOSS advisors, multimedia means to support or demonstrate the roadmap of proposed retrofit actions and various benefits of associated would be helpful to gain confidence of the customers. Also having a checklist to collect the information about the residential property to propose the appropriate course of action would be helpful for AOSS advisor. Reducing the numbers of uncommitted potential customers, who are primarily interested in just information at this point of time engaging with SEAI One Stop Shops and other retrofit providers, would also be important for AOSS to streamline engagement with the providers and support retrofit providers deliver for customers.

Participant List *(will be provided scanned with signatures upon request)*

Selected photos *(will be provided upon request)*

Poland

BUSHROSSs 1st Round table on Identification of skill gaps and needs

Held in the framework of the Annual Meeting of Polish Network “Energie Cites”

“Cities and Municipalities in the Process of Green Energy Transition”

16 May 2025, Geovita Training and Conference Center, Jadwisin, Poland

Agenda

11:20 – 12:20	Panel: Pathways of transformation - a good practice session Round table “Comprehensive energy consulting using One-Stop-Shop concept” <i>Moderator: Izabela Kuśnierz, Dorota Guzik, Daria Borowik, Association of Municipalities Polish Network “Energie Cites”</i>
	- Needs of training targeted to different expert profile – legal, economic, technical and social; - Digital Training Needs (MOOC, LMP); - What challenges do municipalities face when dealing with residents? What problems do residents present? What help do they need? - What should an OSS look like? What should the OSS provide? What services should be available? - What municipalities need to run OSS successfully

Summary

The Roundtable meeting organized within the **BUSHROSSs** project revealed a wide range of practical challenges faced by municipalities and residents when implementing grant programs and conducting energy renovations. Participants emphasized the urgent need for a professional, trustworthy, and easily accessible support system – a **One Stop Shop (OSS)** – that would truly address the needs of local communities, particularly elderly citizens, digitally excluded individuals, and those mistrustful of formal institutions.

Key discussion points included: misuse of grants and lack of trust in contractors, confusion about program rules and criteria, the need for tailored approaches, and the creation of a simple and accessible OSS model. Participants also highlighted successful inspirations from other initiatives such as **Mazowsze bez smogu** in Poland and the **Energy Caravan** in Germany.

Main Results and Suggestions

Key Problems and Needs Identified:

- **Mistrust and confusion among residents** – fear of fraud, lack of understanding of programs, difficulties in verifying contractors.

- **Insufficient accessibility of OSS** – current support points feel bureaucratic and are not suited for elderly or digitally excluded populations.
- **Unprofitable renovations for some properties** – need for systemic solutions like municipal buyouts and offering alternative housing.
- **Changing and complex program criteria** – existing frameworks (of for example governmental programs as “Clean Air” and “Stop Smog”) are too rigid or unclear and do not reflect real-life situations of the residents.
- **Lack of stable, attractive working conditions for energy-related professionals** – retaining competent staff remains a challenge.

Recommendations and Suggestions:

1. **OSS should be user-friendly and welcoming** – designed more like a shop than an office, located in central areas, with a non-bureaucratic atmosphere.
2. **Multifaceted resident support** – including energy education, technical and psychological guidance, financing advice, and contractor verification.
3. **Create contractor directories and “blacklists”** – developed in collaboration with municipalities to prevent fraud and ensure service quality.
4. **OSS funding models** – should include programs such as LIFE, “Mazowsze bez smogu,” and partnerships with WFOŚ, NFOŚ, and NGOs, offering flat-rate or per-client compensation.
5. **Use of digital tools and AI** – to support OSS staff, provide electronic guidance paths, and streamline services while maintaining offline access.
6. **Expand municipal housing stock** – enabling the city to buy out inefficient properties and offer residents affordable, energy-efficient alternatives.
7. **Adjust program communication and eligibility criteria** – simplifying language, increasing flexibility, and aligning with real socioeconomic conditions.
8. **Inspirations for effective OSS models:**
 - **“Mazowsze bez smogu”** – as a good example of integrated awareness, advisory, and operational activities.
 - **German “Energy Caravan”** – as a mobile solution to reach vulnerable or isolated groups more effectively.

Participant List *(will be provided scanned with signatures upon request)*

Selected photos *(will be provided upon request)*

Slovenia

BUSHROSSs 1st Round table on Identification of skill gaps and needs

Held in the framework of the international fair DOM 2025¹ (HOME 2025) in Ljubljana

“Opportunities and challenges of setting up a „one-stop shop” for home renovation”

Friday, 07 March, 2025, 10:15-13:30,

in Urška room, at Gospodarsko razstavišče, Ljubljana, Slovenia

Agenda

petek, 7. marca 2025, dvorana Urška 1, Gospodarsko razstavišče v Ljubljani

Time	Title	Lecturer
10:15 –10:30	Arrival and registration of participants	
10:30 – 10:45	Welcome and introduction to legislative background - EPBD transposition status and plans for OSS in Slovenia	mag. Erik Potočar / Gregor Rome, Ministry of environment, climate and energy MOPE
10:45 – 11:30	Presentation of the OSS principles - Organisation and scope of OSS – various solutions - Renov-AID project, OSS in pilot cities (Ljubljana, Kranj, Velenje) Skills gaps in OSS - BUSHROSSs project, training needs to different expert profile - legal, economic, technical and social skills; - Digital Training Needs (MOOC, LMP); - Needs for Modular System ad Micro credentials	Ana Tisov, mag. Jure Vetršek, Institute for Innovation and Development of University of Ljubljana - IRI-UL dr. Marjana Šijanec Zavrl, Building and Civil Engineering Institute ZRMK - GI ZRMK
11:30 – 12:15	Round table - Modul 1: Challenges and benefits of participating in the OSS - Key stakeholders, motivation	mag. Vladimir Gumilar, Andro Goblon, Construction Cluster of Slovenia - SGG
12:15 – 13:00	Round table - Modul 2: Key skills in OSS -Skills gaps, training methods and modules; - OSS stakeholders, matching demand and supply skills in OSS	dr. Marjana Šijanec Zavrl, Neva Jejčič, GI ZRMK
13:00 – 13:30	Discussion and networking over coffee and snacks	
Moderator: dr. Miha Tomšič, GI ZRMK		

¹ <https://www.sejemdom.si/o-sejmu/svetovanja/gradbeni-institut-zrmk-spremljevalni-program/>

(Accompanying professional events of GI ZRMK organized at fair DOM 2025)

Summary of the event

The 1st round table "Opportunities and challenges of setting up a one-stop shop for home renovation", which took place on 7 March 2025, on the occasion of the DOM fair, in Ljubljana, Slovenia. The event was organized by Building Research and Construction Institute ZRMK in the frame of LIFE BUSHROSSs project and developed as a joint event with LIFE Renov-AID project (on development of OSSs in three Slovenian pilot cities). The 1st round table was attended by 39 experts, a good third of them designers, architects and engineers, a lesser third from the public sector, and the remaining participants were (energy) consultants, researchers and providers of products and services for building renovation. On the other hand, 38% of participants were responsible for organisation of OSS and its operation, 20,5% of participants were energy advisors and professionals, future collaborators of OSSs, and 38% of participants were future users of the OSS services.

