SAVE THE HOMES

Project duration: 1 September 2020 – 29 February 2024

Grant Agreement number: 892749

WP 5 Deliverable: 5.2 – Save the Homes Exploitation and Replication Plan

Lead beneficiary: UIPI

Submission Date: M42

Dissemination Level: Public

Revision History:

DATE	VERSION	AUTHOR/CONTRIBUTOR	REVISION BY	COMMENTS
03/22	Draft v1	Maria Figueira (UIPI)	Ana Tisov Ana Sanchis	
02/24	Draft v2	Emmanuelle Causse, Ander Jimenez Morillas, Nataša Vistrička (UIPI)	Ana Tisov, Haico van Nunen, Álvaro Salamanca, Ana Sanchis, Andreas Jäger	

Acknowledgements:

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 892749. The sole responsibility for the content lies with the authors. It does not necessarily reflect the opinion of the European Communities. The European Commission is not responsible to any use that may be made of the information contained therein.

1 Executive Summary

The Save the Homes Replication and Exploitation Plan (REP) outlines a comprehensive approach to testing and leveraging the outcomes of the Save the Homes project to support the development of similar initiatives. This plan has been iteratively updated to encapsulate the various steps executed under the project, sharing insights and key takeaways for the replication and exploitation of the Citizen Hubs and other significant results achieved. It details the concerted efforts made to enhance the visibility of Save the Homes, laying the groundwork for the broader adoption of the tools and OSS models developed.

Key to the REP is the "Learn → Explore → Identify → Test → Replicate → Exploit → Acquire" framework, which recapitulates the steps undertaken to promote the replication and exploitation activities. It also integrates the outcomes of various work streams, or Work Packages, within the project. This structure not only showcases the project's phased approach to development and scaling, but also highlights the interconnectedness of each work package in supporting the overarching goal of replication and exploitation.

The methodology underpinning this plan includes a thorough analysis of past OSS experiences to identify challenges and strategies for effective replication, evaluation of potential EU countries for scaling, feedback from pilot customers to refine the customer journey, and collaborative workshops with stakeholders to ensure continuity post-project. The integration of lessons learned strengthens the plan's foundation, underscoring the importance of holistic approaches, stakeholder engagement, and sustained support for the effective deployment and replication of OSS initiatives.

As the project concludes, the plans also include an overview of the potential for further replication in pilot and follower cities, as well as among stakeholder communities, notably property owners' associations and local authorities.

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2 Introduction

2.1 The Challenges

Reaching climate neutrality by 2050 is a critical objective for the European Commission, and renovating buildings is a key aspect of achieving this goal. Buildings are major energy consumers, accounting for 40% of energy use and 36% of CO2 emissions in the European Union. By renovating buildings to improve their energy efficiency, it is possible to reduce their carbon footprint in a cost-effective manner. Not only does building renovation save money on energy bills, but it also creates jobs in the construction and building trades and leads to improved health and comfort for those living and working in the buildings. Furthermore, renovating buildings to reduce their energy consumption helps to significantly reduce greenhouse gas emissions. As such, it is a key step to achieve the promised climate neutrality by 2050 as it offers a solution that reduces energy consumption and emissions while creating jobs and improving the health and comfort of building inhabitants.

One Stop Shops (OSS) for building renovation, also known as Integrated home renovation services (IHRS), are a vital tool to reach those objectives. They can help to streamline the building renovation process by bringing together necessary services that can include energy audits, design and planning, financing options, and renovation work, under one roof. This simplifies the renovation process for homeowners and ensures that all measures are taken to improve energy efficiency, including insulation, airtightness, heating and cooling systems, and the use of renewable energy. One Stop Shops also provide financing options and expert advice, making the renovation process more accessible and efficient. By speeding up the renovation process, integrated home renovation services can play a significant role in reducing energy consumption and emissions, contributing to the goal of climate neutrality.

The concept of OSS has been gaining momentum in the EU as a means of promoting sustainable housing and reducing energy consumption. The new Recast of Energy Performance of Buildings Directive (EPBD) that is currently under the final stage of adoption provides a series of objectives to foster One Stop shops requirements at national level.

2.2 The Save the Homes Project

The EU-funded Save the Homes project aims to boost building renovation rates in the EU to over 5% by offering integrated renovation services through "OSS Citizen Hubs" in partnership with trusted municipalities. The project offers a 5-step customer journey, strengthens local networks, and aims to establish services in the City of Rotterdam and Municipality of Valencia. It seeks to improve interactions between stakeholders and provide a one-stop shop for renovation advisory, financing, and legal advice, with the goal of harmonizing the concept across EU Member States.

Save the Homes aims to increase home renovation demand in the EU while enhancing people's health and living comfort through the Citizen Hub, which streamlines the renovation process. It provides technical assessment, financing options, quality assurance, and support.

Save the Homes proposes to assist citizens in their deep renovations with:

- Enhancing technical skills and knowledge for renovation oversight;
- Simplifying market navigation with transparent and comprehensive brokerage services;
- Addressing financing barriers, making it easier to access subsidies and low-cost, long-term financing;

- Building trust through smart financing and robust quality verification, with coordination by the trusted Citizen Hub;
- Providing clear performance data, ensuring investments result in improved quality, energy savings, and indoor environmental quality.

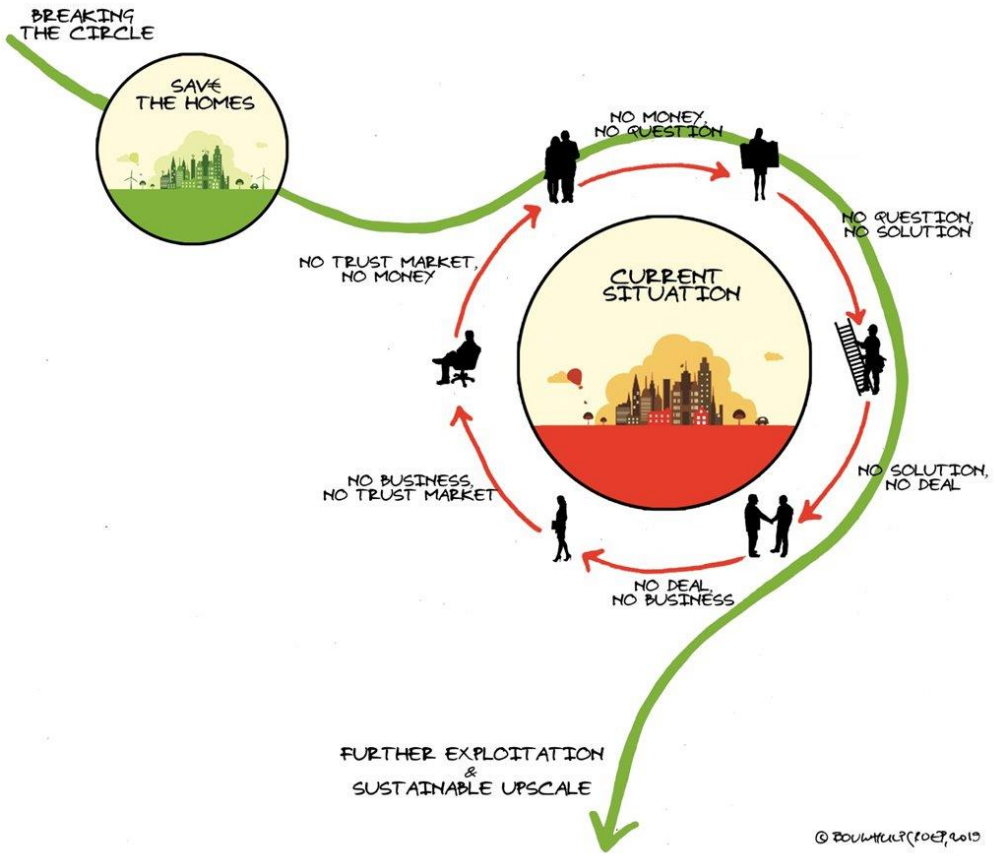


Figure 1: Why One Stop Shops and Save the Homes - Credits: van Nunen, H., Bouwhulp Groep. Save the Homes, 2020

2.3 The objectives

A key driver for the Save the Homes project was to **replicate one-on-one the Save the Homes Citizen Hub models developed for Valencia (ES) and Rotterdam (NL)** in the two follower cities, Sant Cugat (ES) and Ljubljana (SI). This two-fold realised replication process was meant to **present the main viability assessment and prove how smooth the transfer and replication can be** when replicated model in the same country (applying to the same regulations) or in between EU countries.

The **final objective was to ensure that the successfully validated Citizen Hub model** was replicated further through:

- **Exploitation and promotion at regional and national level**, with a pivotal role for the Save the Homes Advisory Board working groups and the pilot networks.
- E**xploitation on an EU wide scale** towards Save the Homes main target groups, notably through the two European umbrella organisations involved in the project, UIPI and ICLEI.

2.4 The Save The Homes Replication and Exploitation Plan

The Save the Homes Exploitation and Replication Plan (REP) incorporates detailed replication and exploitation elements that define how the project's results can be implemented and how they will impact on the market, future developments, and policymaking. They aim at deliberate efforts to increase the exploitation of Save the Homes experience, replication of successfully tested One Stop Shop models and services developed in our project, such as the Citizen Hub developed under the scope of Save the Homes. The final update of the Plan recapitulates the steps undertaken and draws lessons learned.

2.4.1 The Framework

Replication is seen as the implementation of Save the Homes concepts and Citizen Hubs within the project time frame, while exploitation considers the future 'business' opportunities for the Save the Homes Citizen Hubs Models and other Key Exploitable Results and further deployment at EU level.

The general methodology for this REP, including a set of special indicators to assess the process, outcome and impact of scaling up in consolidation with the objectives mentioned above was based on:

- The analysis of replication and exploitation challenges from previous OSS experiences and analysis of relevant reports and documents assessing the potential and challenges for OSS;
- The evaluation and identification of EU, national and local interested in upscaling and further roll-out at the target cities;
- The feedback gathered from the two pilots on the complete customers' journey;
- The replication experience in follower cities;
- The feedback gathered during the Save the Homes on the move events;
- The Exploitation Workshops, including members of Save the Homes Replication Board and relevant stakeholders to continue the activities after the project's duration;
- The final event to share the final key results and discuss the transferable key takeaways;
- Lessons Learned to foster the exploitation and replication of our Save the Homes tools.

The Save the Homes Replication and Exploitation Plan has been structured as following:

"Learn → Explore → Identify → Test → Replicate → Exploit → Acquire"

The REP integrates the outcomes of various project work streams, known as Work Packages, in different ways. While not every action directly contributes to exploitation efforts during the project,

each Work Package generates outputs that are internally leveraged for the development and execution of other outputs and activities. Consequently, it can be inferred that each Work Package indirectly supports exploitation actions. This plan serves to consolidate and outline the work accomplished in other project activities, with further details available in relevant publications (Deliverables) for a comprehensive understanding of the undertaken work, analysis conducted, and detailed descriptions of specific outcomes.

The replication and exploitation activities conducted during the project and their interaction with other project tasks and Work Packages can be summarised as following:

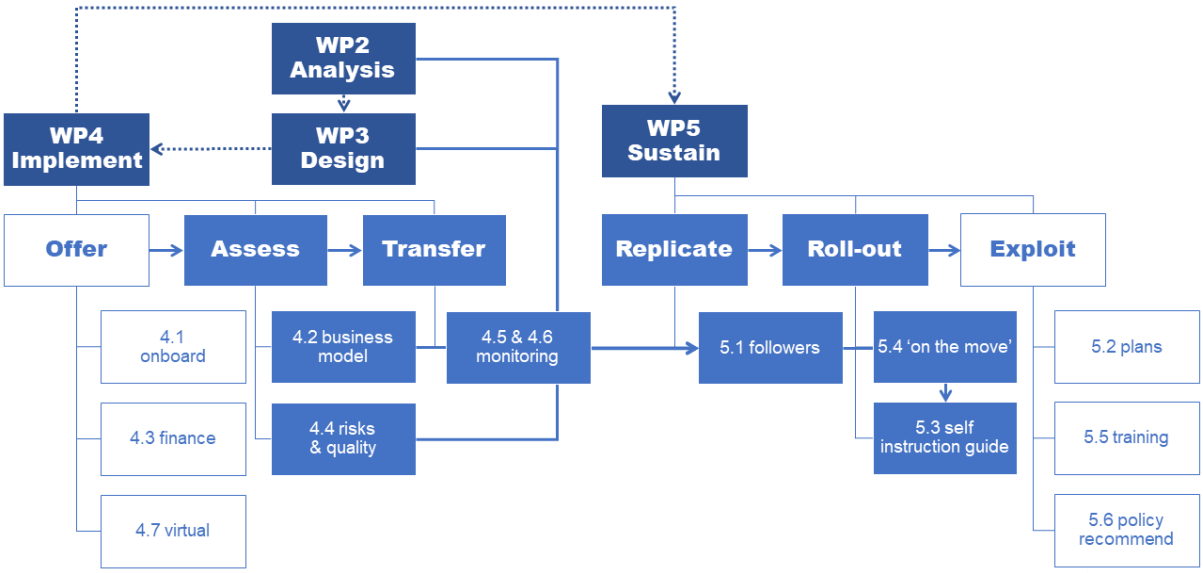


Figure 2: Relations between Work Package 5 on Replication and Exploitation and the other Work Packages of the project

Deviation from the Grant Agreement:

The draft plan was to be ready at the end of the first year of the project and contacts were to be made with the EC Support Services for Exploitation of Research Results (SSERR) to get professional support. As some of the deliverables were delayed, the draft plan was only made in the second year of the project and was continuously improved with feedback and lessons learned from the follower cities, as well as the 'Save the Homes on the Move' activities. Its first validation was made among project partners (around M24). On this occasion, the organisation of Exploitation Workshops was agreed. These workshops were intended to Save the Homes Advisory Board and Save the Homes Replication Board members, but also other relevant stakeholders to optimise the impact and exploitation potential of the project and to come to a final version of the plan until end of the project.

2.4.2 Intended audience

This deliverable is aimed at three main audiences:

1. Consortium members;
2. Members of the Commission services and reviewers of the project;
3. Save the Homes Advisory Board and Save the Homes Replication Board members;

4. Other external organisations and projects, especially those with an interest in the deployment of One Stop Shops for building renovation.

In addition, as a public deliverable its contents can also be made available online to other interested parties for future reference and guidance.

2.4.3 Why may you want to read this Replication and Exploitation Plan?

The role of the deliverable depends on the targeted audience.

1. Public/All audience:
    - Provide a status report on replication and exploitation steps undertaken during the project and an overview of the related activities as well as the Key Exploitable Results produced throughout the project. This information can be used to gain insights into what has been achieved in the project, and how to conduct similar activities in other EU funded projects or in order to massify the development of OSS in Europe as required under the new EPBD.
2. Consortium members:
    - Provide an outline of the overall replication and exploitation strategy, including relevant replication activities and actions conducted throughout the project, mechanisms and tactics for exploitation and how various project activities and Work Packages contributed to this task. This is meant as a reference point for consortium members;
    - Provide inputs to discussions on any.
3. Save the Homes Advisory Board and Save the Homes Replication Board members:
    - Provide an outline of the replication and exploitation activities, valuable information on how to replicate Save the Homes Citizen Hub(s) and other Key Exploitation Results as well as a repository of lessons learned.
4. Commission services and reviewers of the project:
    - Provide formal reporting on status of replication and exploitation (including specific related communications activities;
    - Provide evidence of concrete and realistic plans for long-term exploitation of results.
5. Other external organisations and projects:
    - Help identify whether there is potential for upscaling Save the Homes OSS models during and after the project duration.

3 Learn: From existing experiences

The first step of the REP to lay the ground for further use of the OSS models and tools developed in Save the Homes did not require reinventing the wheel. Abundant information already exists, stemming from existing OSS initiatives. Public authorities, often supported by EU programmes, have developed local OSS examples, illustrating various customer journey steps and providing series of guidelines on how to replication OSS.

The first step included reviewing these initiatives through in-depth research, examining past and ongoing OSS projects, including EU funded projects, associated events, and pertinent documents provides context-specific insights and informs OSS design and help effective planning and implementation.

In addition, this step also consisted in learning and exchanging with several regional and local initiatives in order to gather on-the-ground experience and identify potential shortcomings. In Spain, several exchanges took place with projects such as Opengela in the Basque Country, EuroPACE in Catalonia and Hogares Saludables Office in Getafe, notably on how to set-up and scale up OSS physical offices. In Rotterdam, lessons were drawn from the existing OSS experience from Woonwijzerwinkel (a physical place in Rotterdam), where customers could look at practical solutions, get advice and order them.

The above-described research activity helped identify potential challenges and opportunities. Moreover, this preparatory work also offered strategic guidelines on how to prepare replication for engaging homeowners, and other stakeholders, such as effective marketing, incentives, and support mechanisms to overcome participation and fragmentation barriers. All in all, this gave us direction on what to focus to promote the exploitation and replication of Save the Homes tools.

4 Explore: Interest for Upscaling

The second step of our REP consisted in 'testing the water' by understanding the interest in OSS, assessing and eventually influencing the political commitment for the deployment of such technical assistance tools at EU level as well as the identification of the political interest at national and local levels.

4.1 Assessment of the political commitment at EU level

During the project phase, one tasks was to keep up to date with the evolution of the European political landscape. The beginning of the Save the Homes project coincided with the publication of the Renovation Wave Strategy which confirmed the growing political focus on One Stop Shops as a key tool to promote the goal of at least doubling building renovation in the European building stock. This increasing commitment was a clear sign of growing interest in OSS, offering new perspectives and an upscaling potential for Save the Homes solutions. Project partners, in particular umbrella associations, advocated at the policy level for the concretisation of this commitment.

This growing support was confirmed toward the end of the project in the final stage of the adoption of the Recast Energy Performance of Buildings Directive, which gives the political impetus for OSS by setting clear objectives for the deployment of OSS at national level. Under the soon to be adopted EPBD:

- Member States are mandated to establish at least one OSS per 80,000 inhabitants. This strategic placement ensures widespread accessibility and coverage, reaching various stakeholders involved in building renovations.
- OSS placement is guided by strategic criteria, including regions with an above-average age of building stock, areas implementing integrated district renovation programs, and locations reachable within a 90-minute travel distance. This targeted approach addresses the diverse needs of different geographical areas.

- OSS must provide holistic support, not only offering advice on technical and financial possibilities but also catering to vulnerable households, those affected by energy poverty, and individuals in low-income households.
- For buildings with EPCs below level C, building owners are encouraged to seek renovation advice from OSS. This requirement ensures timely advice, promoting energy-efficient renovations when a building's energy performance is suboptimal.

This is the political translation of a raising interest for this type of support mechanism. Part of the work consisted in updating project partners with the change in the policy landscape and updating them with the final outcome, notably during the Exploitation Workshops. This provided the adequate momentum and constitutes a framework for the future exploitation of the Save the Homes models.

4.2 Analysis of the political interest at national and local levels

Save the Homes project's partners initiated exchanges with subnational and national government representatives during the project implementation period to gauge levels of interest in adopting the OSS model.

4.2.1 At national level

At national level, interactions included:

- Discussions with Finish, French, German and Swiss Government officials on the sidelines of GlobalABC[1] meetings (ICLEI);
- Exchanges with national Slovenian representatives in the context of the Save the Homes exploitation campaigns in Ljubljana;
- Dialogues with Austrian national Government representatives engaged in the Driving Urban Transitions Partnership (ICLEI);
- Interactions with Swedish counterparts during the 2023 EU Presidency (Creating Green Cities Conference in Malmö - June 14th and 15th 2023).

At national level, the urgency to enhance the energy efficiency of building stock was broadly recognised, with frequent reference being made to overall Greenhouse gas (GHG) emissions inventories (highlighting buildings as a key emitter). National long-term renovation strategies, as part of national energy and climate plans, were highlighted as key documents that summarise national endeavours. Many national Governments' representatives highlighted the renovation of public buildings as a key action area (low hanging fruit). Regarding commercial and industrial buildings, the role of ESCOs was highlighted frequently, whilst in relation to residential building stock the primary catalyst mentioned tended to be nationally administered subsidy and grant schemes. It was often conceded, however, that public funds are limited, and private investment must be leveraged. Familiarity with the One Stop Shop concept was mixed, but it should be emphasised that counterparts engaged in discussions were not always affiliated with departments or teams that worked on these.

[1] The Global Alliance for Buildings and Construction is coordinated by the United Nations Environment Programme to catalyse the sustainable transformation of the built environment. ICLEI represents local government interests within the alliance as a member of its steering committee.

4.2.2 At local level

At local level, interest and capacity to replicate OSS was gauged in the context of:

- Save the Homes exploitation campaigns, which engaged over 20 municipalities in ES, NL and SI (see Deliverable D5.4);
- Capacity building activities such as those co-organised with the European Covenant of Mayors (see Deliverable D5.5);
- CINEA organised workshop on OSS in Brussels.

At local level, substantial interest in citizen hub roll-out was expressed (see, for instance, D5.4). Common challenges and bottlenecks identified included, among others: [1] limitations with regard to human, technical and financial resources, [2] the difficulty in tracking residential building renovation activity (and linked real performance improvements), [3] lacking national support for the creation of OSS and [3] supply-side issues holding back the uptick of renovation activity.

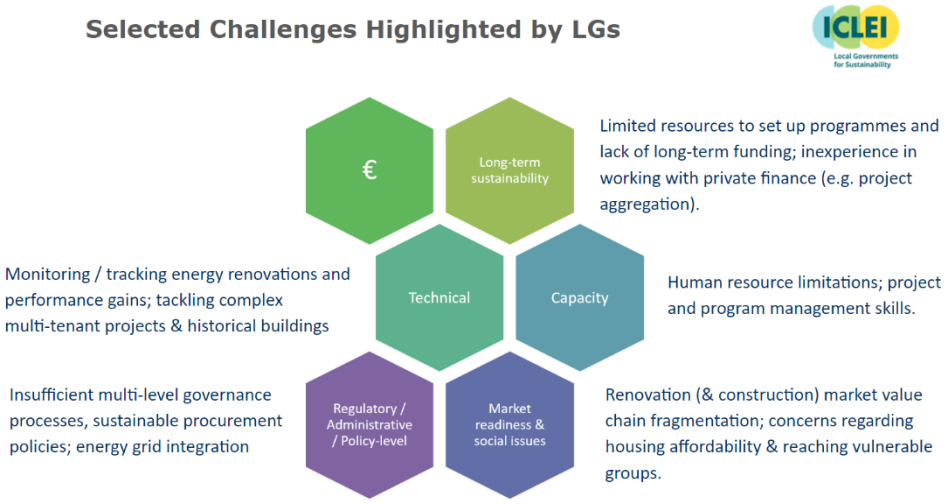


Figure 3: Overview of common challenges encountered when catalysing the Renovation Wave at local level (Source: ICLEI)

4.2.3 At pilots local and regional level

Surveying and reinforcing political interest were also done at local level, next to the pilots and replication cities.

In Valencia region

In the case of Valencia, the political commitment of the regional authorities was already there, and local replication already foreseen from the beginning of the Save the Homes initiative. It was confirmed during the project phase, with IVE in the lead – as the innovation agency of the Regional Ministry competent on housing matters. The aim of this housing related regional competences was the "municipalisation", since the municipalities are the ones dealing with the daily matters of their citizens. Therefore, following the example of Valencia Energy Office, the Regional Government designed a collaboration agreement and set a pilot experience with 6 local governments:

- Mancomunitat de l'Alcoià i el Comtat (91,811 inhabitants, 16 municipalities)
- Mancomunitat de la Ribera Alta (220,000 inhabitants, 35 municipalities)
- The Vall d'Uixo (31,660 inhabitants)
- Denia (41,733 inhabitants)
- Gandia (73,829 inhabitants)

Then, disseminated the experience and results to attract other municipalities in the region. The most prominent interest was firstly the funding, but also, very important, the structure, guidelines, materials and tools provided for a harmonised service all along the region.

n	Tipo	Fecha	Lugar	Tema
1	Jornada	08/07/2020	Generalitat	Presentación
2	Reunión	20/01/2021	IVE / Meet	Reunión de coordinación
3	Jornada	22/07/2021	IVE / youtube	Jornada formativa
4	Jornada	17/11/2021	IVE / youtube	Emergencia Habitacional
5	Jornada	21/01/2022	Alginet	Presentación
6	Jornada	09/02/2022	Generalitat	Presentacion ayudas
7	Jornada	15/03/2022	IVE / youtube	Jornada formativa Teams
8	Jornada	15/03/2022	Zoom	Formacion personal oficines XALOC
9	Jornada	28/09/2022	Zoom	Formacion personal oficines XALOC
10	Jornada	05/05/2023	IVE	CONVOCATORIA 2023 FONDOS NEXT GENERATION
11	Jornada	24/05/2023	Sagunt	Rehabilitacion viviendas
12	Jornada y sesión de trabajo	24/11/2023	IVE	BALANCE DE CONVOCATORIAS ANTERIORES Y NOVEDADES

Figure 4 info days for XALOC network

In Sant Cugat region

Political and local interest was also assessed through engagement with the follower city Sant Cugat and its surrounding environment. The Valencian model was further disseminated through various workshops, including the RETHABIT project, ENHR conference 2022. It became evident during the project that the model piloted by Sant Cugat also met the needs and expectations of similar nearby municipalities such as Rubí and Esplugues de Llobregat, even though this interest was expressed independently and not backed by a supra-municipal entity. Nonetheless, this model was later adopted by the AMBmonths later, serving as an umbrella for municipalities around Barcelona.

In Rotterdam

In Rotterdam, the initial approach was slightly different as the focus was on building upon the experience and structure of energy communities, in this case Alex Energy. Therefore, the identification of possible local interest also followed a bottom-up approach: assessing the interest of other local energy communities and through the umbrella organisation Energie van Rotterdam (https://energievanrotterdam.nl/) that regroups these local communities and traditionally focus on the deployment of renewables projects.

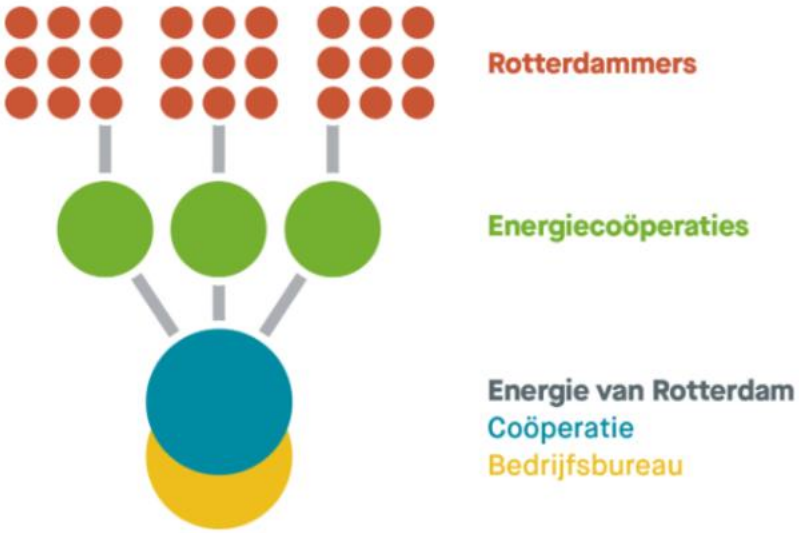


Figure 5: The Rotterdam energy communities organisational structure

One of the possible paths identified during the project to trigger further interest was to build upon the actual municipal trend in the Netherlands, in Rotterdam in particular, which consists in increasing the focus on neighborhood and district approaches, notably to develop local heating plans. This was identified as a possible path to follow and where the potential interest in OSS and Save the Homes could be identified.

In Ljubljana

The City of Ljubljana (CoL) regroups the Slovenian capital and most important city in highly fragmented local administration landscape consisting of 212 municipalities and no regions. It is a lighthouse for local administration as they look up to it and replicate their activities. CoL already embrassed a green path with participation in the 100 net zero cities. It is already actively engaged in the transformation of its built environment, e.g. retrofitting approximately one-third of municipal buildings through public-private partnerships (PPPs) supported by the European Local Energy Assistance (ELENA) program, as successful implementation requires a clear understanding of the local context and adapt the approach accrodingly.

Additionally, CoL is making strides in renewable energy adoption, with the construction of 5 MW of photovoltaic panels on public buildings nearing completion within the framework of a PPP. Recognising the importance of addressing private buildings, CoL is enhancing its citizen engagement efforts to support building renovations, including local schemes for culturally protected buildings. During the project phase, the political support and possible interest for a wider use of Save the Homes concept was further tested. The Ecofund, managed by Ensvet, has been instrumental in providing energy advisory services for over 30 years, with CoL leveraging knowledge gained from EU projects like Save the Homes to enhance its initiatives.

The relocation of the Ensvet office to a prominent location in the heart of the city signifies CoL's commitment to fostering citizen interaction on climate-related topics, with building renovation serving as a central focus, demonstrated by events such as workshops organised for Save the Homes.

5 Identify: Save the Homes Key Exploitable Results

A key stage of the REP consisted in identifying the Key Exploitable Results. Although the Save the Homes Customer Journey and Citizen Hub constitutes the main KER of the project, during the execution of the project and after the replication tests and the feedback collected during the exploitation activities, following tools were considered as valuable for further development and upscaling during and after the project phase.

5. 1 The Save the Homes Customer Journey

During the Save the Homes project, a very comprehensive Customer Journey was developed. It gives a clear step-by-step and complete overview of all the touchpoints during the renovation process (demand, supply, onboarding, etc.) and assess how people can go through all the steps needed to move from inaction to renovation and even post-renovation behavioral change.

Each phase of the customer journey intends to ease the renovation process and makes the whole experience user-friendly and appealing. In Deliverable D4.5 each of these steps is elaborated on and put in perspective. Each phase has its own goal where the overall aim is to drive decision-making and

facilitate quicker renovation actions. The figure below represents in visual the key objective, tasks, key stakeholders and key processes of each of the customer journey phases:

The Save the Homes Customer Journey gives insight into the motivation and barriers of the demand side and the Citizen Hub can assist them better with the home renovation process.

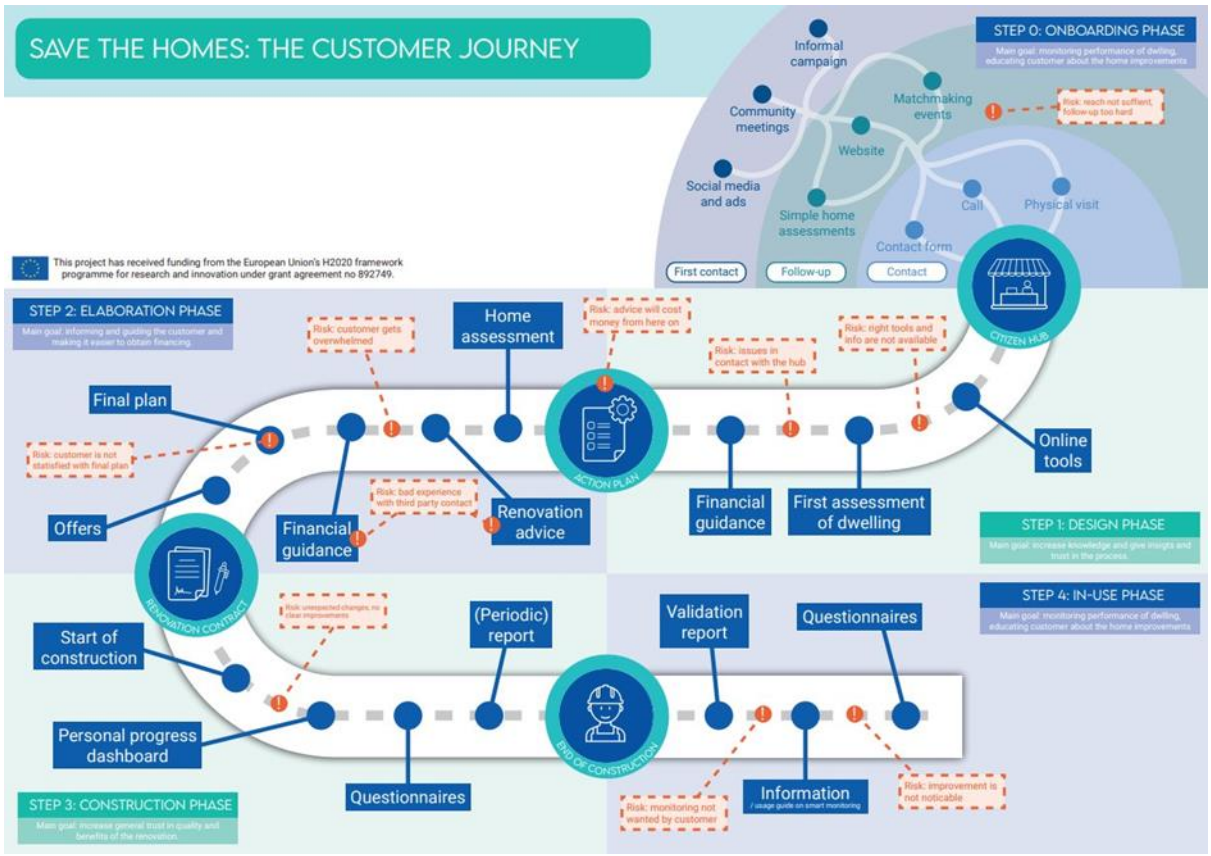


Figure 6: Save the Homes customer journey visual (done by R. Veneklaas, Save the Homes WP6 Dissemination)

5.2 The Save the Homes Guide for Implementation

Available in D4.9, assessed for D5.1 and summarized for self-instruction in D5.3 after considering all the feedback received during replication and exploitation activities, the Save the homes' Citizen Hub blueprint & implementation script consists of 5-step guidelines to help interested entities in designing and implementing their own OSS service.

On each step, the reader will find 5 sections, including the description of the axe to be developed with the implementation of that step and 4 sections for hands-on, all with the same structure, as below:

1) Step

A. Sub-step

Supporting image

Presentation of the step content and logic

Objective of the step and **why is it useful** to follow it

Activities, tasks or options:

- One
- Two
- More…

As an example, how it went in our pilots:

- **Valencia**
- **Rotterdam**

Then it is complemented with some materials such as the show materials, the DIY templates and the blueprint & implementation script.