The event was opened by the moderator Dr. Miha Tomšič from the Building and Civil Engineering Institute of ZRMK (GI ZRMK). Introductory speeches were given by Gregor Rome from the Energy Directorate of the Ministry of environment, climate and energy (MOPE), Ana Tisov and Jure Vetršek from the Innovation and Development Institute of the University of Ljubljana (IRI-UL) as coordinators of the Renov-AID project and Dr. Marjana Šijanec Zavrl from the GI ZRMK as a representative of the BUSHROSS project. The discussion was moderated by Andro Goblon from the Slovenian Construction Cluster and Neva Jejčič from GI ZRMK. The discussion highlighted the current challenges of housing renovation and the possibilities of solutions through integrated services and addressed the missing skills on the part of the one-stop-shop focal points, as well as possible ways of acquiring them within the BUSHROSSs project.

Main results and Suggestions

The round table discussion highlighted the key challenges and opportunities in the comprehensive renovation of buildings (from the decision of the owners, design, financing, implementation to quality control), which must be supported by services provided by qualified providers within the framework of a one-stop shop. The BUSHROSSs project aims to fill the gaps in the knowledge and skills of OSS staff through training tailored to the objectives of the stakeholders (in a modular and digitalized form).

Skills gaps

Among the missing knowledge and skills, the following were particularly highlighted

- in the organisational field (establishment of OSS, business model, practical aspects of implementation) with 51.6% of opinions,
- in the field of the legal framework for the operation of OSS and building renovation (relevant legislation – construction, local communities) with 61.3% support from participants,
- on financing options and incentive programmes for comprehensive building renovation, with 45.2% support,
- on technical aspects and solutions for renovation (energy efficiency and renewable energy measures, renovation planning, step-by-step renovation, renovation and energy management), with 48.8% support.

Finally, it should be noted that a slightly smaller proportion (38.7% of participants) also identified soft skills in support of building renovation as a gap in knowledge and skills for OSS.

Quality control and assurance system

Quality control and assurance are key elements of successful renovation. Owners often fail to recognize the importance of control, which leads to poorly executed renovations. It is proposed to establish a renovation quality assessment system that could become part of the OSS model, to establish a list of verified designers and contractors with defined quality standards, and to organise training for all stakeholders – designers, contractors, consultants and banks – on processes, standards and communication with owners.

Training of stakeholders

Only an integrated support service for building renovation can meet the homeowners' expectations and needs and thus increase the scale of renovation. Therefore, the round table focused on the knowledge and skills that OSS participants need to provide truly comprehensive advice. The OSS will include at least four professional profiles – legal, technical, social and economic – and organisational, soft and digital skills are also essential. The biggest gaps are in legal advice and financing, but there's also a big need for technical and organisational skills to help owners renovate their buildings.

BUSHROSSs project will design targeted training programmes for staff at one-stop-shops to ensure that their assistance is tailored to the needs of citizens. The participants supported the plan of BUSHROSS project, that over the next two years the massive open online courses (MOOC) would be developed where the staff involved in the organisation and operation of OSS will acquire the key skills needed to successfully carry out advisory activities throughout the entire building renovation process, based on the modularity of curricula and the integration of contemporary digital forms of training.

The presentations from the 1st round table of BUSHROSSs project can be downloaded at [link](#). The report about the 1st round table is available (in Slovenian) at [link](#).

The progress can be followed on the [website](#).

Participant List *(will be provided scanned with signatures upon request)*

Selected photos *(will be provided upon request)*

Ukraine

Round table

Upgrading the skills of building renovation experts in a one-stop shop package

The round table was held within the framework of the III International Scientific and Practical Conference "Digital Technologies in Energy and Automation".

June 6, 2025. NUBiP, Kyiv, Ukraine



Круглий стіл
Вдосконалення навичок експертів в галузі реновації будівель у пакеті «єдиного вікна»

6 червня 2025 року
початок о 14:00 год

м. Київ, вул. Героїв Оборони, 12, навчальний корпус 8, ауд. 22
Форма проведення засідання – очно та онлайн
Посилання на приєднання: <https://meet.google.com/adm-ohmh-cdx>

ПОРЯДОК ДЕННИЙ

1. Вступне слово.
Віктор КАПЛІН, директор ІНІ енергетики, автоматизації і енергозбереження, НУБіП України
координатор Проекту BUSHROSSs
2. Швидке відновлення пошкоджених багатоповерхових будівель: досвід Київщини.
Доповідач: Володимир Колієнко,
Фонд енергоефективності України
3. Моделювання будівель для досягнення енергоефективності, комфорту та стійкості в проектах з реновації житла
Доповідач: Максим ГУРЕВ, консультант фірми
ATVAGA Energy Ltd
4. Методичні основи визначення герметичності оболонки захисних споруд цивільного захисту
Доповідач: Євген АНТИПОВ, завідувач кафедри інженерії енергосистем, НУБіП України,
експерт Проекту BUSHROSSs
5. Building up Skills of Experts in One-Stop-Shops (OSS) for Home Renovation
Доповідач: ПАНДЕЛІЄВА-ДИМОВА,
Sofia Energy Centre Bulgaria
6. Home renovation in a "one-stop shop" package: experience of European countries
Доповідач: Олена ШЕЛІМАНОВА,
доцент кафедри інженерії, НУБіП України,
експертка Проекту BUSHROSSs
7. Результати анкетування з визначення прогалин у навичках щодо ремонту та реновації житлового фонду у пакеті «єдиного вікна»
Доповідач: Світлана Макаревич,
доцент кафедри інженерії, НУБіП України,
експертка Проекту BUSHROSSs
8. Обговорення та підведення підсумків заходу.