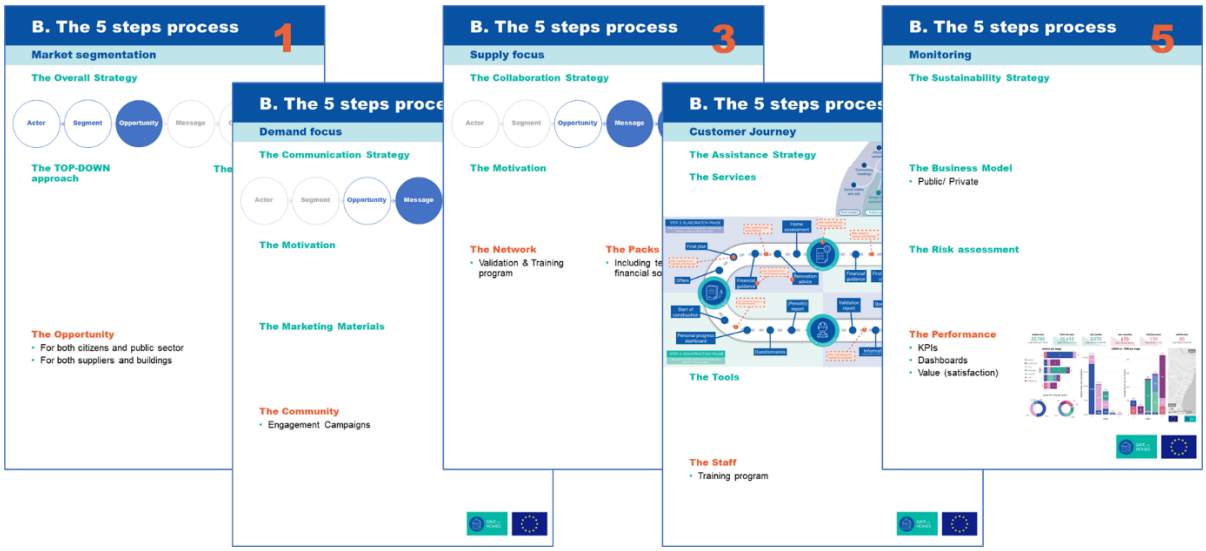
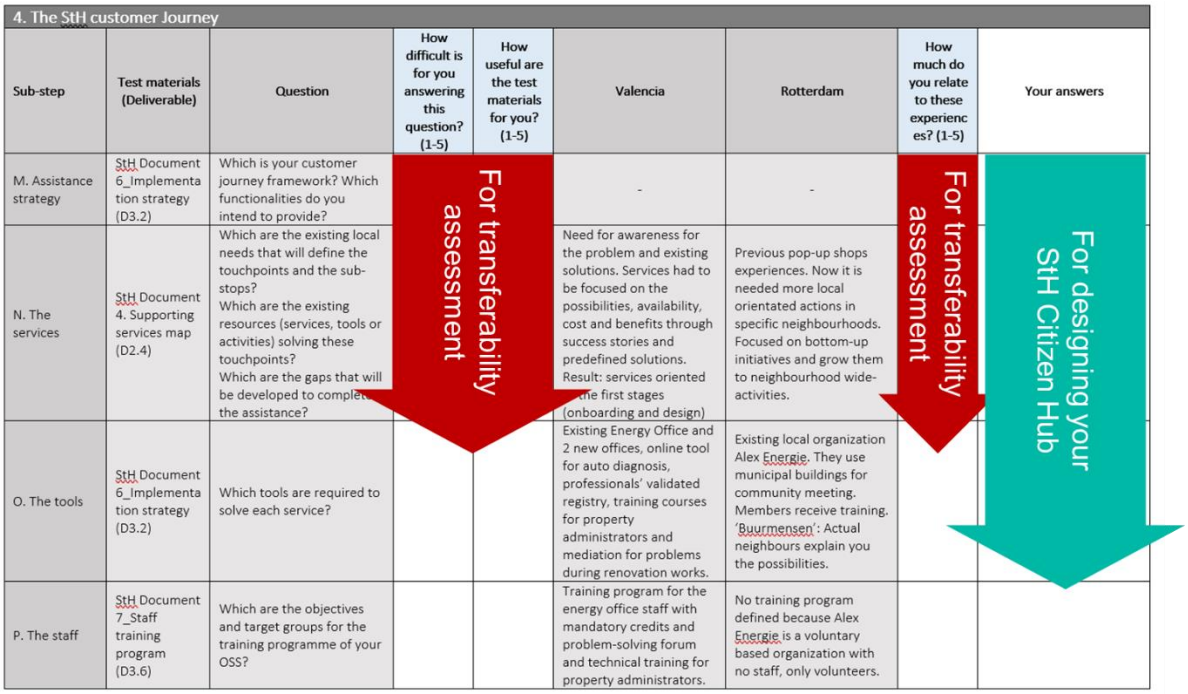


Figure 7: The Save the Home guidelines for implementation

The blueprint & implementation script works for both assessing the project transferability (allowing continuous improvement) and guiding the design and implementation of a new OSS concept, through the structure shown below:

A. Sub-step

- Materials available
- Questions to answer
- How difficult is it for you to answer this question? (1-5)
- How useful are the test materials for you? (1-5)
- Valencia answer
- Rotterdam answer
- How much do you relate to these experiences? (1-5)
- **Your answer**



4. The StH customer Journey								
Sub-step	Test materials (Deliverable)	Question	How difficult is for you answering this question? (1-5)	How useful are the test materials for you? (1-5)	Valencia	Rotterdam	How much do you relate to these experiences? (1-5)	Your answers
M. Assistance strategy	StH Document 6_Implementation strategy (D3.2)	Which is your customer journey framework? Which functionalities do you intend to provide?			-	-		
N. The services	StH Document 4. Supporting services map (D2.4)	Which are the existing local needs that will define the touchpoints and the sub-stops? Which are the existing resources (services, tools or activities) solving these touchpoints? Which are the gaps that will be developed to complet the assistance?			Need for awareness for the problem and existing solutions. Services had to be focused on the possibilities, availability, cost and benefits through success stories and predefined solutions. Result: services oriented the first stages (onboarding and design)	Previous pop-up shops experiences. Now it is needed more local orientated actions in specific neighbourhoods. Focused on bottom-up initiatives and grow them to neighbourhood wide-activities.		
O. The tools	StH Document 6_Implementation strategy (D3.2)	Which tools are required to solve each service?			Existing Energy Office and 2 new offices, online tool for auto diagnosis, professionals' validated registry, training courses for property administrators and mediation for problems during renovation works.	Existing local organization Alex Energie. They use municipal buildings for community meeting. Members receive training. 'Buurmensen': Actual neighbours explain you the possibilities.		
P. The staff	StH Document 7_Staff training program (D3.6)	Which are the objectives and target groups for the training programme of your OSS?			Training program for the energy office staff with mandatory credits and problem-solving forum and technical training for property administrators.	No training program defined because Alex Energie is a voluntary based organization with no staff, only volunteers.		

Figure 8: Citizen Hub blueprint & implementation script section and its addressed objectives

5.3 The Save the Homes Training Programmes

Save the Homes training is two-fold. On the one hand, Citizen Hubs do offer a (set of) service(s) to citizens and staff is physically there to assist them. Therefore, a staff training programme for each Citizen Hub was developed to cover the whole services provided by it, including the context, regulations and tools available to solve citizens problems, and the skills to help them understand and implement the potential solutions.

On the other hand, professionals developing their activity around a Citizen Hub set, have better be trained to best offer their services according to the actions promoted by it, at least; and be validated or certified, even proposed by it, at most.

Save the Homes developed a **staff training programme** design methodology, that can be consulted in D3.6, and covers the next steps:

- **Staff skills needed** to deliver the best service to citizens includes assistance in the whole customer journey, this is, the 5 stops, and most of their sub-steps, according to the objectives and functionalities designed according to D3.2
- **Contents & modality:** distributed in 4 learning modules, which can be addressed to the whole Citizen Hub as a service provider team or to specific profiles within the team, by means of as a (half) day tailor made training, a working group, or a course:
  - Module 1: Context and framework: Background knowledge of the local context, legislation applying, subsidies and grants availability, competences, etc.;
  - Module 2: Customer journey stages and functionalities – general: Theoretical knowledge of the whole services' menu, touchpoints, dependencies, etc.;
  - Module 3: Tools and services – Technical: specific materials for supporting tools used within the customer journey stops;
  - Module 4: Soft skills: Communication skills and basic customer service skills.

- **Resources:** thinking of the offers available in each context for covering each content needed, and detecting needs for customised contents
- **Programme:** recap of all information to design the training proposal according to terms below:
  - OBJECTIVES & TARGET GROUPS
  - REQUIREMENTS
  - MODALITIES & PLANNING
  - EVALUATION & CERTIFICATES
  - NECESSARY RESOURCES (inc. FINANCIAL & HUMAN)
- **Budget:** summary of cost for the setting up of the citizen Hub and the reserve of budget for regular training each year and plan the needed timeline considering at most 4 hours a day (for service continuation)

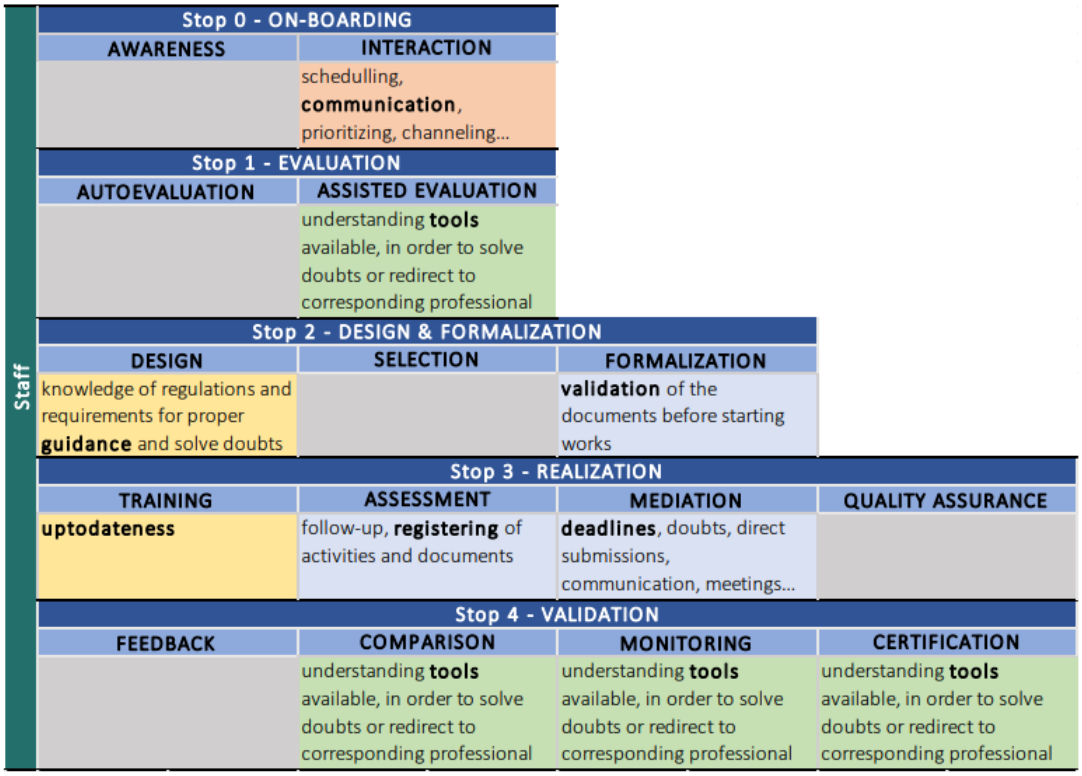


Figure 9: Detecting the training modules according to the Save the Homes Customer Journey

For the **professional training,** the approach was proved valid, and both pilots designed and implemented different training programs addressed to different professional profiles (property administrators, architects & engineers, installers, craftsmen).

Main difference was a last step regarding **evaluation**: according to the purpose of the training, which could be getting a job, a certification giving access to a new kind of work, o a validation giving access a promoted registry, under conditions also related to the services offered by the citizen hub.

5.4 The Save the Homes Marketing & Communication Campaign

To ensure the effective dissemination of information and the successful engagement of stakeholders in each step of the Customer Journey and, ultimately in the OSS, targeted and tailored marketing and communication tools adapted to the audience and target group(s) were deployed.

To create engaging content and promotion campaign, the "Hero, Hub, Help" strategy was followed. Hero content aims to quickly capture attention and encourage sharing, such as videos or infographics for Save the Homes. Hub content, like behind-the-scenes glimpses, ensures regular engagement, while help content, such as informative blogs or demonstrations, provides valuable assistance to the audience, forming the core of the content strategy.

The marketing and promotion campaign plan developed in Save the Home was identified as a potential KERs that could support replication and further exploitation of Save the Homes citizen hubs. It can be summarised as following:

	Start	**Stop 1**	**Stop 2**	**Stop 3**	**Stop 4**
Phase	**Onboarding**	**Design**	**Elaboration**	**Construction**	**In-Use**
Objective	Learning about the project	Making an appointment & filling online tools to learn about the house	Decision making and the sign of the technical & financial offer	Actual renovation and high quality of work	Monitoring the benefits of renovation and continuing
Status	See (Stranger)	Think (Lead)	Do (Prospect)	Care (Customer)	Care (Customer)
Communication activity	Organization of community gatherings. Participation at the different city events; Social media. Website, newsletters	1st appointment at OSS (intake interview). Energy audit. Matchmaking events on specific topics (financing, technical, regulatory)	Specific appointments at OSS. Financial and technical offer discussion (advise and design). Signing of the offer.	Realization. Quality monitoring interactions. Interactions with the involved stakeholders. Complaints	Final meeting at OSS. Post-renovation agreements. Management, maintenance & warranty. Monitoring of energy, IEQ.
Measurable indicators (KPI)	Awareness - Nb of addressed audience via activities above	Project search and first physical meetings	Offers considered. Decision making. Money invested	Satisfaction of people with the quality of work based on	Pro-active behavior of users after renovation (via questionnaire)
Output KPI	Nb of visits of the website or calling the OSS facilitators	Nb of people making an appointment and	Nb of people signing the contract	Nb of people that went through the renovation phase	Nb of people that would repeat the process

Figure 10: Marketing and Communication Campaigns at each step of the Renovation Journey

5.56 The auto-diagnosis tool

After analysing the different needs and services on each step of the customer journey and the preliminary conversion rates from one to another, together with the available physical resources (staff

assisting citizens in a presential mode), it was concluded that some initial sub-steps in the customer journey could be automatised, discharging workload from staff, and getting to them already oriented citizens, so to make more profit of their visits to the Citizen Hub.

This is the case with the auto-diagnosis tool, present and used in both pilots (and in both follower cities). These tools inform citizens on renovation options suitable for their buildings in a very easy way, to get them aware of the costs and benefits from their own home, and letting them want for more, so addressing them to the physical offices, facilitating the appointment.

One example is the **renovEU** tool, which allows to approximately calculate the energy performance of your building, offering 9 renovation scenarios for energy savings and increased comfort, meeting the necessary requirements to obtain the European Recovery Funds grants.

Figure 11: Screenshots from 2 steps of the auto-diagnosis tool (renovEU)

The process is very simple for the user, they only need to enter their address and choose a HVAC system combination, then they are offered the renovation scenarios with cost, subsidies, energy and CO2 savings, energy demand reduction, EPC improvement and time out of comfort reduction. This, together with the description of the proposed renovation and the next steps, which are mainly pointing out the closest citizen Hub.

The process on the back end is more based on reference buildings and how to match the real building with the reference one. At the moment, data and application is adjusted to Valencia region and Sant Cugat municipality but has been successfully replicated for the Balearic Islands region and simplified for the Spanish national scope. Also, a dedicated reading API is being tested with a national bank.

RenovEU exploitation can be addressed on 3 incremental fronts:

- **For the data** - How to customise: offering free templates and descriptions of data and calculations needed.
- **For the services** - How to consume: developing an API to read DB data (including a dataset selection method) and an API to write data into BD (aiming to create a new set of data, to later be read)
- **For the front-end** (functionalities) - How to commercialise: making available the documented source code for download, offering support services, or direct implementation of a new development services.

This is also considered as a Key Exploitable Result and can be used as a template for future developments.

5.6 Citizen Hub Protocol for staff

In the Energy Offices of València, there has been a protocol developed for the offering of different services during an individual appointment, to be used and updated by the staff of the offices. The

protocol aims at standardising the services offered, ensuring high quality and facilitating the work of the staff. This protocol is further replicable and exploitable.

The protocol is structured as follows:

1. **Services offered**: it offers a summary of the main 8 services that can be offered to users of the offices in individual appointments made in the area of energy renovation. The objective is to ensure that the offices' staff communicates these services to the users, who might not know all of them.
2. **Preliminary work**: it describes the work that has to be done prior to the individual appointment, mostly related to administrative paperwork related to opening a file for the user or identifying its file if he/she has already one. Also, it describes some resources that the administrative staff can offer to the user, besides an individual appointment, such as: leaflets, information material, registration to next scheduled workshops, etc.
3. **Individual appointment**: it describes the different services potentially offered during the appointment, indicating some key points and advice for each of the services and providing templates, reference documents and other tools that can help the staff during the appointment, facilitating their work and making it more efficient. It is structured according to different questions that the user might ask:
    a. Information about technical solutions;
    b. Information about public subsidies and aids;
    c. Information about professionals;
    d. Information about financing solutions;
    e. Support in comparing contractors' offers;
    f. Having a pre-diagnosis report;
    g. Contact and exchange with other homeowners;
    h. Information about the savings made thanks to renovation.

6 Test: Collecting feedback from the Pilots

The Save the Homes KERs developed during the project were tested throughout the project duration in the two pilots and with various stakeholders. At these occasions, the KERs were assessed, their potential for replication discussed and analysed until they reached their final version. Collecting the feedback and learning from this experience was a key step of our REP.

In Valencia, the different KERs have been developed, tested and updated iteratively thanks to the work being done at the three Energy Offices of the city and the 23 offices of the XALOC network during the whole duration of the project.

Concretely, the process in most of the cases followed the following steps:

- **Develop**: Project managers involved in Save the Homes develop different materials, protocols or tools, according to the research done at project-level and the feedback gathered at office-level.
- **Explain**: Project managers meet staff at the offices or at local level to show and explain the materials developed.

- **Test**: Staff and employees at the local level test the results developed by the project during some weeks or months.
- **Refine**: The office's staff share their feedback with project managers according to their experience in testing the materials.
- **Iterate**: The feedback is incorporated in the following versions of the materials, tools or protocols developed by project managers, in order to try to fit better the needs of the offices and provide an efficient and high-quality service.

In Rotterdam, the KERs have been developed, implemented and adapted by Alex Energie, BouwhulpGroep and the city of Rotterdam.

As for Valencia, the steps mainly consisted of:

- **Develop**: Consortium partners involved in Save the Homes develop materials, protocols or tools, according to the research done at project-level and the feedback gathered at office-level. Deliverable 4.10 shows a list of these tools, ordered by local and consortium partners.
- **Explain**: A presentation for all program managers of the department of sustainability was organised in January 2024 and led by BouwhulpGroep.
- **Test**: The pilots are being replicated, but not tested yet.
- **Refine**: Refining is done in accordance to the needs, not yet structured**.**
- **Iterate**: Alex Energie and the local project partners are trying to replicate the process in other streets.

The main lessons learned during this iterative testing process can be found in D4.9, and from the replication and exploitation angle can be summarized as:

- The **materials and KERs** developed by Save the Homes address correctly the needs of the Citizens' Hubs and are, overall, well-structured and effective, thus, exportability is ensured, at least for a high-level definition of the potentially new Citizen Hub service.
- However, there is a general tendency towards standardising services and trying to provide templates and protocols for the offices' operation, while the reality of the work is much more fluid and difficult to be standardised. Therefore, the capacity of the staff to improvise and offer a tailored service are key for the satisfaction of the offices' users. This is something that **staff training program** has the ability to address, giving staff capacity to adapt main objectives and protocols to individual situations, by having technical and administrative knowledge and soft skills. But also, the development of a careful **protocol for staff** is a pillar for them to assist customers in all the circumstances that might arrive, driven them to the more appropriate service.
- Considering that each municipality/ region has its own existing dynamic and that the scale and variety of approaches to be adopted for transferability can vary throughout the city, the most important aspect when it comes to transferring methodologies is that expectations between parties are made open and transparently explicit, validating the Save the Homes **step-by-step implementation guidelines** through the detailed mapping of needs all along the services offered through the whole (or part of) the customer journey. In this context, the adaptation potential of some Save the Homes tools, such as the **auto-diagnosis** is also capital for adoption beyond the project scope.
- It is also important to adequately consider the touchpoints (points of interaction between demand and supply). Transitions between steps are key points for a correct deployment. This is especially relevant when thinking about implementing the Customer Journey "partially": when not entering it from the first step, or only implementing a specific step, etc. In this

context, the design of a proper **professional training** following save the homes guidelines is capital to adapt supply side skills to the demand needs. On the other hand, the development of targeted marketing materials drives demand into the actions needed to realize their needs and find the appropriate professional, and the creation of **engaging content and promotion campaign** following the "Hero, Hub, Help" strategy has proven to support this objective.