Agenda

1. Introductory remarks.

Viktor KAPLUN, Director of the Research Institute of Energy, Automation and Energy Saving, NUBIP of Ukraine, Project Coordinator

2. Rapid restoration of damaged multi-story buildings: experience of Kyiv region.

Speaker: **Volodymyr Kolienko**, Energy Efficiency Fund of Ukraine

3. Modeling of buildings to achieve energy efficiency, comfort and sustainability in housing renovation projects.

Speaker **Maksym GUREEV**, consultant of ATVAGA Energy Ltd

4. Methodological bases of determination of tightness of protective structures of civil defense

Speaker: **Yevgen ANTPOV**, Head of the Department of Power Systems Engineering, National University of Life Resources and Environmental Sciences of Ukraine

5. Building up Skills of Experts in One-Stop-Shops (OSS) for Home Renovation
Speaker: **Ivanka PANDELIEVA-DIMOVA**, Sofia Energy Centre Bulgaria
6. Home renovation in a "one-stop shop" package: experience of European countries
Speaker: **Olena SHELIMANOVA**, Associate Professor, Department of Engineering, NUBIP of Ukraine, Expert of the BUSHROSSs Project
7. Results of the questionnaire on identification of gaps in skills regarding repair and renovation of housing stock in the "one-stop" package
Speaker **Svetlana MAKAREVYCH**, Associate Professor, Department of Engineering, NUBIP of Ukraine, Expert of the BUSHROSSs Project
8. Discussion and summing up of the event.

Summary of the event

The moderator of the event, director of the National Institute of Energy, Automation and Energy Saving, Project Coordinator, **Viktor Kaplun**, in his introductory speech emphasized the importance of analyzing local experience in order to identify gaps in the skills of experts in the field of building renovation in the "single window" package in territorial communities.

The experience of Kyiv region communities in the rapid restoration of destroyed high-rise buildings was shared by **Volodymyr Kolienko**, an expert from the Energy Efficiency Fund. And Maxim **Guriev**, a consultant from ATVAGA Energy, gave a report on "Building Modeling to Achieve Energy Efficiency, Comfort, and Sustainability in Housing Renovation Projects"

Yevgen Antipov, Head of the Department of Power Systems Engineering, NUBIP of Ukraine, expert of the BUSHROSSs Project, shared his many years of experience in improving the operation of building heating systems with those present.

Ivanka Pandelieva-Dimova, (Sofia Energy Centre Bulgaria), in her speech highlighted the main objectives of the BUSHROSSs Project to develop training programs to improve the knowledge and competencies of OSS employees.

The experience of the Project's participating countries in the field of house renovation in the "single window" package was summarized in her speech by **Olena Shelimanova**. Expert of the BUSHROSSs Project (NUBIP of Ukraine).

One of the tasks of the Project was to conduct a stakeholder survey to identify gaps in skills regarding the repair and renovation of housing stock in the "single window" package. A detailed survey analysis was presented by **Svitlana Makarevich**, Associate Professor (NUBIP of Ukraine), an expert of the BUSHROSSs Project.

At the end of the event, Professor **Victor Kaplun** sincerely thanked all participants for their meaningful reports and active participation in the discussions.

Main Results and Suggestions

The round table was held in a mixed format. It was attended by about 35 participants (15 in-person and 20 online), including representatives of VET providers, energy agencies, consulting centres, local authorities, energy auditors, homeowners, etc.

Participants were unanimous in their opinion on the need to improve training programs to develop skills in housing repair and renovation in a "single window" package.

They made several valid suggestions, in particular

- The need to deepen the knowledge of experts on new technical solutions to increase the energy efficiency of buildings
- Wider implementation of digitalization in the process of training and retraining of specialists
- The need to revise the regulatory framework in terms of requirements for achieving regulatory comfort indicators when renovating buildings damaged by war.

Overall, the roundtable meeting provided an excellent opportunity for a wide range of academic and business representatives to exchange ideas and share their experience in the field of housing renovation.

Participant List *(will be provided scanned with signatures upon request)*

Selected photos *(will be provided upon request)*

Annex 2: Master Template of the Online Questionnaire

Stakeholder Identification – name, organization and country

.....

.....

Type of involvement in a home renovation OSS

☐	Body responsible for creation and operation
☐	Consulting body
☐	Beneficiary of services
☐	Other

Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region?

☐	Yes
☐	No
☐	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region?

☐	Yes
☐	No
☐	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing?

☐	Organisational aspects (<i>type of body, business model framework, tips for practical implementation, etc.</i>)
☐	Legal framework (<i>relevant laws and regulations, incl. about energy communities</i>)
☐	Economic aspects (<i>economic evaluation of measures, paybacks, financial calculations, etc.</i>)
☐	Funding options and programmes available
☐	Technical aspects and solutions (<i>energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.</i>)
☐	Social inclusiveness and justice (<i>women, people in energy poverty, people with disabilities, vulnerable groups</i>)
☐	Soft skills (<i>ability to unite people, mediation and conflict management</i>)

☐	Digital skills
☐	Other (<i>please specify under point 8</i>)

6. Do you consider the digital methods of training beneficial for obtaining the skills needed?

☐	Yes
☐	No
☐	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed?

☐	Yes
☐	No
☐	Don't know

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS

.....

.....

.....

.....

Annex 3: Country Specific Summary of Results and Links to Online Questionnaires in National Languages

Bulgaria

1. Total number of stakeholders involved – 24

2. Number of stakeholders by type of involvement in a home renovation OSS

12	Body responsible for creation and operation
8	Consulting body
1	Beneficiary of services
3	Other (please specify) ² :

3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region?

13	Yes
9	No
2	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region?

11	Yes
1	No
12	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? (*More than 1 answer is possible*)

17	Organisational aspects (<i>type of body, business model framework, tips for practical implementation, etc.</i>)
17	Legal framework (<i>relevant laws and regulations, incl. about energy communities</i>)
16	Economic aspects (<i>economic evaluation of measures, paybacks, financial calculations, etc.</i>)
15	Funding options and programmes available
17	Technical aspects and solutions (<i>energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.</i>)
13	Social inclusiveness and justice (<i>women, people in energy poverty, people with disabilities, vulnerable groups</i>)
15	Soft skills (<i>ability to unite people, mediation and conflict management</i>)

² The total number of “Other” should be equal to the sum of the specified types of stakeholders – i.e. 2 “Other”= 1 Chamber of commerce and 1 VET provider

12	Digital skills
1	Other (<i>please specify under point 8</i>)

6. Do you consider the digital methods of training beneficial for obtaining the skills needed?

23	Yes
0	No
1	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed?

21	Yes
0	No
3	Don't know

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS

(Please describe every answer in a different row)

1. The knowledge and training on the subject are incomplete, scattered and not summarized. Holistic approach towards the subject is lacking: information about home owners' needs during the entire journey of renovation – from application till evaluation of results. The technical aspects are the most known, while legal, financial and organisational are not well known.

2. The problems can be divided into two main aspects - administrative and technical. Administrative ones include the need to obtain a significant number of documents, such as property deeds, technical documentation, criminal records, certificates of lack of debts, verification of a bank account, etc. In order to collect all the documentation, a significant amount of time is required and sometimes it takes more than 3 weeks. Very often, these documents must be issued for a specific purpose and must state, for example, "Renovation of a dwelling". If a technical error is made, the relevant document must be reissued and this costs additional time. In this regard, it is necessary to prepare precise and clear guidelines for filling in and collecting documents and information. The presence of examples would also significantly assist the process. Technical obstacles are related to the preparation of a renovation project. In smaller buildings, renovation often takes place after receiving offers from small construction companies that have not taken into account the types of thermal insulation, their technical parameters (thickness, thermal conductivity, fire reaction class, etc.) and the regulatory requirements. In this case, after renovation, discrepancies occur between the legal requirements for heat transfer coefficients and the actual ones for the renovated home. In larger buildings, an energy audit is carried out, which sets the minimum requirements for each of the materials used and this problem is eliminated. As a suggestion, a list of minimum technical requirements should be prepared, for the thermal insulation systems and joinery used, which can be used as a basis for the renovation of the homes.

3. The activity should be initiated by the OSS, it should be proactive and should not wait for someone to come and ask.

4. There should be deep technical knowledge of the OSS staff related to building energy renovation and RE applications.

5. Communication abilities.

6. Creation of unified standards and rules to guarantee that all OSSs offer service with constant quality regardless the place or team involved.

Link: [Анкета по Проект BUSHROSSs - Google Forms](#)

Greece

1. Total number of stakeholders involved – 24

2. Number of stakeholders by type of involvement in a home renovation OSS

5	Body responsible for creation and operation
9	Consulting body
8	Beneficiary of services
8	Other

3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region?

6	Yes
15	No
3	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region?

In this case although it was clearly mentioned that this question refers only to those who provided a “yes” in the Q4, 12 persons provided an answer

3	Yes
2	No
7	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? *(More than 1 answer is possible)*

8	Organisational aspects <i>(type of body, business model framework, tips for practical implementation, etc.)</i>
5	Legal framework <i>(relevant laws and regulations, incl. about energy communities)</i>
7	Economic aspects <i>(economic evaluation of measures, paybacks, financial calculations, etc.)</i>
3	Funding options and programmes available
2	Technical aspects and solutions <i>(energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.)</i>
3	Social inclusiveness and justice <i>(women, people in energy poverty, people with disabilities, vulnerable groups)</i>
2	Soft skills <i>(ability to unite people, mediation and conflict management)</i>
<i>(no answers are provided)</i>	Digital skills

<i>for this question)</i>	
0	Other (<i>please specify</i>)

6. Do you consider the digital methods of training beneficial for obtaining the skills needed?

20	Yes
3	No
1	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed?

15	Yes
2	No
7	Don't know

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS

1. It is necessary for the personnel (mostly managers) of the municipalities to be trained regarding both the topic of the funding tools as well as the one of the methodologies for informing citizens.
2. The Local Authorities - under certain conditions - could serve as crucial partners in promoting the goals and implementing specific actions that are related to the operation and services provided by the OSSs for home renovations.
3. The evaluation process both of the training process (investigations and mapping of the required skills - certification of the training program - training of trainers etc.) and of the implementation of actions is estimated to be an important element of quality.
4. For the successful implementation of an OSS, an enhancement of the skills is required, such as the one related to project management for an effective organization, a very good knowledge of the legislative and regulatory frameworks for compliance, the exploitation of digital skills for the use of modern monitoring and communication tools, as well as the development of communication and customer service skills, which can be enhanced through specialized training programs and certifications.
5. It is necessary to identify the personnel who will provide these services, as most bodies/agencies are characterized by significant staff shortages.
6. Identification and evaluation of the possibility for Local Government Entities to be involved in the operation of OSSs.
7. The operation of OSSs should include comprehensive services, such as architectural design, engineering support, issuing of licenses, procurement of materials, execution of tasks, and post-completion support, functioning as a central coordinator. For this model to be able to be a successful one, the skills that need to be improved include the project management for effective coordination, the knowledge of legislation and licensing for compliance, the digital skills for using monitoring and communication tools, as well as the communication and customer service skills.

8. The modular training approach is a good and flexible form of training. It is estimated though that in some sections, the 'practical training' through case studies or other forms of distance interactive/laboratory application, should be added.
9. The detailed and analytical update of the responsible authorities is a prerequisite

Link: [BUSHROSSs Questionnaire for Stakeholders \(Greek\) - Google Forms](#)

Ireland

1. Total number of stakeholders responses received – 25

2. Number of stakeholders by type of involvement in a home renovation OSS

7	Body responsible for creation and operation
3	Consulting body
4	Beneficiary of services
11	Other (please specify) ³ :
1	Software providers to OSS involving service design
1	Energy Cork – represents some contractors and mentors Sustainable Energy Communities (that are often interested in domestic energy upgrades)
1	Education and training providers
1	Social housing retrofitting body
1	Local Authority
1	Research
1	Education, Research
1	We are a one- stop shop
1	Body responsible for registration of OSSs who may administer SEAI grants
1	Public Body
1	Govt Dept

3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region?

13	Yes
11	No
1	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region?

³ The total number of “Other” should be equal to the sum of the specified types of stakeholders – i.e.
2 “Other”= 1 Chamber of commerce and 1 VET provider

15	Yes
0	No
10	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? (*More than 1 answer is possible*)

19	Organisational aspects (<i>type of body, business model framework, tips for practical implementation, etc.</i>)
13	Legal framework (<i>relevant laws and regulations, incl. about energy communities</i>)
13	Economic aspects (<i>economic evaluation of measures, paybacks, financial calculations, etc.</i>)
16	Funding options and programmes available
17	Technical aspects and solutions (<i>energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.</i>)
12	Social inclusiveness and justice (<i>women, people in energy poverty, people with disabilities, vulnerable groups</i>)
15	Soft skills (<i>ability to unite people, mediation and conflict management</i>)
10	Digital skills
4	Other (<i>please specify</i>)

6. Do you consider the digital methods of training beneficial for obtaining the skills needed?

14	Yes
3	No
8	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed?

18	Yes
1	No

6	Don't know
---	------------

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS.