7 Replicate: Experience from the Follower Cities

The replication of Save the Homes Citizen Hub models from Valencia (ES) and Rotterdam (NL) to follower cities Sant Cugat (ES) and Ljubljana (SI) is a major step of the REP. It is extensively explained in D5.1. This aimed to test replication:

1. Within the same country (Valencia to Sant Cugat) to analyse benefits of national language and local circumstances.
2. Across EU countries (Rotterdam to Ljubljana) to validate cross-country replication effectiveness.

The objective was to assess viability and smoothness of transfer, considering regulatory alignment within the same country and differences between EU countries. The process involved knowledge transfer, analysis of replication outcomes, and planning for further exploitation activities.

The replication process comprised similar steps as in the target cities, but they were refined as following:

- **Set:** Develop Citizen Hub models in pilot cities, considering demand and supply side mapping, network creation, and service demonstration.
- **Show/Explain:** Present the implementation process through a developed protocol, summarizing key steps and sub-steps.
- **Test:** Conduct workshops with follower cities to assess the applicability of materials and activities, considering national and transnational contexts.
- **Feedback:** Gather feedback through support materials and follow-up activities, including project meetings, technical workshops, and dedicated workshops for follower cities.

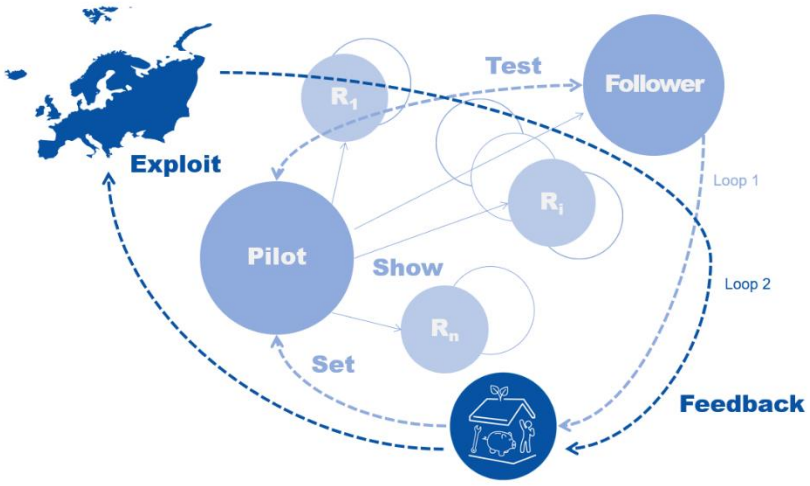


Figure 12: Replication process approach

An analysis of the responses from follower cities regarding their challenges in implementing the Save the Homes Citizen Hub model, aiming to identify commonalities, discrepancies, and areas for improvement in the implementation process. The feedback analysis was structured around 20 sub-steps correlated with 5 main procedure steps, facilitating understanding and comparison. Replication was first stated as a one-on-one replication. However, in practice it consisted at looking at what can be re-used as it clearly appeared that a one-size-fit all solution did not exist.

The feedback from both follower cities highlights several key points:

1. The replication process is well-structured and adaptable to different objectives, but some steps may be challenging to complete fully.
2. The provided replication material is sufficient and useful, but barriers such as language differences and context specificity should be addressed.
3. Despite the small sample size, the feedback is considered reliable, as participants were knowledgeable about their contexts and had experience with the replication process.

Their input provided insights into the approach and materials used. Sant Cugat's approach centered on leveraging existing city resources and engagement channels, while Ljubljana focused on targeting specific building types and promoting subsidies. Despite differences in strategies, both cities reaffirmed their willingness to provide comprehensive support for citizens interested in home renovation, with key challenges revolving around funding and citizen engagement.

Their feedback that can be read in detail in the Save the Homes Deliverable 5.1 stressed the importance of considering variations in language, legislative context, and housing stock when replicating the model. Customisation of implementation materials, particularly contextual information, is crucial. Overall, this experience will enrich and improve future replication and exploitation processes.

Sant Cugat del Vallès experience with replication

Sant Cugat del Vallès assessed the rehabilitation needs, utilised Valencia Office's expertise for information campaigns and integrated digital tools on the municipal website. "La Teulada," established in 2023, offers guidance on photovoltaic systems and energy communities. Services include evaluations of the needs, audits, and project monitoring.

Ljubljana experience with replication

Ljubljana used the Save the Homes Check List, the Save the Homes Customer Journey, implemented expert and local ecosystem stakeholders workshops as well as workshops for citizens, they also used the reMODULEES EU funded project platform (which aims to generate standard modules for energy efficiency and clean energy solutions and bring the know-how and experience of various EU funded project including Svae the Homes).

They are currently reMODULEES platform local adaptation and integration in Ecofund energy advisers network management platform.

The greatest impact of Save the Homes in the city of Ljubljana (CoL) and, more widely, in Slovenia is that key institutions started to work together namely Ecofund, CoL and IRI UL. The Save the Homes event in 2023 brough together key players that started to work towards common goals. This materialised in the will to build on Save the Homes experience in submitting a Life OSS proposal titled Renov-AID Renovation Enhancement Network towards Optimized Vitality and Adaptation Integration in Dwellings. In addition, Ecofund brought energy advisory office to the new location of Climate office and started to work on upgrade with integration of e.g. platform developed in reMODULEES project.

Future focus will be on the initial steps of the renovation journey, i.e. how to encourage people to start the renovation and to overcome the limited knowledge about the buidling stock. Another relevant challenge that would need to be solved would be at the initial execution stage, as energy advisors, as public servants, are not allowed to suggest contractors while customer are keen on getting this type of advise.

8 Exploit: The Save the Homes Exploitation Activities

The Save the Homes KERs developed during the project were presented throughout the project duration with various stakeholders. On these occasions, they were tested, their potential for replication discussed and analysed until they reached their final version.

The Exploitation and Replication Activities consisted of:

- The Save the Homes on the Move workshops, which disseminated the Save the Homes Project and the KERs developed, but also served to collect feedback and planting seeds for future exploitation;
- Bilateral exchanges as well as dissemination and capacity building efforts centered on European local government representatives (described in more detail in the context of D5.5)
- The Exploitation Workshops;
- Discussions with financial institutions;
- The Final Event.

8.1 Testing the KERs during Save the Homes on the Move Events

The planning and partial implementation of EU-wide exploitation campaigns was launched earlier in the project lifetime than initially planned (from M14 onwards rather than M29 onwards), to seize opportunities to both validate and exploit Save the Homes achievements in the context of relevant events, such as UIPI's Renovation Tours. Full implementation of exploitation activities was achieved by the project end in M42. A key exploitation activity for the project were the so-called Save the Homes events, which were overseen by the umbrella associations ICLEI and UIPI, thus targeting two key stakeholder groups – namely local governments and property owners. The following subchapters describe these in brief, whilst more details can be found in the dedicated deliverable D5.4.

8.1.1 Save the Homes on the Move for Local Authorities

Save the Homes experiences and knowledge products were featured in three workshops, taking place between M33 and M41 (May 2023 to January 2024). Tentative planning for the workshops began as early as M22 (June 2022), with agendas being co-developed and incrementally adapted to accommodate the finalisation of new project outputs and to respond to emerging trends (e.g. the Russo-Ukrainian War and resulting European energy crisis). In line with earlier iterations of the Save the Homes Exploitation and Replication Plan, workshop planning focussed on creating fora to (a) feature Save the Homes achievements, (b) address key priorities / challenges of host cities as well as their regional and national context, whilst also (c) offering ample opportunity for peer exchange and learning.

The workshops secured replication interest of 21 local and 2 regional governments to replicate the citizen hub approach or explore the adoption of specific components of Save the Homes. The KPI is likely much higher, considering the very high workshop attendance for the Dutch workshop - for technical reasons (using a project-external platform) only 7 explicit expressions of interest could be captured and reliably reported.

Noting that interest was generally high in relation to all elements of Save the Homes, local governments highlighted the definition of business models, KPIs and monitoring systems as well as IT tools as particular pertinent. Workshop outcomes are given more coverage in D5.4.

NL Save the Homes on the Move Workshop

Date: 18 January 2024 | Venue: Online

Participants: 58 local government representatives of which 7 explicitly expressed interest in specific modules of the Save the Homes approach.

SI Save the Homes on the Move Workshop

Date: 18 May 2023 | Venue: Ljubljana, Slovenia

Participant Breakdown: 21 participants of which 9 represented local governments (excl. City of Ljubljana) and expressed interest in replicating elements of Save the Homes.

ES Save the Homes on the Move Workshop

Date: 19 October 2023 | Venue: Valencia, Spain

Participant Breakdown: 44 participants of which 5 represented local and 2 regional government (excl. the Cities of Valencia and Sant Cugat), expressing interest in replicating elements of Save the Homes.

8.1.2 Save the Homes on the Move during UIPI Renovation Tour

Under the 'Save the Homes on the Move' activities, a specific focus was on private property owners in disseminating about Save the Homes project and its activities, promoting home renovation and OSS at local level among key stakeholders, but also collecting feedback from individual property owners on the Save the Homes experience to support future replication and exploitation. This was done in the framework of UIPI Renovation Tour, and initiative that started in 2020 aiming to create a direct dialogue between property owners, decision-makers and practitioners promoting concrete experiences for property renovation. Three UIPI Renovation Tours were organised under the flagship of Save the Homes in: Bilbao, Barcelona and Brussels.

The KPI underpinning the reporting of exploitation activities considering the umbrella association's membership structure. The Renovation Tours reached approximately 300 individual property owners, national associations of property owners, building managers or their representatives, local authorities, with over 250 expressing interest in knowing about local/national OSS, 240 very interested in using existing local/national OSS, and 200 showing interest in Save the Home tools (feedback forms and bilateral exchanges).

Three Renovation Tours were the following:

Renovation Tour in Bilbao - (28 October 2021) The event counted with 42 online participants and 47 presential participants. Most participants were Basque condominium managers, property owners and representatives from relevant stakeholder groups (e.g.: engineers, architects, etc.)

Renovation Tour in Barcelona – (24 November 2022) The event counted with 82 online participants and 49 presential participants. Most participants were Catalan condominium managers, property owners and representatives from relevant stakeholder groups (e.g.: engineers, architects, etc.)

Renovation Tour in Brussels – (28 November 2023) The event counted around 80 presential participants. Most participants were Brussels' condominium managers, property owners and representatives from relevant stakeholder groups (e.g.: engineers, architects, etc.).

Control:

Feedback forms were distributed in paper format during the conference. They were constituted of a series of questions that allowed to assess the level of participants' satisfaction, identify areas for improvement and more particularly gather insight on how they assess OSS and the tools developed in Save the Homes.

Main takeaways:

The Renovation Tours clearly demonstrated that tools such as One Stop Shops can play a crucial step in the renovation journey of the property owners. Clear raising awareness campaigns about the benefits of the renovations, but equally important, the access and availability of funding, assistance and guidance are the necessary foundation for a successful renovation wave across Europe. The need to have such tools available locally, preferably with physical offices and provided by trusted and

independents parties was often expressed. In instance where an already well-established OSS exist, like in Brussels the Homegrade OSS, participants showed a good awareness of its existence and a strong support for the activities of the OSS. Other participants, not familiar with the OSS, were eager to learn. All in all, through all the Renovation Tours partially dedicated to Save the Homes we could sense a strong appetite for these tools among individual homeowners. In Barcelona, strong hope was expressed on the future replication and exploitation of the Save the Homes Citizen Hubs beyond Sant Cugat and into a wider range around Barcelona.

8.2 The Final Exploitation Workshops

As part of our commitment to ensuring the validity and usefulness of the KERs for EU-wide replication and exploitation, we have organised a series of informal rounds of stakeholder meetings. These meetings were an opportunity for Save the Homes Replication Board members as well as key stakeholders, selected organisations, and experts in the field to discuss, assess, and provide feedback on the project's materials and their applicability in a broader European context. This was also the occasion to exchange with Save the Homes

Objectives:

1. **Validation and Assessment:** The primary goal of these informal rounds of meetings was to validate and assess the relevance and usefulness of the guidelines, outputs, and materials produced by the Save the Homes project.
2. **Gather Stakeholder Insights:** We aimed to gather valuable insights and feedback from key stakeholders, who are experts and experienced professionals in the housing and renovation sector.
3. **Identify Best Practices:** By engaging in open discussions, we aimed to identify best practices, lessons learned, and potential areas for improvement.
4. **Inform EU-wide Replication:** The outcomes of these meetings served to inform the replication and exploitation of the Save the Homes project materials throughout the European Union.

Meeting Format: Each workshop followed the same structure that consisted of four parts. Firstly, through the informative part, a brief presentation was delivered on the recast of Energy Performance of Buildings Directive (EPBD) and its impact on One Stop Shops, following which the Save the Homes project was presented together with Citizens Hubs in Valencia and Rotterdam. Secondly, during the testing phase, the feedback was gathered on the tools produced by Save the Homes projects from the audience. Thirdly, the explorative part required participants to assess whether the tools could be replicated. Finally, to tailor the input received, the participants were engaged in a discussion to understand, when there was the replicability potential, what parts could be replicated, and in this regard which parts were the most relevant for a given stakeholder.

Three Rounds of Discussions:

Round 1: Demand Side Representatives - Conversations with property owners, consumers and real estate intermediaries' representatives.

Round 2: Supply Side Stakeholders - Engagement with relevant stakeholder representatives, such as construction professionals' representatives, service providers, from the supply side.

Round 3: EU-Funded Projects and Existing OSS - Dialogue with related EU-funded projects and existing One Stop Shops representatives.

Control:

Polls were organised during and after the event to collect feedback. UIPI member organisations were also requested to express their commitment and interest for the Save the Homes Citizen Hub and their interest in collaborating/setting an OSS.

Main takeaways:

Thanks to the polls conducted during the workshops, we were able to gather insight from participants on key aspects related to OSS implementation. First, while almost all of the attendees to the three workshops where familiar with the concept of OSS, none were acquainted with any local or national OSS. It is also noteworthy that other than the lack of knowledge, upfront costs and lack of financial support are the main bottlenecks.

Participants in all workshops found the presentation of the Valencia and Rotterdam cases useful and enlightening. Regarding specific elements of the service; Local physical offices, previous examples of success renovations stories as well as early home assessments and renovation plans or financial stimulations. The value of working with trusted professionals, local SMES and having OSS integrated in the community were also highlighted.

15 January 2024 – with the Demand Side

During the Q&A session, participants discussed collaboration, financing, and incentivising homeowners in renovation projects. Insights were shared on previous collaboration efforts and the importance of training intermediaries and administrators. Homeowners' associations' involvement needs to be boosted in the design stage of OSS and collaboration with public institutions to share knowledge, identify partnerships to foster the long-term sustainability of OSS. Questions that were raised about contractor engagement, installer accreditation, financing mechanisms, involvement of homeowners in the OSS, incentivising landlords and the growing need for EU funded financing programmes for sustainable renovation, thus highlighting different barriers. Concerns were expressed about the shortage of capable renovation companies and banks' reluctance to finance projects, stressing the need for political engagement with bankers. Questions were raised on how this will affect OSS and their deployment. Overall, discussions emphasised need for collaboration between OSS and stakeholders, needs for neutral, independent and trusted advice sustainable financing, and targeted incentives to address renovation market challenges in Europe.

8 February 2024 – with the Supply Side

The participants discussed the importance of stimulating interest in the supply side for OSS. The need to attract not only big suppliers, but also smaller ones were emphasised, together with the importance of providing more incentives and improving the visibility of OSS. The discussion highlighted the importance of sustaining projects, particularly those with public functions, beyond their initial phase. The risk of wasting time, resources, and the signal it sends if projects are not adequately funded and trusted was further highlighted. The importance of involving relevant stakeholders in setting OSS, including supply side representatives (e.g. SMEs representatives) was reiterated.

9 February 2024 – with existing OSS and EU projects

The participants discussed grant application challenges for home energy renovations, highlighting frustrations with rejected applications and the complexity of the process. They also explored a renovation tool facilitating dialogue between property owners and stakeholders, noting its benefits in providing a reality check and promoting collective action for energy reduction. Upscaling visits to

understand homeowners' needs was considered, with emphasis on coupling them with online resources. Challenges in the green finance market were addressed, proposing solutions like establishing a new bank and ensuring accessibility of loans for condominium associations. Overall, the audience acknowledged the importance of One Stop Shops in aiding homeowners, but also exposed challenges in sustaining such services over the long term.

For more information about the workshops and the surveys conducted during the workshops, please check Annex II.

8.3 Discussions with the financial sector

The financial sector is one of the key stakeholders that should be involved in the deployment of OSS. During the Save the Homes project, bilateral discussions were conducted with the mortgage industry at the EU level and financial institutions involved locally in the pilot cities.

In addition, the financial elements of the OSS were discussed in the framework of a sister project, FITHOME, studying innovative financing schemes. The initiative involves a working group with various objectives, including gaining insights from best practices of other H2020 projects on financing structures and exploring the replication of its on-tax finance mechanism. These discussions provided valuable input for our replication and exploitation activities.

Seeking to exploit Save the Homes activities, project partner ICLEI engaged in multiple discussions and meetings with senior representatives of the European Investment Bank in 2021 and 2022. These interactions served to provide feedback on the ELENA programme's attractiveness for OSS establishment and to potentially onboard local governments. Acting as a facilitator between the Bank and local governments – and by organising exchanges between interested local governments and ones with ELENA grant experience - a consortium of eight German local governments was formed to begin development of an ELENA funding application for OSS establishment.

Overall, engagement of stakeholders in the financial domain triggered discussions, notably regarding derisking investments by ensuring the quality of advice provided by OSS and the necessity for financial skills among OSS or local administration employees. Intermediation with local banks or other financial institutions is essential in this regard.

8.4 Final event of Save the Homes

The Final event of the Save the Homes project was foreseen as the final step of our exploitation activities. This Conference took place on 22 February 2024 at the European Economic and Social Committee (EESC), as a presential meeting with live web streaming. It was indeed the final opportunity to discuss the projects findings and KERs, to share the tools developed with a broader European audience as well as discuss experiences with the European stakeholders' communities, including members of Save the Homes Replication Board.

During the morning session, exchanges and sharing of experiences took place from the EU cities implementing OSS. STH Customer Renovation Journey was exploited and key models from STH were exposed, thus also presenting STH final results which was also another occasion to test the replicability and exploitation potentials.