1. I think lead generation and qualifying leads if needed as often OSS are good technically but not necessarily in managing a pipeline of enquiries and handling these efficiently - it can be very time-consuming and takes a different skillset (sales advisor role).
2. I value the opportunity to engage with other stakeholders across the industry to collaborate + share the perspectives, understand challenges + unlock potential.
3. Training should be modular, short and meet specific, user-focused needs. Training should try to anticipate the "tricky/difficult" questions i.e. the questions asked by the public that are hard to predict and answer - this could be done using role-playing or on-the-job training.
4. There is a major lack of support for buildings built before 1920. Many one-stop shops will not even take these on, and the ones that do take them on, do not always offer the most appropriate products and materials for this type of building. Also, regarding question 7, it is not clear to me what a modular system of training is - do you mean training in modular building and MMC or do you mean microcredentials or other short forms of training?
5. Certification from reputable contractors and ensuring support for repairs. Important information for different types of houses. Access to funding options and support for middle income families.
6. Keep up the good initiative to fill the knowledge gap!
7. There are many options available, but a site-specific response is required. And all the various options are disjointed and lack coherence so most often people hire a consultant which is expensive and doesn't address the specific needs for this individual project. Instead, it is a generic model that doesn't necessarily consider requirements and is usually overly engineered for the requirement. Preventative maintenance costs are not incorporated and thus it lands itself on maintenance that is prohibitive.
8. OSSs report a lack of technical sales representatives, i.e., people who can convert a lead into a signed works contract while also being able to answer the Homeowner's technical questions.
9. The upskilling process needs to be introduced into the second & third level educational curriculum; these are the generations of people that can create the changes that can make the difference going forward with a proper level of understanding of what is required for a property to perform and what is required to achieve the necessary skillset.
10. Hybrid delivery model of online and practical application.
11. Heat Pump installations need to be improved.
12. Regarding Q3 - Know about the programme in LOTEb but no others. More resources are required for training people from the school/college levels. Increase in funding required for bigger uptake

from clients/local authorities etc. More collective approach from current companies is required to grow industry.

13. Soft skills are missing and have been identified by many pieces of research (see for instance:

<https://www.igbc.ie/resources/developing-a-register-of-building-professionals-construction-workers-who-have-upskilled-in-energy-renovation/>

<https://www.igbc.ie/resources/national-upskilling-roadmap-2030/>

14. Training should be practical and delivered in a blended format. More than new training programs (there are many in Ireland), we need to incentivize people in completing these training courses. An idea to explore is the introduction of a "sustainability pass" similar to our "safe pass" on health and safety that would be mandatory for everyone working on site.

Link: [BUSHROSSs Questionnaire for Stakeholders - Ireland - Google Forms](#)

Poland

1. Total number of stakeholders involved – 21

2. Number of stakeholders by type of involvement in a home renovation OSS

3	Body responsible for creation and operation
11	Consulting body
3	Beneficiary of services
4	Other (please specify) ⁴ :
1	Municipal eco-advisor
1	Body providing information on subsidies
2	I don't know

3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region?

1	Yes
9	No
11	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region?

1	Yes
1	No
19	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? (*More than 1 answer is possible*)

13	Organisational aspects (<i>type of body, business model framework, tips for practical implementation, etc.</i>)
12	Legal framework (<i>relevant laws and regulations, incl. about energy communities</i>)
14	Economic aspects (<i>economic evaluation of measures, paybacks, financial calculations, etc.</i>)
15	Funding options and programmes available
16	Technical aspects and solutions (<i>energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.</i>)

⁴ The total number of “Other” should be equal to the sum of the specified types of stakeholders – i.e. 2 “Other”= 1 Chamber of commerce and 1 VET provider

6	Social inclusiveness and justice (<i>women, people in energy poverty, people with disabilities, vulnerable groups</i>)
5	Soft skills (<i>ability to unite people, mediation and conflict management</i>)
4	Digital skills
2	Other (<i>please specify</i>):
2	Lack of answer

6. Do you consider the digital methods of training beneficial for obtaining the skills needed?

17	Yes
2	No
2	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed?

17	Yes
2	No
2	Don't know

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS
(Please describe every answer in a different row)

No answers in this section.

Link: [PL Copy of BUSHROSSs Questionnaire for Stakeholders - Google Forms](#)

Slovenia

1. Total number of stakeholders involved – 99

In Slovenia altogether 99 stakeholders responded the questionnaire “BUSHROSSs - Identification of skill gaps and needs for home renovation One Stop Shops (OSSs)”.

The questionnaire was translated into Slovenian language and opened for responses via google forms.

Three rounds of invitations to respond were organized:

1st batch: 24 Feb.-7 Mar. 2025 (around DOM fair in Ljubljana, focus on construction sector stakeholders) – 39 respondents

2nd batch 10 Mar. – 27 Mar. 2025 (around MEGRA fair in Gornja Radgona, municipalities) – 32 respondents

3rd batch 3 Mar. – 27 Mar. 2025 (focused on energy advisors of network ENSVET) 28 respondents

Identification of skill gaps and needs for home renovation OSSs BUSHROSSs questionnaire for stakeholders Slovenia	construction&renovation stakeholder	public sector&municipalities	energy advisors
Field of operation (more choices possible)	1st batch	2nd batch	3rd batch
• Architect	10	4	1
• Engineer	6	5	7
• Supervisor of works	0	2	0
• Researcher/developer	5	2	1
• Energy advisor	3	5	17
• Renovation planner	0	1	0
• Producer / retailer of building materials and products	1	0	0
• Building contractor / services provider	0	0	0
• Public sector	11	15	4
• Financial institution	0	0	0
• Other	5	6	3

Total nr. Of respondents N=99	39	32	28
-------------------------------	----	----	----

2. Number of stakeholders by type of involvement in a home renovation OSS (*the sum of the numbers in categories should match the total number of answers under Q1 – i.e. 99*)

24	Body responsible for creation and operation
38	Consulting body
33	Beneficiary of services
4	Other (please specify) ⁵ :
1	Dissemination&promotion
3	n.a.

3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region? (*the sum should be 99*)

57	Yes
27	No
15	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region? (*Only for those who answers “yes” to Q3*)

22	Yes
7	No
28	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? (*More than 1 answer is possible*)

34	Organisational aspects (<i>type of body, business model framework, tips for practical implementation, etc.</i>)
43	Legal framework (<i>relevant laws and regulations, incl. about energy communities</i>)
37	Economic aspects (<i>economic evaluation of measures, paybacks, financial calculations, etc.</i>)
41	Funding options and programmes available
53	Technical aspects and solutions (<i>energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.</i>)

⁵ The total number of “Other” should be equal to the sum of the specified types of stakeholders – i.e. 2 “Other”= 1 Chamber of commerce and 1 VET provider

24	Social inclusiveness and justice (<i>women, people in energy poverty, people with disabilities, vulnerable groups</i>)
34	Soft skills (<i>ability to unite people, mediation and conflict management</i>)
12	Digital skills
3	Other (<i>please specify</i>)
1	The gap is in scattered advice offer in the country (RES, RUE...advice)
1	Organisational gaps
1	The gap is on demand side – low interest for services

6. Do you consider the digital methods of training beneficial for obtaining the skills needed? (*the sum should be 99*)

92	Yes
3	No
4	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed? (*the sum should be 52*)

92	Yes
5	No
2	Don't know

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS (*Please describe every answer in a different row*)

1. Upskilling should address skills for better organization of the OSS services
2. Skills are needed to recognize the needs of demand side and respond adequately for addressing renovation barriers (raise the interest of clients).

Link: n.a.

Questionnaire (in Slovenian)

Slovenian questionnaire	Ireland (English questionnaire)
Ime * Short answer text Priimek * Short answer text	1. Stakeholder Identification – name, organization and country * Long answer text

Podjetje / organizacija * Short answer text Vaše strokovno področje * ☐ Arhitekt ☐ Inženir - gradbeni, strojni, elektro, ... ☐ Nadzornik ☐ Raziskovalec / Razvijalec ☐ Energetski svetovalec ☐ Svetovalec prenov ☐ Proizvajalec ali ponudnik materialov in proizvodov ☐ Izvajalec storitev ☐ Javni sektor ☐ Finančni sektor ☐ Drugo <i>In English:</i> <i>Name</i> <i>Surname</i> <i>E-mail</i> <i>Company / organisation</i> <i>Your professional field:</i> • <i>Architect</i> • <i>Engineer</i> • <i>Supervisor of works</i> • <i>Researcher/developer</i> • <i>Energy advisor</i> • <i>Renovation planner</i> • <i>Producer / retailer of building materials and products</i> • <i>Building contractor / services provider</i> • <i>Public sector</i> • <i>Financial institution</i> • <i>Other</i>	
Prosimo vas, da odgovorite še na nekaj uvodnih vprašanj: * Kje vidite svojo morebitno vlogo v svetovalni točki "Vse na enem mestu" (One Stop Shop - OSS) za prenovu stavb? ☐ Organizator / sodelujoči pri...vzpostavitvi in delovanju točke "vse na enem mestu" ☐ Svetovalec / svetovalna organizacija v točki "vse na enem mestu" ☐ Uporabnik storitev točke "vse na enem mestu" ☐ Other... <i>In English:</i> <i>Where do you see your potential role in the One Stop Shop (OSS) for building renovation?</i> • <i>Organizer / participant in establishment of OSS</i>	2. Type of involvement in a home renovation OSS * ☐ Body responsible for creation and operation ☐ Consulting body ☐ Beneficiary of services ☐ Other...

• <i>Advisor / consultant in OSS</i> • <i>User of OSS services</i>	
Ali ste seznanjeni s katerim od obstoječih usposabljanj pri nas, kjer bi lahko pridobili znanja in veščine za vzpostavitev in delovanje točke "vse na enem mestu"? (t.j. na primer znanja in veščine na tehničnem, pravnem, družbenem in ekonomskem področju prenove stavb) ☐ da ☐ da (a so usposabljanja neopolna in razpršena) ☐ ne ☐ ne vem ☐ Other... <i>In English:</i> <i>Are you aware of any existing training courses in our country where you could acquire the knowledge and skills to set up and operate a one-stop shop?</i> <i>(i.e. for example knowledge and skills in the technical, legal, social and economic fields of building renovation)</i> • <i>Yes</i> • <i>Yes (but the trainings are incomplete and dispersed)</i> • <i>No</i> • <i>I don't know</i> • <i>Other</i>	3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region? * ☐ Yes ☐ No ☐ Don't know
Ocenite, kako velika je po vašem mnenju vrzel pri današnji ponudbi izobraževanja in usposabljanja za prenovo stavb - z vidika potreb v svetovalnih točkah "vse na enem mestu"? (5- velika vrzel, 3-srednja vrzel, 1-ni vrzeli/ponudba je ustrezna) 1 2 3 4 5 ☐ ☆ ☐ ☆ ☐ ☆ ☐ ☆ ☐ ☆ <i>In English</i> <i>In your opinion, how big is the gap in today's education and training offer for building renovation - in terms of the need for one-stop-shops?</i> <i>(5 - large gap, 3 - medium gap, 1 - no gap/the offer is adequate)</i>	4. If the answer of Q3 is "yes", are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region? * ☐ Yes ☐ No ☐ Don't know
Kje vidite največje vrzeli pri današnji ponudbi izobraževanja in usposabljanja za prenovo stavb - z vidika potreb svetovalnih točk "vse na enem mestu"? * ☐ na tehničnem področju ☐ pri upravnih postopkih ☐ pri družbenih (mehkih) veščinah ☐ pri ekonomsko / finančnem svetovanju ☐ Other... <i>In English</i> <i>Where do you see the biggest gaps in today's education and training provision for building renovation in terms of the need for one-stop-shops?</i> • <i>In technical field</i>	