During the panel that consisted of representatives from different stakeholders' groups and sectors, the discussion focused on enhancing home renovation services through the OSS concept. In order to introduce this discussion, STH policy recommendations (Deliverable 5.6) were presented emphasizing

the need for coordinated market development, adequate policy frameworks, and tailored services based on local needs. Among others, the importance of home-owners trust, communication, and a need for robust financial ecosystem were highlighted. These policy recommendations served as a basis for further input and exchanging on lessons learnt from the perspective of different sectors.

Another important element is that the event was the occasion to bring OSS concept closer to the concerns of the EESC, especially as they are preparing their input for the European housing ministers' meeting, taking place in March in Liège. Promotion of the OSS and the need for their long-term sustainability have been highlighted as the key takeaways of the Conference by the EESC officials.

Overall, as it was highlighted by the presentation of the European Commission when it comes to the legislative procedure of the soon to be adopted recast of the Energy Performance of Buildings Directive, its transposition and its implementation will be key. In this regard, the findings of the project on replicability and exploitability can be promoted at the optimal timing through this new policy setting.

9 Acquire: Lessons learned for Exploitation and Replication

The final step of our Exploitation and Replication Plan was to draw some lessons from our experience to create a solid ground for further exploiting our results. These lessons are the outcome of our Save the Homes ride, starting with lessons learned from previous OSS practises, our practical experience with Save the Homes OSS and related tools, the challenges we faced in developing and then replicating them, as well as the extremely valuable feedback we collected during our Exploitation and Replication Activities.

9. 1 How to set up a one stop shop in nine steps

Existing OSS initiatives vary significantly in terms of their scope, business models, and services offered. Despite this diversity, there are fundamental elements shared among them. To streamline the setup process and promote efficiency, the following graph explains how to set up a one-stop-shops in 9 steps. This is a key outcome of our replication and exploitation work and will be used as a future repository to upscale the results of Save the Homes and the deployment of OSS at EU level.

It can serve as a proposal for structured frameworks for local authorities and implementing actors, reducing both time and resources required for OSS establishment.

HOW TO SET UP A ONE STOP SHOP IN YOUR TOWN, CITY OR REGION

IN NINE MAIN STEPS

Consistent and lasting funding is crucial for public citizen hubs. This ensures they can effectively boost home renovation rates and prevent disruptive starts-and-stops in their operations. It's important to prioritise the long-term renovation of homes and recognise the vital role citizen hubs play in enabling and catalysing this process at the local government level. **Policymakers need to be aware of the various benefits** of One-Stop-Shops (OSS), and support for it should be secured across different political parties at the local, regional, and national levels.

Before establishing an OSS to enhance sustainability in the built environment, it's crucial to understand the local building stock. A **thorough mapping exercise** should be conducted to identify common building types, poorly performing structures, and neighbourhoods where increased renovation support would have the greatest impact. Additionally, stakeholders need to create a **clear overview of technical solutions that align with the local building stock.** This enables homeowners to make informed choices, addressing their specific needs such as overall energy savings or improved thermal comfort in specific areas of their homes.

Local renovation markets can be complex, so it's vital to identify key players in the renovation ecosystem. On the demand side, **conduct interviews or surveys with property owners, tenants, and colleagues** in other local authority departments to understand the diverse needs, priorities, and challenges of different customer groups. This knowledge will help tailor support offerings and communication strategies, ensuring the protection of vulnerable groups, such as those facing energy poverty or social marginalization. On the supply side, **assess the capacity of local businesses and contractors offering renovation services**, ensuring they possess the necessary technical knowledge for deep renovations.

Various schemes across Europe financially support homeowners in carrying out renovations at national, regional, and local levels. It's important to map these offerings to (1) **identify gaps** that local governments could potentially address in their own schemes and (2) **create a catalogue of financing options**, including grants, subsidies, tax incentives, low-interest mortgages, etc. This will assist homeowners in accessing these resources and initiating their renovation journey.

The earlier analysis offers vital insights for local governments to make policies based on evidence. The gathered data should be used to create **comprehensive cross-sectoral plans**, translating climate goals into local actions. These plans should include neighbourhood-level strategies for urban renewal, highlight the benefits of citizen hubs, and be collaboratively developed by local government departments, citizens, vulnerable groups, NGOs, and business representatives. Additionally, these plans need **strong monitoring and reporting processes** on the environmental and socio-economic impacts of energy renovations. This involves real pre- and post-renovation data on energy savings, greenhouse gas emission reductions, indoor thermal comfort, and health.

Depending on the intended functions, a citizen hub can be established as **purely public, fully private, or a public-private partnership**. A private model (typically funded through project management service commissions) may be considered impractical in less mature renovation markets. Fully public OSS tend to be popular, but face some restrictions under EU State Aid rules regarding the services they can offer. To identify the most suitable model for the local context and address associated challenges, it's recommended to **consult guidance from Save the Homes and other EU-funded OSS projects**, as well as engage in exchanges with existing national or subnational OSS.

The customer journey describes the experiences and decisions a customer goes through when dealing with a brand or company leading up to buying something. It involves various steps from the customer's point of view, following their decision-making process. **Mapping the customer journey** helps you understand how people go through the whole process, the touchpoints involved, and the factors influencing their decisions at each phase. This way, you can **guide them through the entire process**, knowing what information is needed when, to understand why a potential customer may continue or decide to stop the process.

The services offered by the OSS should be adapted to local needs as well as technical and financial capacities. Initially, the OSS can **raise general awareness** about the advantages of energy renovations. Beyond this, citizen hubs can **offer advice on renovation choices**, covering areas such as building insulation, integrating renewable energy solutions, adopting energy-efficient technologies (e.g., appliances, heating, and cooling systems), and suggesting behavioural changes. Additionally, OSS staff can guide homeowners on **available financing options** to reduce upfront costs. The OSS can also provide training for **small and medium-sized enterprises** to enhance their abilities in delivering high-quality deep renovations.

For effective communication with all stakeholders, **a clear strategy is essential**. This strategy aims not only to inform and promote the One-Stop-Shop but also to guide stakeholders. Use the customer journey as a foundation for shaping the communication strategy. It is advisable for One-Stop-Shops to include both **an online platform and a physical hub** to enhance information sharing and increase customer engagement or "conversion rates."

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 892749.

9.2 Further considerations for exploitation

In addition to the 9 steps for setting up an OSS, Save the Homes partners collected additional feedback and developed further considerations to take into accounts when establishing OSS.

Lesson 1: On ensuring political support

Our Save the Homes experience demonstrates that to exploit our result and replicate our solutions political support is needed. Governments at the local, regional and national levels need to be supportive of this concept and provide the necessary resources to help implement it. This includes financial and technical support, the development of regulations and policies, and the promotion of OSS to the public. In the Save the Homes pilot of Valencia in particular political commitment was essential to support the impetus.

Political support can be two-fold, ideally requiring a combination of different levels of political commitment, meaning:

- Political will at the highest level to support the developments of (local) OSS, including clear political objectives and targets, OSS deployment objectives as well as technical and financial support for the mainstreaming of OSS;
- Local incentives and initiatives to design and set OSS close to citizens that are based on robust business models and cross-party consensus in relation to the vital role of OSS in decarbonising and future-proofing building stock.

Now that the momentum is there at EU level, it needs to be translated into concrete political commitments at national and subnational levels. As the outcome of the survey conducted during our Demand Side Exploitation Workshop shows, there is long way to go. Indeed, it showed that 85% of respondents are familiar with the OSS concept, while 88% are not acquainted with or aware of the existence of local OSS, which is a worrying outcome (these participants were representatives of homeowners and should be more aware of the tools to support their members than individual owners). Nevertheless, 100% of participants expressed their opinion that a OSS can indeed help property owners to renovate, which was also the case for the supply side participants.

Therefore, promoting the development of OSS, including the Save the Homes KERs, to reach EU and national renovation objectives and the new EPBD requirements necessitates national and local political will and structural support for making OSS long-term trusted and functioning tools (*See Lesson 2*). Local authorities can enforce strong and stable local policies and provide funding measures that foster deep renovation but also ensure and support the development and of OSS specific services, including specific support for vulnerable and low-income homeowners or specific segments of the real estate markets that are predominantly represented at local level.

Lesson 2: On long-term financial support for OSS

Political will needs to include and be accompanied with the necessary means to translate the “wills” into practice. Considerable financial means are crucial for setting and running an OSS, having in mind in particular the fact that it is extremely human resource consuming. The Save the Homes experience demonstrates the success in having a concrete outcome thanks to availability of public funding. In the Valencia case, for example, the availability of Recovery and Resilience Funds was a godsend for the deployment of the Save the Homes objectives.

At European level, for example, funding is available through notably the LIFE Programme to support the deployment of OSS and the ELENA programme, overseen by the European Investment Bank and the European Commission, which offers advisory services and technical assistance to public and private entities interested in setting up OSS or financing renovation. Although ELENA has been a success story, it faces limitations (notably due to the minimum ratio/leverage factor between the total investment amount, the limited funding period of 3-4 years and the grant and the complex administrative requirements).

But even more problematic is the fact that the long-term sustainability remains a challenge. This is confirmed with the feedback we collected during our projects and our exploitation activities, notably with professionals and other OSS representatives: How can the long-term sustainability of the OSS be ensured beyond the possible initial funding phase?

Accumulating different revenue schemes and developing a business model to ensure the viability is often required by the funding institution(s). Nonetheless, in the case of OSS it seems to be very difficult without underpinning the independence of the OSS and the technical neutrality of the solutions provided or without risking jeopardising customers' interest for the tool by putting a cost on the service provided. A clear outcome of STH experience (notably in Rotterdam) and the discussion held during various exploitation activities shows that it is difficult enough to attract homeowners to the OSS services. Adding a cost to the service is a risk and homeowners clearly expressed the importance of having at least the first step of the onboarding service provided for free (e.g. in Rotterdam).

EU is at a political crossroad and the massification of OSS, including the solutions developed in Save the Homes would require a strong political commitment. Thus, a major hurdle for all OSSs lies in securing financing, not just for the actual renovation projects, but also for the operations of these services. To effectively boost the rate of building renovations across Europe with OSS, it is essential to ensure they have sufficient resources to function. Many OSS struggle to create sustainable business models, expand to the desired extent, and reduce reliance on public funding. Although funds are available, gaining access to them is crucial. Considering the investments spurred by home renovations, OSS exhibit a significant leverage factor, which, justifies receiving public subsidies. As the EU and Member States gear up to inject substantial public grants into home renovation programs, it appears pertinent to allocate a portion of these funds to OSS.

Lesson 3: On adapting to local market conditions and different target groups

Overall, mapping the market before implementing an OSS is critical for ensuring that the service meets the needs of targeted local stocks and stakeholders, integrates seamlessly with the existing market, and is well-received by the different actors involved in the housing/building sector. This was one of the first steps of our Save the Homes journey.[2]

[2] More information can be found in our D2.1 - Save the Homes demand and supply mapping. In Rotterdam, for example, a building typology was mapped, and corresponding solutions were compiled into a menu, serving as a service offer. This service offer was integrated into the digital tool Ikwoon (www.ikwoon.io) for the Dutch market. Although intended for use in the upscaling in the Bazelbuurt, it has not been activated due to a shortage of workforce. The service offer remains accessible through the Ikwoon tool.

Our exploitation and replication journey was guided by the acknowledgment, confirmed during our Save the Homes experience, that to replicate OSS initiatives – and notably Save the Homes KERs – existing local needs, conditions, dynamics and resources should be recognised and the process and the tools need to be adapted to those and be catered for specific target groups within the diverse building sector and/or local area.

The Save the Homes' experience shows **that one-to-one replication is very unlikely and might even be counterproductive**. The Save the Homes KERs – and more broadly OSS models - needs to be further tailored to the local context. This requires to:

- **Make a building stock evaluation:** Having a comprehensive understanding of the current building stock in the targeted area, including details such as building type, age, location, and the quality of the stock in term of energy efficiency to identify potential retrofit opportunities, prioritising and targeting specific buildings or sub-areas and segments for upgrades, and evaluating the impact of energy-saving measures.
- **Assess the target groups:** Take into account the diversity of the needs of various local targets groups and eventually concentrate on the ones that are more represented locally or the ones that needs more support: e.g. co-owners (in cities like Valencia) or vulnerable owners (in some specific neighborhood) or on the contrary single-family owners (like in Rotterdam as they are the ones who need this technical assistance). This requires mapping potential users, considering their socio-economic backgrounds, needs, and motivations, informs service customisation. Geographical analysis aligns services with local conditions, such as energy poverty or specific housing types. While the overarching goal might be to serve all (individual) property owners and consumers in need of renovation, doing so presents challenges such as limited capacity and the absence of tailored solutions.
- **Identify market gaps:** The mapping process reveals service gaps in the housing and renovation sectors, enabling OSS to provide comprehensive solutions that address existing barriers is the best solution to answer local needs.
- **Key Player Identification:** Identifying housing/building sector key players and their existing renovation-linked services informs OSS integration strategies. Collaboration opportunities with entities offering relevant services can be explored (see below on building a stakeholders).
- **Assess the cost:** Evaluating costs of services from various sector actors, including architects and contractors, helps design a competitive pricing structure for OSS, making it accessible to homeowners.
- **Tailor the approach:** Acknowledge that different (sometimes very) local markets require adjusting approaches and be open to implementing either a uniform approach for the entire region or diverse approaches based on the very local opportunities and activities;
- **Adapt the intervention level:** Consider either a bottom-up (like in Rotterdam) or a top-down (like in Valencia) initiative based on the local context. and use appropriate tools for that group.

Lesson 4: On the Customer Journey

Home renovation is very often a challenging experience. During the process, property owners must interact with various stakeholders, including contractors and public authorities. However, these stakeholders often focus only on specific aspects of the project and do not see it as a coherent

experience from the homeowner's perspective. This leads to stress for the homeowner, who must coordinate all the project's aspects on their own.

To make the home renovation process more attractive, equivalent service integrators are needed. These integrators can help homeowners by delegating some or all the tasks they are not well equipped for. This can make the renovation experience much smoother and reduce the likelihood of homeowners abandoning their projects. Addressing every phase of the renovation process, from onboarding to post-renovation, ensures comprehensive support for homeowners. Within the online workshop held with the end users' stakeholders' representatives, 100% of the participants would recommend the implementation of service as provided by Save the Homes Citizen Hubs in their region/context. This clearly demonstrates that enabling tool for property owners that provides guidance and support is crucial in the Customer Journey. Moreover, all participants stated high interest in being informed about similar local/national OSS models.

The customer journey developed in Save the Homes provides a holistic and comprehensive description of the key steps and bottlenecks of a renovation process from the perspective of those undertaking this journey.

A customer journey needs to be customised to the local and specific needs, yet the main steps of this journey remain the same. It is up to the local OSS initiator to decide which steps can and should be covered depending on the local needs and the available means.[3]

It is not always feasible to address each of the steps. Nonetheless, among the lessons we learned is that providing a standardised customer journey framework that could be used across EU markets to address the specific bottlenecks and steps of the renovation journey and to plan the services to be provided under the OSS is feasible and useful. In that respect, the Save the Homes Infographic on the Customer Journey was recognised as clear and useful and could be used as a template for future OSS.

While testing and implementing the tools to address each of the steps of our Save the Homes customer journey(s), we also identified key recommendations that should support the exploitation of the Save the Homes Customer Journey and facilitate possible replication. This included:

1. **Profile Your Personas:** Start by creating buyer personas and understanding their demographics, behaviours, motivations, and goals. Determine how they prefer to communicate and make decisions regarding renovations.
2. **List all the touchpoints:** Identify various touchpoints and channels where you can reach your personas. These could include social media, landing pages on the municipality's website, in-person meetings, webinars, and more. Consider how potential customers may find you and what methods of contact are available.
3. **Define the stops for different personas:** Develop different customer journeys for different personas, considering their specific needs and preferences. Define roles for local parties involved and determine when and how personal contact is provided.
4. **Take the Customer Journey yourself:** Evaluate the customer experience from the perspective of each persona. Rate the user-friendliness of the processes, identify pain points, and assess whether their needs have been met. Consider whether they would recommend the experience and how easy it is to reach you for assistance.

[3] See also our Deliverable D4.5 for extra opportunities per step.

5. **Make necessary changes:** Based on the feedback and evaluations, make improvements to the customer journey to enhance the overall experience and meet customer needs more effectively.

Lesson 5: On the services to provide

As already widely documented, there are three main models of OSS, each with its own level of engagement and responsibilities:

- **Advice Model:** Focus on the upstream parts of the customer journey, providing information and first-level advice to homeowners. The OSS in this model plays a more passive role, offering guidance and information but not getting into the specifics of the project.
- **Support Model:** Represents a qualitative leap from the advice model, as the OSS becomes fully engaged in market activities and incurs professional liability for the support provided. The OSS provides detailed design support to homeowners, taking position on the renovation project and assuming a more active role in the process. This can be materialised by the existence of a service contract, but not exclusively.
- **Implementation Model:** Represents a further qualitative leap from the support model, as the OSS takes on the responsibility for carrying out all or part of the renovation work. In this model, the OSS not only provides detailed advice but also has an economic interest in delivering works.

In addition to these three models, a third qualitative leap can be made by offering autonomous financing solutions, allowing homeowners to finance their renovation projects independently.

It is worth noting that the boundaries between the different OSS models can be porous, and the exact tipping point between advice and support is not always clear. Furthermore, in case of litigation, a court may judge the OSS liable, even in the absence of a contract or despite the contract not mentioning any liability.

The decision to adopt a particular model often hinges on local needs and the level of support available, including resources and knowledge. The complexity of the OSS correlates with its resource intensity, demanding increasingly specialized knowledge.

Save the Homes primarily functions as an advisory model, although it also incorporates some elements of a support model.

Input received by representatives from end users' stakeholders during the online workshop highlighted several types of services in terms of their value. Once again, in terms of overall services, local physical offices were preferred by 86% of participants. Examples of success renovation stories (57%), training for professionals (43%), validated registers of professionals, contractors and craftsmen (29%), problem solving (29%), financial solutions (14%), visits to renovation sites (29%), pop-up/mobile actions (14%), virtual hubs (14%), resources and tools (14%), workshops and webinars (14%), preliminary simple home assessments and renovation plans (14%) are all among valuable services that could be provided by an OSS.

As has been observed in the Deliverable 5.6 Note with Policy Recommendations, there could be a as many types of renovation related service providers as one could think of. What needs to be guaranteed is that the OSS acts as a point for trusted information for renovation and raising awareness about the requirements and available instruments to achieve it. Therefore, research of the market needs, and equally important, market gaps, is necessary ahead of setting up the OSS. The best solution seems to be the compromise based on the local conditions.