• <i>On administrative procedures</i> • <i>In social (soft) skills</i> • <i>In economic/ financial skills</i> • <i>Other...</i>	
Katera znanja in veščine bi morali sodelujoči v točkah "vse na enem mestu" pridobiti, da bi lahko spremenili sedanje stanje pri prenovi stavb? * ☐ na organizacijskem področju (ustanovitelj točke, poslovni model delovanja, praktični vidiki uvedbe...) ☐ o pravnem okviru delovanja točke (relevantna zakonodaja, energetska, o lokalnih skupnostih, gradbena, ...) ☐ o ekonomskem vidiku prenove stavb (ekonomsko vrednotenje ukrepov prenove, ocena naložbe...) ☐ o možnostih financiranja in programih spodbud ☐ o tehničnih vidikih in rešitvah za prenovo (ukrepi URE in OVE, načrtovanje prenove, po korakih, upravljanje...) ☐ na področju socialne vključenosti in pravičnosti (obravnavanje energetske revščine, ženske, ranljive skupine, ...) ☐ mehke veščine (sposobnost povezovanja ljudi, mediacija, obvladovanje sporov...) ☐ digitalne veščine ☐ Other... <i>In English</i> <i>What skills and knowledge should participants in the One-Stop-Shops acquire to change the status quo in building renovation?*</i> • <i>Knowledge and skills about organisational aspects (business model, tips for practical implementation, etc.)</i> • <i>Legal framework (relevant laws and regulations, incl. about energy communities)</i> • <i>Economic aspects (economic evaluation of measures, paybacks, etc.)</i> • <i>Funding options and programmes available</i> • <i>Technical aspects and solutions (energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.)</i> • <i>Social inclusiveness and justice (women, people in energy poverty, people with disabilities, vulnerable groups)</i> • <i>Soft skills (ability to unite people, mediation and conflict management)</i> • <i>Digital skills</i> • <i>Other (please specify)</i>	5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? (multiple answers are possible) * ☐ Organisational aspects (type of body, business model framework, tips for practical implementation, etc.) ☐ Legal framework (relevant laws and regulations, incl. about energy communities) ☐ Economic aspects (economic evaluation of measures, paybacks, financial calculations, etc.) ☐ Funding options and programmes available ☐ Technical aspects and solutions (energy efficiency, renewable energy in buildings, energy management, p...) ☐ Social inclusiveness and justice (women, people in energy poverty, people with disabilities, vulnerable gro...) ☐ Soft skills (ability to unite people, mediation and conflict management) ☐ Digital skills ☐ Other (please specify under point 8. Any Comments/Suggestions)
Ali menite, da je digitalna oblika usposabljanja koristna za pridobivanje manjkajočih veščin za točko "vse na enem mestu"? * Opomba: V mislih imamo predvsem Množični Odprti Spletni Tečaj - MOST (angl. Massive Online Open Course - MOOC), ki ga načrtujemo v projektu LIFE BUSHROSSs. MOST/MOOC sestavljajo (krajša) video predavanja (fleksibilnost pri ogledu), domače delo udeležencev na daljavo in občasni interaktivni študijski forumi. (5- da, zelo koristna oblika, 3-srednja koristna, 1-ne, ni koristna oblika usposabljanja) 1 2 3 4 5 ☆ ☆ ☆ ☆ ☆	6. Do you consider the digital methods of training beneficial for obtaining the skills needed? ☐ Yes ☐ No ☐ Don't know

<i>In English:</i> <i>Do you think that digital training is useful to acquire the missing skills for the one-stop shop?</i> <i>Note: We are referring in particular to the Massive On-line Open Course (MOOC) planned in the LIFE BUSHROSSs project. The MOST/MOOC consists of (short) video lectures (flexibility in viewing), homework of participants at a distance and occasional interactive study forums.</i> <i>(5 - yes, very useful, 3 - moderately useful, 1 - no, not a useful form of training)</i>	7. Do you consider the modular system of training beneficial for obtaining the skills needed? ☐ Yes ☐ No ☐ Don't know
Vprašanja / Pobude / Predlogi Short answer text	8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS Long answer text

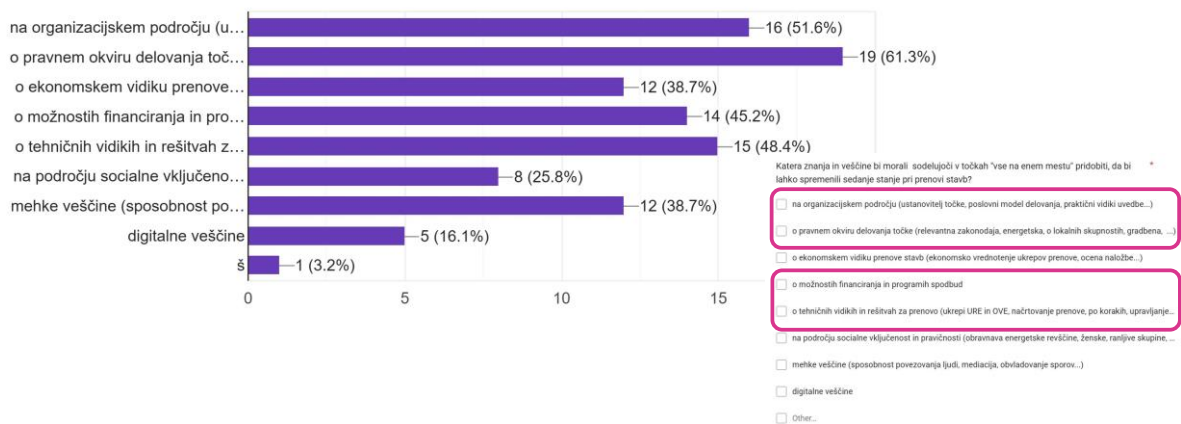
Preliminary questionnaire results communicated at events in Slovenia:

1st batch

PROJEKTANTI, DRŽAVNA UPRAVA, PROIZVAJALCI (7.3.2025)

Katera znanja in veščine bi morali sodelujoči v točkah "vse na enem mestu" pridobiti, da bi lahko spremenili sedanje stanje pri prenovi stavb?

31 responses

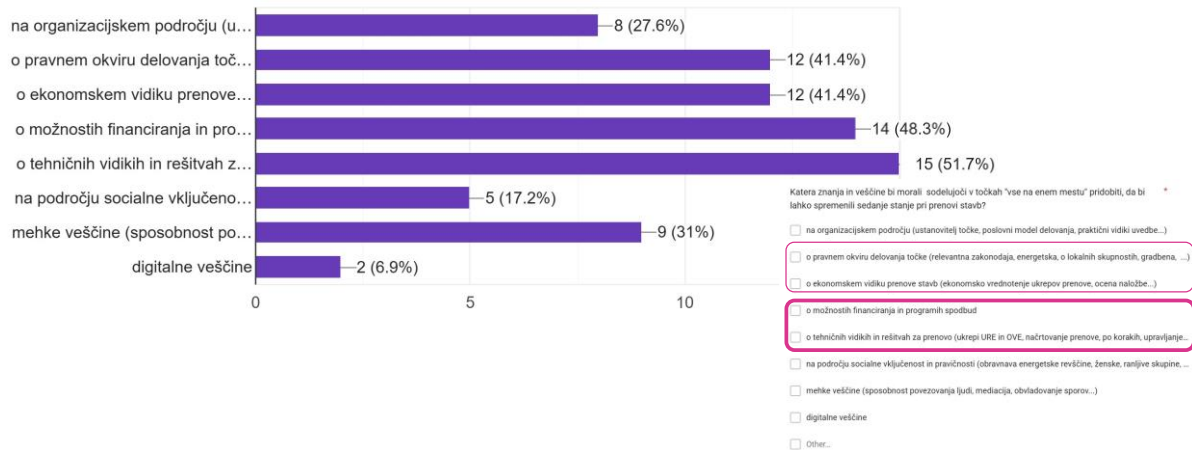


2nd batch

OBČINE (26.3.2025)

Katera znanja in veščine bi morali sodelujoči v točkah "vse na enem mestu" pridobiti, da bi lahko spremenili sedanje stanje pri prenovi stavb?

29 responses

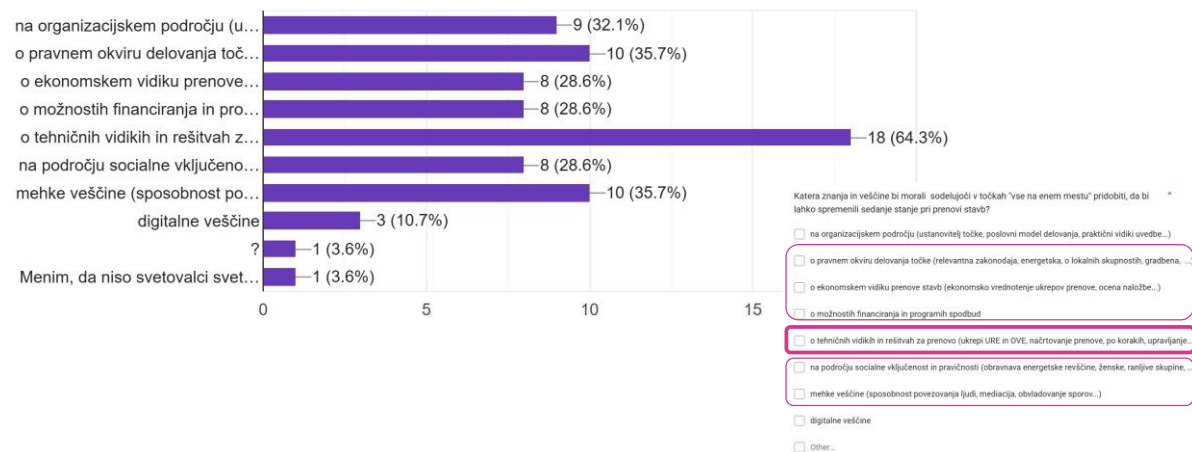


3rd batch

ENSVET (27.3.2025)

Katera znanja in veščine bi morali sodelujoči v točkah "vse na enem mestu" pridobiti, da bi lahko spremenili sedanje stanje pri prenovi stavb?

28 responses



Ukraine

1. Total number of stakeholders involved – 53

2. Number of stakeholders by type of involvement in a home renovation OSS (*the sum of the numbers in categories should match the total number of answers under Q1 – more than 53 (57), because they can be Consulting body and Beneficiary of services*)

6	Body responsible for creation and operation
22	Consulting body
25	Beneficiary of services
4	Other (please specify) ⁶ : VET provider

3. Do you know about current training and/or upskilling programs regarding establishment and operation of OSS for home renovation in your country/region? (53)

28	Yes
20	No
5	Don't know

4. If the answer of Q3 is “yes”, are there any gaps in the current training and/or upskilling program regarding OSS for home renovations in your country/region? (53)

20	Yes
17	No
16	Don't know

5. In your view, what are the upskilling needs to operate a home renovation OSS in your country/region? What skills are particularly missing? (*More than 1 answer is possible=128*)

14	Organisational aspects (<i>type of body, business model framework, tips for practical implementation, etc.</i>)
15	Legal framework (<i>relevant laws and regulations, incl. about energy communities</i>)
10	Economic aspects (<i>economic evaluation of measures, paybacks, financial calculations, etc.</i>)
25	Funding options and programmes available
28	Technical aspects and solutions (<i>energy efficiency, renewable energy in buildings, energy management, planning of refurbishment, etc.</i>)
10	Social inclusiveness and justice (<i>women, people in energy poverty, people with disabilities, vulnerable groups</i>)

⁶ The total number of “Other” should be equal to the sum of the specified types of stakeholders – i.e. 2 “Other”= 1 Chamber of commerce and 1 VET provider

17	Soft skills (<i>ability to unite people, mediation and conflict management</i>)
9	Digital skills
	Other (<i>please specify</i>)

6. Do you consider the digital methods of training beneficial for obtaining the skills needed? (53)

46	Yes
3	No
4	Don't know

7. Do you consider the modular system of training beneficial for obtaining the skills needed? (53)

46	Yes
3	No
4	Don't know

8. Any comments/suggestions regarding the upskilling needs to operate a home renovation OSS
(Please describe every answer in a different row)

1. Very important is including upskilling to the citizens.
2. Training in housing renovation and repair is necessary in modern conditions in Ukraine.
3. Systematic state support for such training initiatives is needed to reach as many specialists as possible, as there is a huge amount of reconstruction and modernization work ahead.
4. OSS significantly simplify the performance of repair or reconstruction work on residential buildings.
5. It is necessary to review the regulatory framework regarding the requirements for achieving standardized indicators when renovating buildings damaged by war.
6. Given the urgent need to modernize Ukraine's housing stock, particularly in communities with outdated infrastructure, we consider it appropriate to include a structured upskilling program in the "One-Stop Shop" package for representatives of local self-government bodies, municipal enterprises, homeowners' associations (HOAs), and construction professionals.
7. The program should cover the following key aspects:
 - Regulatory framework for residential renovation;
 - Practical approaches to energy-efficient building modernization;
 - Funding sources (Energy Efficiency Fund, state programs, international donors);
 - Project management for capital renovation in multi-apartment buildings;
 - Examples of successful implementation of similar projects in Ukraine and the EU.
8. We also recommend creating an online learning module or platform featuring document templates, typical technical solutions, and step-by-step guidance to accelerate decision-making processes at the community level.

9. Homeowners need to be conscious energy consumers, especially during crisis situations (as is currently the case in Ukraine). Therefore, any new information regarding building renovation is valuable.
10. The upskilling program should take into account the specific needs of different trainee groups — both in terms of their technical preparedness and psychological aspects (for example, when retraining war veterans, people with disabilities, etc.).
11. The implementation of the “One-Stop Shop” package will enhance user awareness and increase the uptake of energy-efficient solutions in building renovation.
12. It is crucial to include a module on the effective operation and maintenance of buildings after commissionin

Link:

[Визначення прогалин у навичках щодо ремонту та реновації житлового фонду у пакеті «Єдиного вікна»](#)