Lesson 6: On the local physical presence versus digital one

The success of OSS models like those in Valencia and Rotterdam is attributed to their presence in neighborhoods (widespread presence in the case of Valencia), making them highly accessible and locally relevant.

The physical existence of the OSS is a challenge for upscaling the deployment of OSS and streamlining the process. Nevertheless, what clearly came out of our experience and of our exploitation activities is the fact that the physical contact, direct personalised advice and the neighborhood-level focus were extremely valued. The outcome of the Exploitation Survey is striking in that sense as 75% of the respondents preferred a physical OSS rather than a digital one. During the online workshop with stakeholders from the end-users side, 70% of participants prefer a physical OSS while 30% opted for a virtual/digital one. The supply side's view was fully divided, as 50% prefer a physical compared to the other 50% preferring a virtual/digital OSS.

All in all, what came as one of the conclusions of the various feedback we gathered is that this type of physical services might be **"time consuming, but they remain time effective"**: meaning that despite the time-consuming nature of personalised and localised OSS services, such an approach is considered time-effective due to its potential for higher impact and success in engaging individuals in their renovation journey (the same comment were made when it comes to the physical tours/visit to renovation site).

Ideally, the utilisation of a combination of digital tools, such as pre-diagnosis and auto-diagnosis tools, along with physical OSS offices, can cater to diverse homeowner needs.

In the Rotterdam pilot, a hybrid approach was designed to engage homeowners. Initial physical meetings in local neighbourhoods served as the catalyst for interest, complemented by digital tools for preliminary self-preparation and orientation. Interested participants then continued their journey collectively, combining the benefits of physical interaction with the efficiency of digital engagement. This method not only maintained the personal touch of physical meetings but also optimised capacity by informing and engaging homeowners as a group.

Lesson 7: On building a stakeholder network

In OSS implementation, our experience shows that strategic engagement with targeted local stakeholders is essential.

It requires doing:

1. **A key player identification** (as part of the local market mapping): Identifying housing/building sector key players and their existing renovation-linked services informs OSS integration strategies.
2. **Exploring collaboration opportunities:**Engaging with those stakeholders and to encourage the establishment of durable stakeholder networks for supporting the services and their introduction, upscale the impact and build further capacity.

In line with existing work done on OSS, several categories of actors have been identified that can have specific roles in the OSS landscape:

- **Craftsmen/contractors/craftsmen networks and associations:** Offer a diverse range of services and aggregating the supply side. However, they may prioritise familiar and profitable projects, lack experience in complex energy renovations, and provide biased advice to

maximise profits. While large construction companies may be easier to involve, smaller ones should not be excluded, as they play a key role in renovation efforts. As our Rotterdam experience demonstrated, large contractors typically do not work for individual households, while self-employed individuals may lack the capacity for comprehensive solutions. Therefore, small and medium-sized enterprises (SMEs), particularly maintenance and paint companies accustomed to working in people's homes, offer the best perspective. To ensure the involvement of small craftsmen, it can be useful to engage their local professional organisations, but it is not always easy to bridge the gap between sectoral associations and those directly performing the work.

- **Brokers/architects/contractors:** Act as intermediaries between homeowners and other professionals as project leaders. While they help define and design the projects, y might see OSS as a competitor or prioritise larger scale projects.
- **Retail Banks:** Can help to provide financing for green (deeper) renovations. They sometimes offer basic advice on energy savings and subsidies through existing customer relationships but more importantly they can be a channel to engage house buyers before their purchase, ensuring the right information reaches the right people.
- **Real estate agents/notaries** can also help to reach end-users effectively by offering pre-sale services, support and advice to homeowners.
- **Condominium Administrators:** Deal with energy efficiency in multifamily buildings. They are well-informed about potential renovations, making them ideal collaborators. When a building plans renovation work, administrators can facilitate comprehensive renovations, including energy efficiency measures, utilising existing processes and subsidies. But it is a challenging market due to weak decision-makers and potential conflicts of interest. Their role can be vital but comes with limitations.
- **Property owners and consumers associations:** Associations representing the demand side are also key intermediaries as they have direct contact with homeowners, are recognised as trusted interlocutors and provide advice and support tools to their members.
- **Public Authorities:** Offer valuable information and advice but often remain neutral, avoiding intervention in the market. They may lack resources to proactively engage homeowners, mostly assisting those already motivated to renovate.

All these stakeholders can play a crucial role in the success of OSS and need to be consulted throughout the development and implementation process. This includes involving them in the design of service offers, marketing and communication strategies, and the development of local plans. Involving them after the development of the OSS could jeopardise their interest and commitment. On top of that, their input and experience can be very valuable for setting up the right tools and best consider the local peculiarities, needs and capacities.

Leveraging existing networks can help to boost the potential of OSS. Our experience in Rotterdam showed that tapping into local energy communities' network, such as Energie voor Rotterdam, could serve as a promising starting point, fostering collaboration and facilitating the expansion of OSS initiatives within the community.

Lesson 8: On utilising success story for marketing & communication Purposes

Information and marketing are pivotal at the initial stage of the customer journey. They serve to create homeowner awareness about energy consumption control and methods to achieve it, using various communication channels like local energy agencies. This aims to prompt immediate action and foster

long-term behavioural change. The impact of information and marketing is amplified when coupled with a comprehensive service offering. By bundling services, OSS increase interest, (normally) inspire confidence, simplify the renovation process, and make it more enticing for homeowners.

Furthermore, effective information and marketing build trust and credibility, particularly among sceptical or uninformed homeowners, including low-income and vulnerable populations. They dispel misconceptions, overcome participation barriers such as financial constraints, and highlight the financial benefits of energy efficiency upgrades.

The testing and replication of the Save the Homes OSS models required well though through targeted and tailored marketing and communication tools adapted to the audience and target group(s).

This includes the use of digital and traditional media, public relations, and other forms of communication. But what works and what does not work? How to promote the OSS and renovation?

During our project, we have made use of the different available digital and physical channels and tools to promote the OSS. If they all had a certain impact, a couple of specific lessons were drawn:

- Sharing successful renovation stories can inspire homeowners and demonstrate the tangible benefits of engaging with OSS;
- This can be done through site visits (as we mentioned earlier, “this can be time consuming, but is also time effective”);
- A hybrid form can use the best of both worlds.

10 What’s next: Further potential for exploitation

As the Save the Homes project nears its conclusion, it becomes imperative to evaluate the potential for further replication and the long-term sustainability of the tools developed during its duration. While the successful deployment of Citizen Hubs in Valencia regions signals a promising path towards establishment and expansion, the pilot and follower cities demonstrate significant potential and intentions for utilising Save the Homes' key exploitable results in the future. This exploration provides insights into the prospects of scaling up and maintaining the project's impactful solutions beyond its current phase. In summary, the future outlook, as hinted in previous sections of this report, indicates promising developments on the horizon.

In Sant Cugat

Sant Cugat's future plans include promoting knowledge-sharing, enhancing awareness campaigns, introducing a tax reduction for energy retrofitting, and improving La Teulada's services to provide comprehensive support to local initiatives and energy communities. Additionally, visits to large multi-family buildings are being undertaken. With significant interest in the region for the installation of solar energy sources, this approach has been identified as suitable for establishing initial contacts with homeowners.

In Ljubljana

The recent relocation of the Ensvet climate office to a prominent location in the heart of Ljubljana demonstrates the city's commitment to engaging with citizens on climate-related topics. Acting as a citizen hub for energy advice through Ecofund Ensvet services, it will soon operate as an OSS for renewables via the power market operator Borzen. Synergies have been identified with the reMODULEES EU-funded project's platform, which will be available in the office for use by citizens and advisors. The prospect for expansion includes deploying OSS through Ensvet's network of 60 offices

once proven successful in the CoL climate office. Additionally, the CoL has submitted a proposal for further development of the OSS concept in Slovenia, largely based on the Save the Homes experience, to the 2023 Life call (Renov-AID: Renovation Enhancement Network towards Optimized Vitality and Adaptation Integration in Dwellings).

In Valencia region

Next to the pilot experience in the six local governments, the Regional Government crafted a collaboration agreement and executed a management assignment with 23 additional local governments to implement the Citizen Hub concept for delivering IHRS, among other housing services. This initiative entailed the establishment of a virtual OSS network, encompassing training programs, communication channels, branding, staff protocols, brochures, explicative documents, and a diagnosis tool. The success of the diagnosis tool and its replication and exploitation, even prior to the project's conclusion (such as the Balearic Island and National versions, along with a dedicated API for the national bank), has spurred efforts to maintain and enhance the tool. Plans for additional functionality, including compatibility with grants, incorporation of private funding, integration with contractors' registries, and customization of data and results, are already in progress, aligning with the envisioned exploitation plan. Similarly, training programs, along with support and dissemination efforts, have proven immensely valuable and will continue to be provided to staff and professionals, adapting to emerging trends (such as industrialization) or evolving incentives (new grant schemes) and challenges (such as climate adaptation and risk mitigation).

In Rotterdam

In Rotterdam, there is an emerging pathway being explored that involves collaborating with the umbrella organization Energie van Rotterdam, which brings together local energy communities to replicate the successful experience of Alex Energie. This endeavour aligns with a notable shift in municipal policy, where greater autonomy is being granted to neighbourhoods and districts to execute their own plans. This shift towards decentralisation underscores a strategic pivot towards community-driven initiatives, fostering greater grassroots involvement and ownership in the city's sustainability efforts.

Among property owners' associations

While property owners' associations they may not independently establish OSS initiatives, their willingness to collaborate and promote such endeavours demonstrates significant commitment. This commitment is particularly notable among the majority of members, with 8 out of 9 expressing interest during the exploitation workshop. Moreover, initial exploratory steps are been taken by two associations, signaling concrete interest in setting up OSS with the expertise gained from the Save the Homes Citizen Hub. Additionally, there's keen interest in local collaboration with Save the Homes pilots, particularly in Spain. Notably, strong enthusiasm is evident among members for adopting the Save the Homes citizen hub concept.

For local authorities

In the short and medium term, ICLEI plans to leverage 3 key outputs in the context of collaboration with its 125 European member cities, namely [2] the infographic that outlines 9 key steps for the setup of OSS by local governments; [2] the replication guidelines based on the lessons learned from the follower cities (D5.1) and [3] the self-instruction guide for the Citizen Hub model (D5.3). At the EU-projects and policy level, ICLEI will continue to exploit knowledge gained in the context of project implementation, to integrate OSS-considerations in built environment policy recommendations, replication planning and engagement in consultation processes. As partner of the Climate-Neutral and Smart Cities Mission, ICLEI will further endeavour to support cities in their quest to decarbonise their building stock, by providing technical assistance and facilitating peer-to-peer learning. In addition, the

local government network will incorporate OSS in project acquisition work, both at national, EU and international level (e.g. future DG ENER citizen-led renovation project calls, relevant tenders such as the EU-US Transatlantic Sustainable Transition Initiative (NDICI-Global Europe). At the international level, ICLEI will endeavour to feed gained expertise into international processes, building on its engagement in the GlobalABC, the Climate Heritage Network, the UN Climate Conferences and the Coalition for High Ambition Multilevel Partnerships (CHAMP).

11 Conclusions: "Thinking Big Starts Small!"

OSS models can help address several market gaps by offering a streamlined renovation journey for homeowners, establishing a trusted process for accessing reliable and accredited experts, and mitigating coordination challenges in the construction value chain. Additionally, OSS models enhance the appeal of deep renovations by packaging technical and financial solutions, demonstrating their long-term value. Despite a steady increase in OSS across the EU, their impact and scale have been limited. With the new Energy Performance of Buildings Directive mandating the expansion of OSS, there is an urgent need to scale up their deployment.

The Citizen Hub model, developed through the Save the Homes project, along with other key exploitation results identified, can serve as essential tools for the successful adoption and exploitation of OSS in the EU. Its application across different EU regions offers valuable insights for replication, creating a framework that can help local governments and market actors to collaborate effectively, ensuring OSS's successful rollout across the EU. The lessons learned from this initiative are crucial for OSS's successful replication.

Incorporating lessons learned, political support, long-term financial backing, adaptation to local market conditions, customer journey enhancement, varied service offerings, strategic stakeholder engagement, utilisation of success stories, and maintaining a balance between physical and digital presence are essential for effective deployment and replication of OSS initiatives. These lessons underscore the importance of holistic approaches, local adaptation, stakeholder engagement, and sustained support in the successful deployment and replication of OSS initiatives.

Our strategy for the deployment and replication of the Save the Homes One Stop Shop models aims to facilitate OSS's successful rollout in the EU. To achieve the overarching renovation goals and align with the new EU directives for OSS deployment, we must adopt a strategy that starts small yet thinks big.

As the Save the Homes project draws to a close, there is significant potential for its tools to be replicated and sustained in the future. The deployment of Citizen Hubs in Valencia regions presents an opportunity for expansion, while pilot and follower cities are poised to leverage key project results. From Sant Cugat's initiatives to Ljubljana's commitment and Rotterdam's exploration, various regions are ready to continue the project's impact. Additionally, property owners' associations show enthusiasm for adopting Save the Homes concepts, and local authorities express interest in leveraging project outputs for collaboration and policy integration. This widespread engagement augurs well for the future of OSS and the Save the Homes Citizen Hubs, marking a positive outcome from this 36-month project.

References

- *"One-stop shops for residential building energy renovation in the EU"*, Analysis and Policy Recommendations, JRC Science for Policy Report, Boza-Kiss Benigna, Bertoldi Paolo, Della Valle Nives, Economidou Marina, 2021.

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- *"One-Stop-Shops for Energy Renovation of Dwellings in Europe – Approach to the Factors That Determine Success and Future Lines of Actions"*, Sustainability, MDPI, Rolando Biere-Arenas, Silvia Spairani-Berrio, Yolanda Spairani-Berrio and Carlos Marmolejo-Duarte, 2021.

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Relevant Save the Homes Deliverables:

Phases of the implementation work plan	Related Save the Homes Report (Deliverables)
Market analysis	D2.1 - Save the Homes demand and supply mapping
Business model definition	D3.3 - Citizen Hub business model for the two pilots
Set-up and physical office definition	D3.2 - Strategy and structure to implement the Citizen Hub concept for the two pilots
Citizen Hub's ecosystem - contractor training and verification	D2.1 - Save the Homes demand and supply mapping D2.3 - Citizen hub protocol for supply side community building and network creation
Services and process flow	D3.1 - Home renovation customer journey methodology D2.5 - Suitable renovation packages and supporting services for two pilots
Phases of the implementation work plan	Related Save the Homes Report (Deliverables)

HR and staffing guide	D3.6 - Staff training programme for the two pilots
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KPIs and monitoring system	D2.4 - Mapped suitable protocols and methods for quality control of the renovation works and for buildings performance monitoring D3.8 - Data monitoring plan for the two pilots D4.2 - Citizen Hub model agreement including quality control system for the business model elements and monitoring protocols for evaluation of partners' activities D4.5 - Action plan, risk assessment and quality assurance of the renovation activities
IT Tools	D3.7 - Definition of the Local Citizen Hub Platform functionalities for the two pilots and its integration within existing platforms

Annex: Final Exploitation Workshops: Polls results and content

This annex provides additional information on the Replication Workshops conducted by UIPI. These workshops aimed to facilitate the validation and assessment of project materials for EU-wide replication, gathering insights from stakeholders across different sectors. Comprising three distinct sessions tailored to specific target groups (Group 1 - Demand Side, Group 2 - Supply Side, Group 3 – Existing OSS and related Projects) the workshops sought to address various aspects of replication challenges and opportunities.

In addition to the information provided in Chapter 8 of this report, this annex includes presentations, discussions, and feedback gathered from participants. Additionally, the results of surveys conducted during the workshops are presented, offering valuable insights into stakeholders' perspectives on One Stop Shop (OSS) implementation and related barriers.

Workshop promotional posters - Starting from the top right and downwards: Poster for the first workshop on 15 January with end users; Poster for the second workshop on 8 February with the supply side; and Poster for the third workshop on 9 February with existing OSS and EU projects.

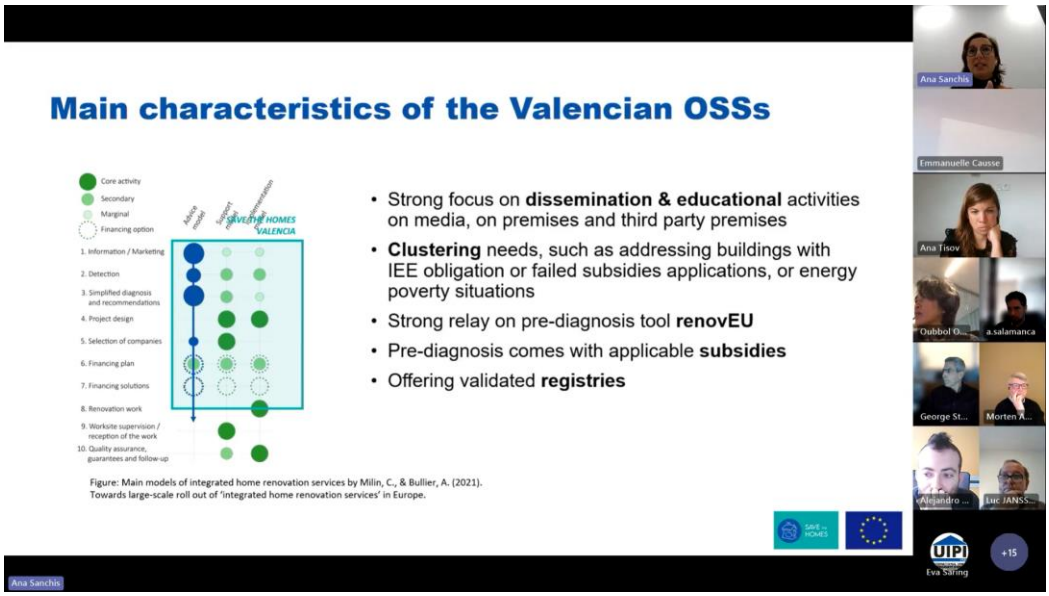
The workshops were structured with the objective of consolidating the impact of the Save the Homes project, providing a comprehensive platform to report on the project's achievements to date. Through the presentation of the OSS in Valencia and Rotterdam, we sought not only to disseminate results, but

also to receive direct and detailed feedback from participants on the functionality and effectiveness of the innovative OSS. Furthermore, the workshop aimed to explore the possibility of replicating these tools in different contexts, evaluating their adaptability and relevance. A crucial element was the personalized adaptation of the tools to the specific needs of the participants, encouraging their active participation in the decision-making process. Ultimately, the importance of achieving key project indicators was underlined, thus consolidating collaborative participation essential to shaping the future of home renovation in Europe.

Structure of the workshops

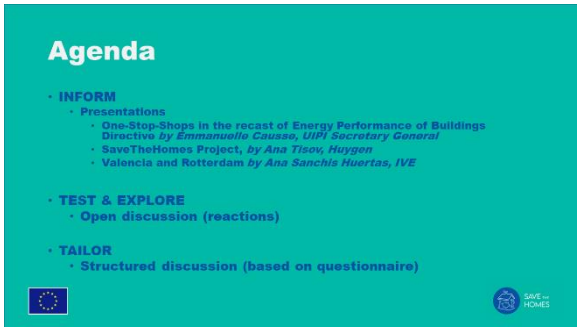
The workshops were structured to provide comprehensive insights into the deployment of One-Stop-Shop (OSS) models within the context of the Save the Homes project. The events were structured as following:

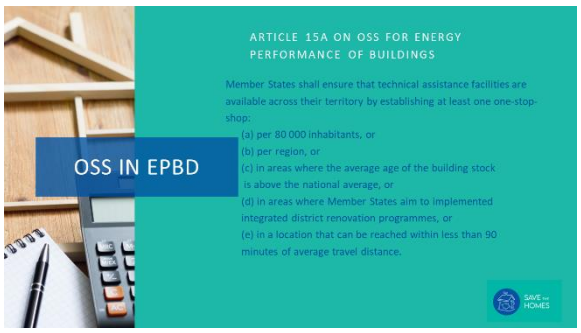
1. **Introduction to the Political Landscape**: Kickstarting the sessions with an overview of the OSS deployment's political context and the forthcoming Energy Performance of Buildings Directive (EPBD) provisions.
2. **Overview of the Save the Homes Project**: Detailing the project's goals, the collaboration between its partners, and its intended impact on the OSS landscape.
3. **Presentation of the Rotterdam and Valencia Pilot Cases**: Offering in-depth insights into the Citizen Hubs developed in Rotterdam and Valencia. The Rotterdam model was presented as a bottom-up approach, assisting citizens through every step of the renovation journey, from need detection to renovation commencement, highlighted by financing through the energy transition fund and a "Renovation Solution Menu" for clearer citizen guidance. Physical offices were emphasized as vital for exploring long-term renovation strategies. Conversely, the Valencia model showcased a top-down strategy, focusing on collective need creation by an official entity, with a strong emphasis on dissemination, awareness, and educational efforts to align individual renovations with available solutions.
4. **Q&A Session**: An interactive segment for discussing the pilots, soliciting feedback, and assessing the replication and exploitation potential of the two models.
5. **Polls for Trends and Insights**: Throughout the workshop, polls were conducted to gather trends and insights on various aspects linked to OSS deployment and the potential for replicating the Rotterdam and Valencia pilots. These polls aimed to capture the perspectives of attendees on the feasibility, challenges, and opportunities associated with adopting and scaling OSS models in different contexts.



Presentation of Valencia Pilot during the first workshop

Workshop slides





H2020 Save the Homes

One-Stop Shops as Citizens' Hubs to support the decision-making process for integrated renovations

Ana Tisov
Huygen Engineers & Consultants

Let's talk One Stop Shops

UIPI & SaveTheHomes
9 Feb 2024

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 892749.

To ensure sustainable cities, we need to improve performance of existing building stock.

Why: The building sector is one of the largest energy consumers in Europe, responsible for more than one third of the EU's energy-related emissions.

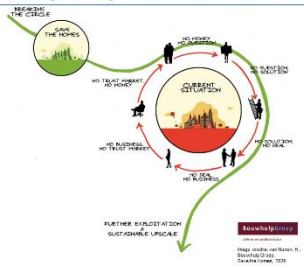
What: R… minimum of 2-3%[1].

How: E… sed services[2] as a… integrated renovation s…

Proposal for EPBD recast (provisional a… 023)

[1] Study 'Boosting Building Renovation: What potential and value for Europe?' done for European Parliament's Committee on Industry, Research and Energy, 2016: LINK
[2] Report on maximising the energy efficiency potential of the EU building stock (2020/2070(INI). Committee on Industry, Research and Energy, Rapporteur: Ciaran Cuffe (April 2020) LINK
[3] Towards large-scale roll out of "integrated home renovation services" in Europe, Adrian BULLIER, CINEA (March 2022)

Why One-Stop-Shops & Save the Homes?



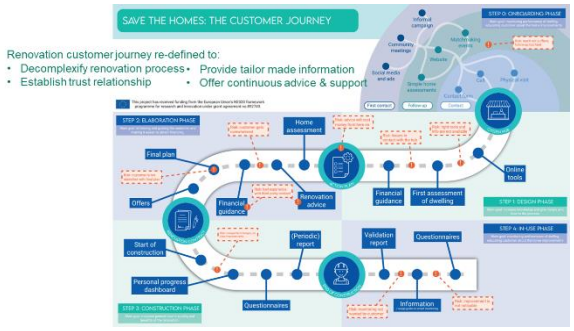
Save the Homes in the Netherlands, Spain, Slovenia

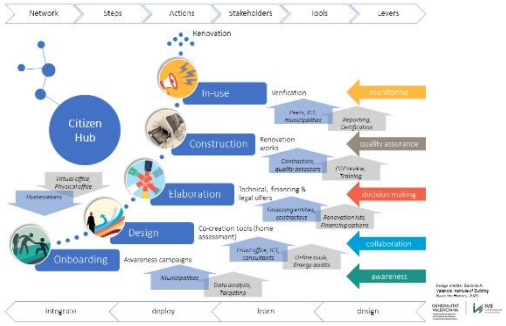
Save the Homes builds upon the current activities at:
- **City of Rotterdam**, NL
- **Municipality of Valencia**, ES

and aims to strengthen them & bring the cities renovation ambitions further within **Citizen Hubs** -> OSS inspired concept.

The two follower cities **City of Ljubljana**, SI & **Sant Cugat**, ES are developing blueprints for OSSs in their cities.

These Citzen Hubs are endorsed by a municipality, a trustworthy entity ensuring that the process is independent, transparent and of high quality for their citizens.





Save the Homes OSS implementation guide

	Phases of the implementation work plan	Related Save the Homes Report (Deliverables)
a	**Market analysis**	D2.1 - Save the Homes demand and supply mapping
b	**Business model definition**	D3.3 - Citizen Hub business model for the two pilots
c	**Set-up and physical office definition**	D3.2 - Strategy and structure to implement the Citizen Hub concept for the two pilots
d	**Citizen Hub's ecosystem - contractor training and verification**	D2.1 - Save the Homes demand and supply mapping D2.3 - Citizen hub protocol for supply side community building and network creation
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Visit: savethehomes.net/knowledge-hub/ for all the reports!

Save the Homes OSS implementation guide

Pilots - Possible risks and barriers

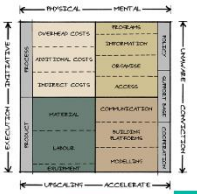
Onboarding	Failure of campaigns / onboarding activities to reach citizens and convert them into real leads.
Design	The financial barriers might pose a risk of drop out from the project by prospective citizens.
Elaboration	The complexity of the bureaucracy -> Homeowners' satisfaction must be of utmost importance.
Construction	The lack of contractors, the quality of the work delivered and delays.
In-use	Insufficient feedback and lack of knowledge of the necessary improvements.

Main challenge

Energy renovations are more than just about energy:
- Product
- Process
- Policy
- Support base
- Cooperation

From unaware to **conviction & trust**
... and from initiative to **execution**

All together in a HUB.



Key takeaways

- Think big, start small: Start working on **strong network with local actors**.
- Work on how to **channel fundings effectively** (boosting use of available public funds & leveraging private financing)
- Take time: Work on **value proposition** focusing on the whole customer experience. Single entry point to cover the whole customer journey, good marketing is important!
- Have a strong **online platform** to get people interested and ensure good conversion rates (OSS efficiency). Maximize use of digital solutions & available data.
- Consider **different revenue streams**, as quite difficult to make viable BM as it strongly depends on public subsidies.
- **Widen the scope** by integrating the expertise on health, aesthetics, circularity.

Thank you for your attention!

SAVE THE HOMES

https://www.savethehomes.net

Twitter: @SavetheHomes

Linkedin: https://linkedin.com/showcase/71812220

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 892749.

Our pilot cases

Share with you the outcome of our work, present our Citizens HUBS in Valencia and Rotterdam

Replication Workshop – Supply side
8 February 2024

SAVE THE HOMES

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 892749.

Rotterdam

One-Stop Shops as Citizens' Hubs to support the decision-making process for integrated renovations

Replication Workshop – Supply side
8 February 2024

SAVE THE HOMES

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 892749.

Main characteristics of OSSs in Rotterdam

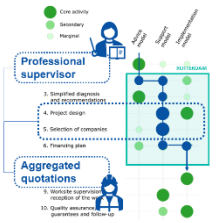
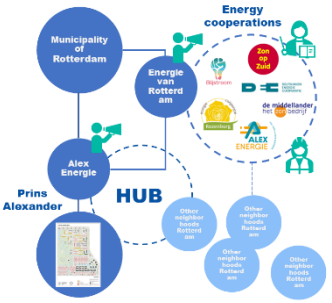


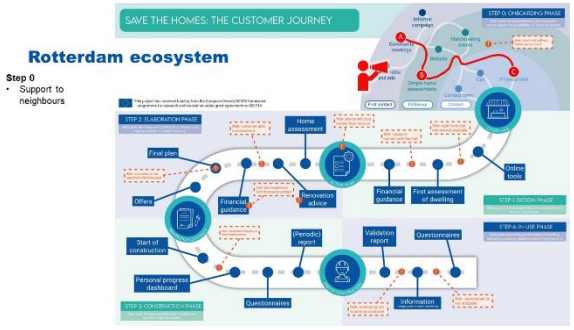
Figure: Main models of integrated homerenovation services by Miller, C., & Buttler, A. (2021). Towards large-scale roll out of integrated home renovation services' in Europe.

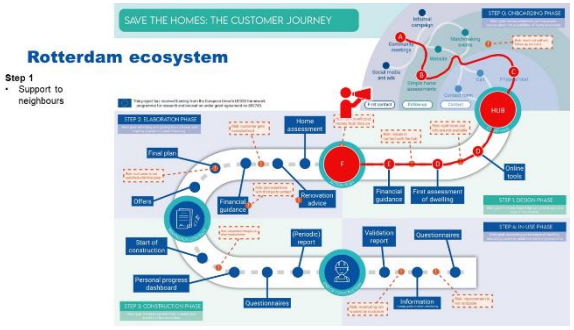
- Integral model
- From advice to individual homeowners
- **To form a collective** Aggregator
- Access to finance
- The HUB focuses from the part of detection until the **start of renovation** works

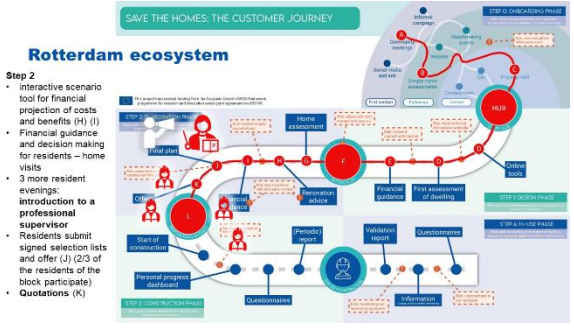
Rotterdam ecosystem

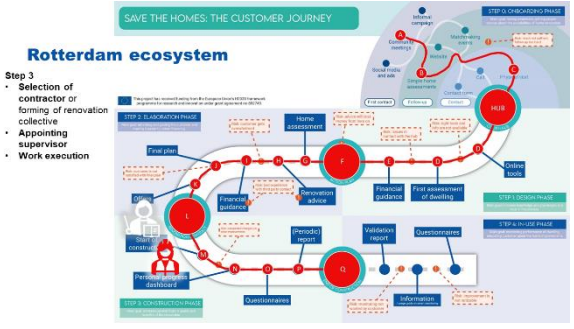
- Municipality of Rotterdam as **facilitator**
- Alex Energy as **local entity**
- Energie van Rotterdam as possible **gateway** to other local entities (upscaling)
- Energie Transitie Fonds (ETF) for **finance**
- First **demonstration project** 11 homes
- Line up of **2 more projects** (6 and 350)
- **Digital campaigns** ready to start
- Renovation solutions **Menu** available

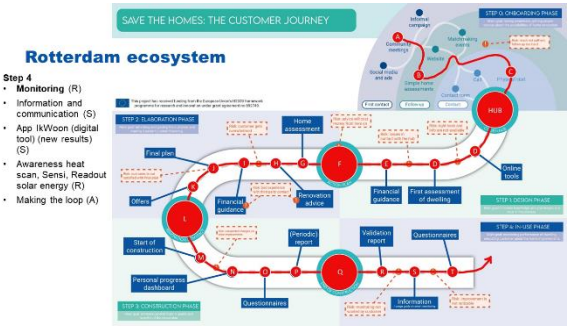


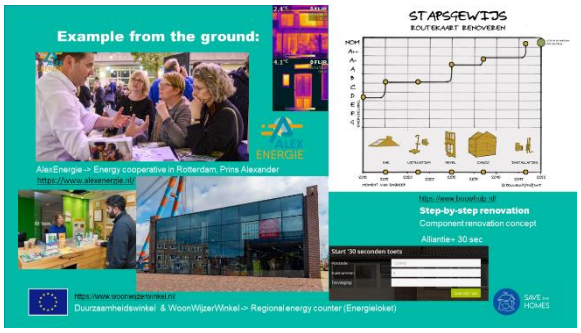









SAVE THE HOMES: THE CUSTOMER JOURNEY
Rotterdam ecosystem
Step 4
Monitoring (R)
Information and communication (S)
App IkWoon (digital tool) (new results) (S)
Awareness heat scan, Sensi, Readout solar energy (R)
Making the loop (A)
HUB


Example from the ground:
AlexEnergie -> Energy cooperative in Rotterdam, Prins Alexander
https://www.alexenergie.nl/
STAPSGEWIJS
Step-by-step renovation
Component renovation concept
Alliantie+ 30 sec
Duurzaamheidswinkel & WoonWijzerWinkel -> Regional energy counter (Energieloket)


Valencia
One-Stop Shops as Citizens' Hubs to support the decision-making process for integrated renovations
Replication Workshop – Supply side
8 February 2024
SAVE THE HOMES
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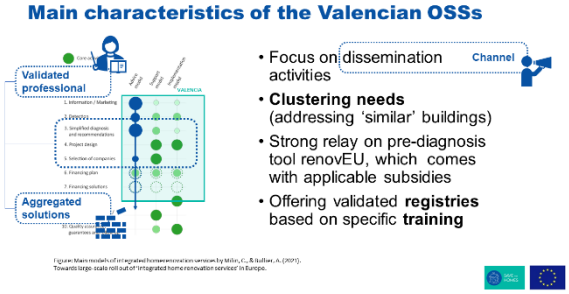
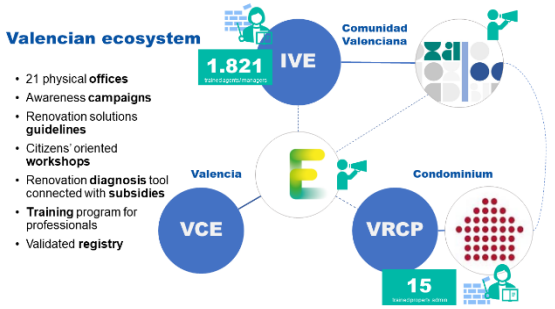
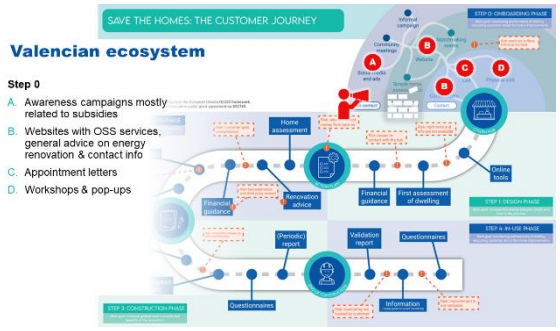
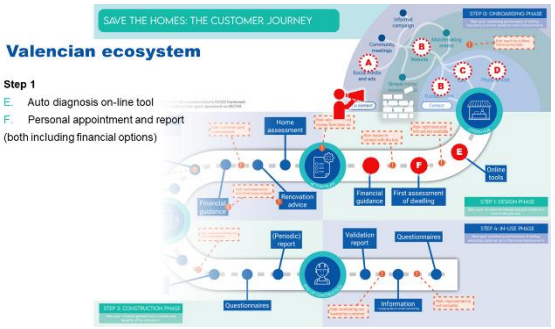
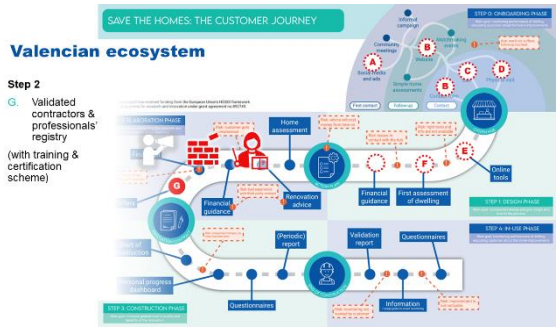
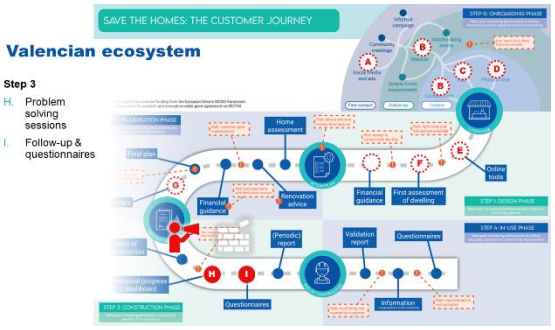

Main characteristics of the Valencian OSSs
Validated professional
Aggregated solutions
Focus on dissemination activities
Channel
Clustering needs (addressing 'similar' buildings)
Strong relay on pre-diagnosis tool renovEU, which comes with applicable subsidies
Offering validated registries based on specific training

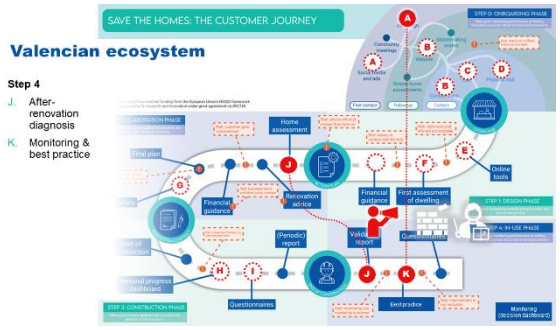

Valencian ecosystem
21 physical offices
Awareness campaigns
Renovation solutions guidelines
Citizens' oriented workshops
Renovation diagnosis tool connected with subsidies
Training program for professionals
Validated registry
1.821
IVE
Comunidad Valenciana
Valencia
VCE
Condominium
VRCP
15


SAVE THE HOMES: THE CUSTOMER JOURNEY
Valencian ecosystem
Step 0
A. Awareness campaigns mostly related to subsidies
B. Websites with OSS services, general advice on energy renovation & contact info
C. Appointment letters
D. Workshops & pop-ups


SAVE THE HOMES: THE CUSTOMER JOURNEY
Valencian ecosystem
Step 1
E. Auto diagnosis on-line tool
F. Personal appointment and report
(both including financial options)


SAVE THE HOMES: THE CUSTOMER JOURNEY
Valencian ecosystem
Step 2
G. Validated contractors & professionals' registry
(with training & certification scheme)


SAVE THE HOMES: THE CUSTOMER JOURNEY
Valencian ecosystem
Step 3
H. Problem solving sessions
I. Follow-up & questionnaires


SAVE THE HOMES: THE CUSTOMER JOURNEY
Valencian ecosystem
Step 4
J. After-renovation diagnosis
K. Monitoring & best practice

Questionnaire results

During the events, participants were asked to take part in a series of questions to provide relevant information for the project and to help steer the discussion. These questions were tailored to each audience group and also served as key resources to gather the stakeholder views on OSS in general and Save the Homes outputs in particular. Despite the small sample size, the feedback is considered reliable and highly relevant, as participants were targeted for the part of the building sector/stakeholders they represented and were highly knowledgeable about their contexts and had experience with the replication process.

1st workshop – Demand Side

1. **Before today, were you familiar with OSS? (22 responses)**
    a. 85% Yes
    b. 15% No
2. **Are you acquainted with local or national OSS? (21 responses)**
    a. 12% Yes
    b. 88% No
3. **From your point of view, what are the main drivers for renovation? (20 responses)**
    a. 30% Reduction on monthly expenses
    b. 15% Increase in property or rental value.
    c. 20% Improving confort (temperature, air quality, noise, etc)
    d. 10% Financial support opportunities

e. 10% Contribution to sustainability target (s) reason
f. 10% Access to technical support and information
g. 0% Legal obligations in place
h. 5% Other

4. **From your point of view, what are the main challenges and bottlenecks impediments renovation? (20 responses)**
    a. 27% Upfront cost too high
    b. 35% Lack of financial incentives
    c. 7% No guarantee or overview of the long-term benefits
    d. 10% Lack of knowledge (what to do, where to start, what or in which order to implement measures)
    e. 10% Perception of overly technical complex project, due to structural and systems change.
    f. 7% Lack of trust in professional
    g. 4% Others
5. **If you attended today's workshop, do you think the Valencia model of OSS can be useful to support individuals in their renovation journey? (17 responses)**
    a. 50% Yes
    b. 0% No
    c. 50% Not applicable
6. **If you attended today's workshop, do you think Rotterdam model of OSS can be useful to support individuals in their renovation journey? (17 responses)**
    a. 50% Yes
    b. 0% No
    c. 50% Not applicable
7. **Which elements of the services explained is/are the most valuable? (18 responses)**
    a. 21% Local physical offices
    b. 3% Pop-up / mobile actions
    c. 3% Virtual hubs, resources, and tools
    d. 21% Examples of success renovations stories
    e. 6% Visits to renovations sites
    f. 3% Workshop and webinars (citizens school)
    g. 0% Personal letters of appointment
    h. 3% Gamified/awareness/consciousness actions
    i. 9% Preliminary simple home assessment and renovation
    j. 0% Energy comfort and wellbeing monitoring
    k. 6% Financial simulation

l. 9% Training for professionals
m. 3% Training for craftsmen
n. 6% Validated registers of professionals, contractors, and craftsmen
o. 6% Problem solving, forums, hotlines.
p. 0% Analysis of impacts from actions (follow-up)
q. 0% Others

8. **If you attended today's workshop, what features/tools should be added to answer end-users' needs in Valencia? (13 responses)**
    a. not applicable
    b. Financial offers that blend public and private funding
    c. Provide Energy Certificate as part of the service (should be free of charge for the private citizens who live e.g. in single family house themselves)
    d. Not applicable
9. **If you attended today's workshop, what features/tools should be added to answer end-users' needs in Rotterdam? (13 responses)**
    a. not applicable
    b. a bit more clarity on who addresses and redresses any complaint from households who invested in the retrofit work.
    c. Same
10. **What works best in your view: (19 responses)**
    a. 75% A physical OSS
    b. 25% A virtual/digital one
11. **If you attended today's workshop, what would you improve/change to guarantee the success of the models presented in your context (ensuring a business model, long term viability, etc. of the OSS)? (13 responses)**
    a. Funding and tax incentives support
    b. They can probably work, but renovating is quite mentally burdensome that you should catch up when ownership changes and by catching up when you are willing to renovate.
    c. Must be long-winded operation in order to reach inhabitants (like in Finland there are 1,2 million single-family houses)
    d. Address/support the rental market, simplification as much as possible and financially viable
    e. A major problem in Germany is likely to be the provision of sufficient craftsmen. Due to the importance of the topic, it is important that the OSS continue to be operated beyond the project. The financial aspect could be the biggest problem here.
    f. I don't know precisely. I think that it's necessary to take more time to give good feedback to this question.
    g. not applicable

h. Financial assistance of property owners in order to be able to face the cost of renovation.

i. Oss should work with installers cooperatives and no more scattered individuals - that's the condition to implement coherent work of different specialists.

j. Financial stimulation

k. Cooperation with different stakeholders (like municipality, associations of owners and consumers)

l. One question needs to be addressed: who exactly should visit the OSS in case of Multi-Unit Buildings (MUB)? As pretty much all biggest and most effective renovations considering energy efficiency are the ones that need the collective decision made in the MUB, should all the shareholders or just some of them visit the MUB's (whether physical or virtual) or just a representative of the board (such as the chair) or the property manager (usually, a paid professional)?

m. I don't know.

12. **If you attended today's workshop, would the Rotterdam model work / could be replicated in your region/country? (13 responses)**

    a. not applicable

    b. yes, with some twists to adapt it to local conditions.

    c. yes

    d. Yes, and in Finland we have had advise offered by the municipalities, but they have disappeared (maybe due to the lack of financial resources of the municipality?) Other example is that in Finland we have special support and advice service on home reparation for elderly people +65 years old that (see more: https://vtkl.fi/in-english

    e. Not applicable

13. **If you attended today's workshop, would the Valencia model work / could be replicated in your region/country? (13 responses)**

    a. not applicable

    b. yes, with some twists to adapt it to local conditions .

    c. Yes, there are lots of good concept there. I wonder how this could be reproduced in other Spanish regions. We had the occasion to visit Opengela in the Basque region with UIPI, there too the concept is slowly materialising.

    d. Yes

    e. Not applicable

    f. Yes, of course

14. **Which particularity of your context could only be overcome by a policy change? In other words, if you were to make policy recommendations to support the development of an OSS what would that be? (13 responses)**

    a. In Ireland, the full building assessment €750 approx. has to be paid initially €350 can be claimed back if householder goes ahead. This is too much of a gamble. People don't like that.

    b. Stand by the interested citizens and help them renovate.

c. Change the economic environment of companies and installers to incentivise cooperatives = higher insurance costs when you work alone, stricter condition on proving the installer is insured, etc

d. Financial founds

e. People need sovereign independent advice for their own house (general information is not enough anymore) - so would be important to have a program that for example is a "Mobile OSS" and would make a roundtrip on every area - then people would get nearby information and there could be people who can visit on site as well.

f. I think it would be interesting for city councils to get directly involved to give credibility and transmit confidence to small owners and communities of owners.

15. **Would you recommend the implementation of this kind of service (explained today) in your region/context? (18 responses)**

    a. 100% Yes

    b. No

16. **How interested you would be (as an organisation) in being informed about similar local/national OSS models? Response from 1 to 5 (1= low, 5= very likely) (14 responses)**

    a. 0% 1

    b. 0% 2

    c. 12% 3

    d. 25% 4

    e. 63% 5

17. **How interested would you be (as an organisation) in promoting local/national OSS? Response from 1 to 5 (1= low, 5= very likely) (14 responses)**

    a. 0% 1

    b. 0% 2

    c. 16.7% 3

    d. 16.7% 4

    e. 66.7% 5

18. **How interested would you be (as an organisation) in collaborating with existing local/national OSS? Response from 1 to 5 (1= low, 5= very likely) (10 responses)**

    a. 0% 1

    b. 0% 2

    c. 20% 3

    d. 0% 4

    e. 80% 5

19. **How interested would you be (as an organisation) in setting up (alone or with local partners) an OSS for your members? Response from 1 to 5 (1= low, 5= very likely) (10 responses)**

    a. 16.7% 1

    b. 0% 2

c. 33.3% 3

d. 0% 4

e. 50% 5

20. **Do you think a OSS can help property owners to renovate? (12 responses)**

a. 95% Yes

b. 5% No

2nd Workshop – Supply Side

1. **Are you familiar with OSS?**
   a. 100% Yes
   b. 0% No
2. **Are you acquainted with local or national OSS?**
   a. 67% Yes
   b. 33% No
3. **From the point of view of your organisation, what are the main drivers for renovation? (max. 2)**
   a. 70% Reduction on monthly energy expenses
   b. 50% Financial support opportunities
   c. 30% Increase in property or rental value
   d. 30% Legal obligations in place
   e. 40% Contribution to sustainability target(s) reason
   f. 30% Access to technical support and information
   g. 70% Improving comfort (temperature, air quality, noise, etc)
   h. 0% Other
4. **From the point of view of your organisation, what are the main challenges and bottleneck impeding renovation? (max. 2)**
   a. 86% Upfront cost too high
   b. 43% Lack of financial incentives
   c. 14% No guarantee or overview of the long-term benefits
   d. 71% Lack of knowledge (what to do, where to start, what or in which order to implement measures)
   e. 57% Perception of overly technical complex project, due to structural and systems change
   f. 43% Lack of trust in professionals
   g. 0% Other
5. **Do you think a OSS can help property owners to renovate?**

a. 100% Yes
b. 0% No

6. **What works best in your view?**
    a. 50% A physical OSS
    b. 50% A virtual or digital OSS
7. **Do you think the Valencia model of OSS can be useful to support individuals in their renovation journey?**
    a. 100% Yes
    b. 0% No
8. **Why?**
    a. they raise awareness and motivate homeowners to start the renovation process
    b. Importance of meeting people physically, advising with low hanging fruit solutions with added practical value.
    c. Physical contact is very important, especially for older people.
    d. Because homeowners are various and have different needs.
    e. very efficient to keep the home owner on track, solid to mitigate risk of important drops
    f. The impressive success factors
    g. It's targeted at the local level and supports people in their community, less of a barrier to access.
9. **What features/tools should be added to answer supply side needs in Valencia?**
    a. Better include small construction companies and link them with small homeowners
    b. Not sure to know all the features of the current model.
    c. How to support craftsmen
    d. I don't' know in specific
    e. More measures to attract small craftsmen
10. **Do you think the Rotterdam model of OSS can be useful to support individuals in their renovation journey?**
    a. 100% Yes
    b. 0% No
11. **Why?**
    a. it's an innovative idea that could be replicated into other cities.
    b. Because o a lack of craftsmen
    c. Again, I am just diving into the OSS topic and not able to say which exactly feature or features are most useful for promotion of renovations.
    d. Stronger inclusion of small contractors

e. good the idea concerning the contractors. obviously it should be considered in each legal country framework

f. The bottom up approach, people work together in a community, they are not directed or told what to do, they take the initiative themselves.

12. What features/tools should be added to answer supply side needs in Rotterdam?

a. maybe a registry of professionals

b. A legal form maybe to support building collectives

c. Sorry, not experienced yet to answer it.

13. **Which elements of the services explained is/are the most valuable? (max 3)**

a. 83% local physical offices

b. 17% pop-up/ mobile actions

c. 33% virtual hubs, resources and tools

d. 50% examples of success renovation stories

e. 33% visits to renovation sites

f. 17% workshops and webinars (citizens school)

g. 17% personal letters of appointment

h. 17% gamified/ awareness/ consciousness actions

i. 67% preliminary simple home assessment & renovation plan

j. 17% energy, comfort and wellbeing monitoring

k. 50% financial simulations

l. 17% training for professionals

m. 17% training for craftsmen

n. 67% validated registers of professionals, contractors, craftsmen...

o. 17% problem solving, forums, hotlines

p. 17% analysis of impacts from actions (follow-up)

q. 0% Other

14. What could be done to stimulate the interest of the supply side in OSS and to motivate their involvement?

a. replicate the collective initiative done in Rotterdam

b. By organising tenders

c. Suppliers are automatically visible/promoted on the OSS platform. They can make their solutions more visible and thus attract new clients but new co-workers, can be invited to the new cooperative projects even not from OSS platform. The idea to head some subsidies to the suppliers in addition to the client is a good one.

d. Incentives such as the subsidies and grants suggested. Relieve the admin burden. Train more people at the beginning of their careers.

e. Perhaps support from local authorities or social institutions, often vulnerable consumers need more support than the supply side is set up to deal with and thus a gap occurs where those most in need of support do not receive it.

15. Which particularity of your context could only be overcome by a policy change? In other words, if you were to make policy recommendations to support the development of an OSS what would that be?

16. OSSs based on private company's need large long term funding.

a. I think just broader availability of OSS as they not widespread in my context. Also paring with appropriate financial supports are key, sometimes advice is insufficient.

b. I would try to involve enterprises and professionals asking money support, providing in exchange visibility and training courses that usually aren't available. Also I would try to involve the public sector (e.g. Municipalities, NGOs, Non-Profit)

c. Sorry, >I am not qualified enough yet in this subject to reply. I like it is very technical, but I can't reply right now.

d. Funding for OSS should be guaranteed beyond initial funding, to ensure that services remain accessible to home owners and SMEs

17. Would you recommend the implementation of this kind of service (explained today) in your context?

a. 100% Yes

b. 0% No

18. **How interested you would be (as an organisation): In being informed about similar local/national OSS models?**

a. 0% 1

b. 0% 2

c. 0% 3

d. 0% 4

e. 100% 5

19. **In promoting local/national OSS:**

a. 0% 1

b. 0% 2

c. 0% 3

d. 25% 4

e. 75% 5

20. In collaborating with existing local/national OSS:

a. 0% 1

b. 0% 2

c. 0% 3

d. 25% 4

e. 75% 5

21. **In setting up business models or other type of direct role (managing etc.) an OSS?**
    a. 0% 1
    b. 0% 2
    c. 25% 3
    d. 25% 4
    e. 50% 5

Workshop 3 – Established OSS and EU Projects

1. **From your point of view, what are the main drivers for renovation? (max. 2)**
    a. 72% Reduction on monthly energy expenses
    b. 61% Financial support opportunities
    c. 11% Increase in property or rental value
    d. 28% Legal obligations in place
    e. 0% Contribution to sustainability target(s) reason
    f. 11% Access to technical support and information
    g. 39% Improving comfort (temperature, air quality, noise, etc.)
    h. 11% Other:
2. **If you chose "Other", please specify:**
    a. Accessibility; "Neighbourhood pride"
    b. Subsidies (more concretely)
    c. Improving the looks of the building
    d. needed maintenance in combination with sustainability ambitions
3. **From your point of view, what are the main challenges and bottleneck impeding renovation? (max 2)**
    a. 50% Upfront cost too high
    b. 29% Lack of financial incentives
    c. 7% No guarantee or overview of the long-term benefits
    d. 71% Lack of knowledge (what to do, where to start, what or in which order to implement measures)
    e. 43% Perception of overly technical complex project, due to structural and systems change
    f. 21% Lack of trust in professionals
    g. 7% Other
4. **If you chose "Other", please specify:**
    a. lack of knowledge about the availability of incentives and their combination, and how to apply to them.

b. Lack of third-party funding instruments that are not a financial burden to the homeowners

5. **Do you think the Valencia model of OSS can be useful to support individuals in their renovation journey?**
    a. 100% Yes
    b. 0% No
6. **Why?**
    a. they have several data
7. **Do you think the Rotterdam model of OSS can be useful to support individuals in their renovation journey?**
    a. 100% Yes
    b. 0% No
8. **Why?**
    a. -
9. **Which elements of the services explained is/are the most valuable? (max 2)**
    a. 45% local physical offices
    b. 0% pop-up/ mobile actions
    c. 9% virtual hubs, resources and tools
    d. 18% examples of success renovation stories
    e. 18% visits to renovation sites
    f. 9% workshops and webinars (citizens school)
    g. 0% personal letters of appointment
    h. 0% gamified/ awareness/ consciousness actions
    i. 27% preliminary simple home assessment & renovation plan
    j. 0% energy, comfort and wellbeing monitoring
    k. 55% financial simulations
    l. 18% training for professionals
    m. 18% training for craftsmen
    n. 27% validated registers of professionals, contractors, craftsmen...
    o. 0% problem solving, forums, hotlines
    p. 9% analysis of impacts from actions (follow-up)
    q. 9% Other
10. **If you chose "Other", please specify:**
    a. preassessment tool, validated registers of professionals, impact analysis
11. **Would you be interested in using one of these tools in your OSS?**
    a. 100% Yes

b. 0% No

12. What features/tools should be added to answer end-users' needs in Valencia?

a. The grant/financial aids calculator that is about to be integrated

b. I think that the connection of the homeowners' association management program with the IVE programs would be good

c. Inquiries towards homeowners to collect feedback on how to further build confidence (perhaps it was already mentioned) in the model of Serafin

d. Maybe try to group clients according to similar typologies of buildings so that they can share renovation suppliers, introduce economies of scale and reduce costs.

e. Very difficult to say. Maybe the most important factor is the long term financing of the OSS in general.

13. What features/tools should be added to answer end-users' needs in Rotterdam?

a. Inquiries towards homeowners to collect feedback on how to further build confidence (perhaps it was already mentioned) in the model of Serafin