



# SAVE THE HOMES

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## Introduction & overall project summary

In order to meet the twin goals of climate action and green recovery, cities need to work on improving and modernizing currently inefficient and old building stock – both in EU as worldwide.



The EU H2020 project, Save the Homes, was a 3.5-year initiative that developed mechanisms for local governments and municipalities to accelerate the speed of home renovations. The project was focusing on implementing its Renovation One-Stop-Shop models in the pilot cities of Rotterdam, Netherlands, and Valencia, Spain, as well as the follower cities of Ljubljana, Slovenia and Sant Cugat, Spain.

It brought together 11 different organizations, from architect's firm, renovation advisory, high impact investment and financing consulting firm, research and knowledge institute, condominium managers, local energy office, municipalities and two EU umbrella organizations representing property owners and local authorities.

Roughly 75% of the building stock is energy inefficient where only 1% of buildings undergo energy efficient renovation every year<sup>1</sup>. Almost 85-95% of today's buildings will still be in use in 2050<sup>2</sup>. If we want carbon neutral cities, we need to address inefficient building stock since sustainable development of a city is as good as city's weakest link.

To achieve the proposed EU 55% climate target by 2030 also through doubling the renovation rates, around €275 billion of additional investment in building renovation is needed every year from now on<sup>2</sup>. To pursue this dual ambition of energy gains and economic growth, in 2020 the Commission published the strategy "A Renovation Wave for Europe – Greening our buildings, creating jobs, improving lives" to boost renovations in EU<sup>3</sup>. They are building on the requirement for each EU country to publish a long-term building renovation strategy (LTRS) while amending Directive on the Energy Performance of Buildings ((EU) 2018/844) to facilitate support on setting up these one-stop shops and enhance each EU country's national energy and climate plans (NECPs). NextGenerationEU, alongside the EU's Multiannual Financial Framework, is making available an unprecedented volume of resources that can also be used to kick-start renovation for recovery, resilience and greater social inclusion. The construction sector is investing in digitalization (BIM, digital tools etc.), training, upskilling, quality control and industrialized renovation concepts and solutions, which can be important enablers towards achieving renovation goals. However, we should not forget on the overall home renovation customer journey, homeowners experience and work on better utilization of available public funds

<sup>1</sup> [JRC Publication \(2020\) - One-stop shops for residential building energy renovation in the EU](#)

<sup>2</sup> [European policy developments - Renovation Wave strategy](#)

<sup>3</sup> [Renovation Wave Strategy.pdf \(2020\)](#)



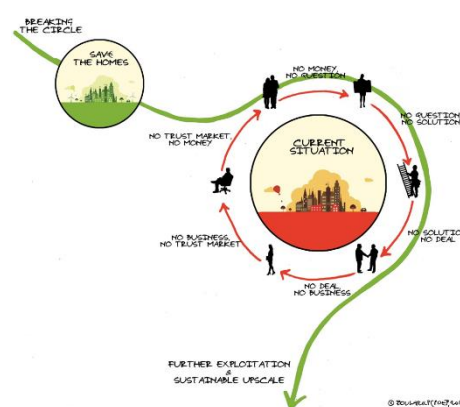
that can further mobilize private investments, while ensuring value creation for various stakeholder's groups involved.

Governments at all levels face a great challenge to transform their building stock to meet ambitious local, national and European climate targets. As Europe is facing an unprecedented energy crisis, the need for action is even greater. Innovative EU-funded projects such as Save the Homes (StH) play an important role in catalysing efforts to future-proof and decarbonize Europe's building stock. In StH project, One-Stop-Shop (OSS) concepts in Spain and the Netherlands were rolled out to represent important and complementary additions to local renovation efforts, by addressing renovation market demand- and supply-side issues. For the two pilot cities, StH intended to strengthen the current activities and bring further the ambitions to: streamline various stakeholder interactions, deliver an attractive renovation offer to the citizens and therefore upscale home renovations.

In most renovation markets, upscaling is crucial for the widespread adoption of home renovation initiatives. However, currently, there is a significant barrier to upscaling due to the absence of offers. Without offers, there is no incentive for anyone to build, leading to a scarcity of renovation projects. This scarcity, in turn, drives up prices for those willing to undertake renovations.

One of the main issues is that each renovation solution is unique, lacking proven quality. Additionally, the lack of available loans further exacerbates the problem. Without access to loans, individuals are unable to finance renovation projects, resulting in a lack of construction and further hindering upscaling efforts.

To address this challenge, it is essential to prove the quality of renovation solutions and make the barrier between loans and quality obsolete. By doing so, we can create a scenario where individuals have access to financing options, thereby stimulating construction activity and facilitating the upscaling of home renovation projects. This is presented by the visual below on how to break the vicious cycle of low renovation rates.



The project aimed to address several key issues:

- **Lack of technical skills and capacity:** Providing skills and capacity building for suppliers and municipalities involved in the renovation process.
- **Fragmented market:** Reorganizing the buildings sector for renovation by coordinating renovation programs and aggregating industry actors.
- **Lack of attractive financing:** Providing access to affordable financing aligned with citizens' needs.
- **Uncertainty and lack of trust:** Establishing one-stop-shops to eliminate uncertainties for homeowners and ensure transparency and quality throughout the renovation process.

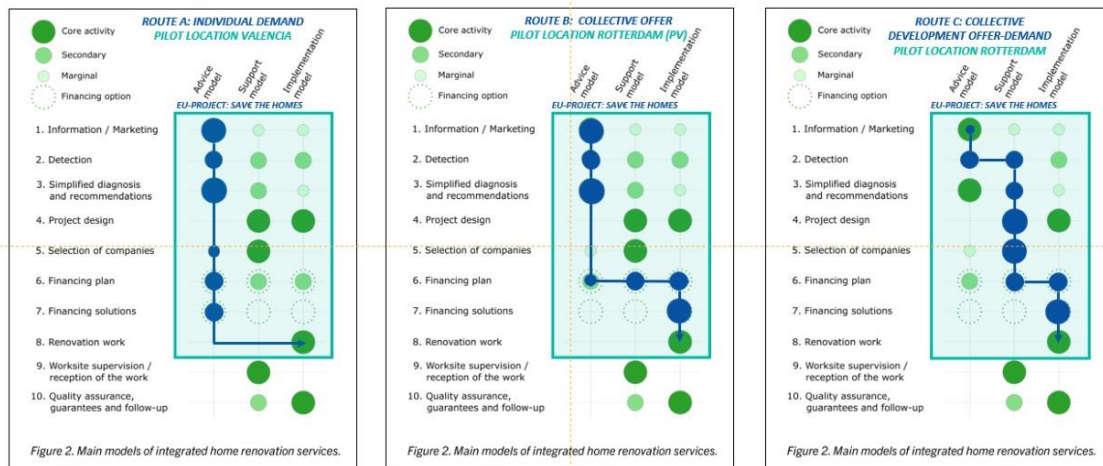
The project emphasized the importance of delivering real benefits to citizens based on measured impacts, such as quality of works and energy savings. The project's success depended on strong



networks with local actors, the involvement of contractors and suppliers, and transparent, efficient renovation processes.

The figure below shows the 3 different models for One-stop-shop (OSS).

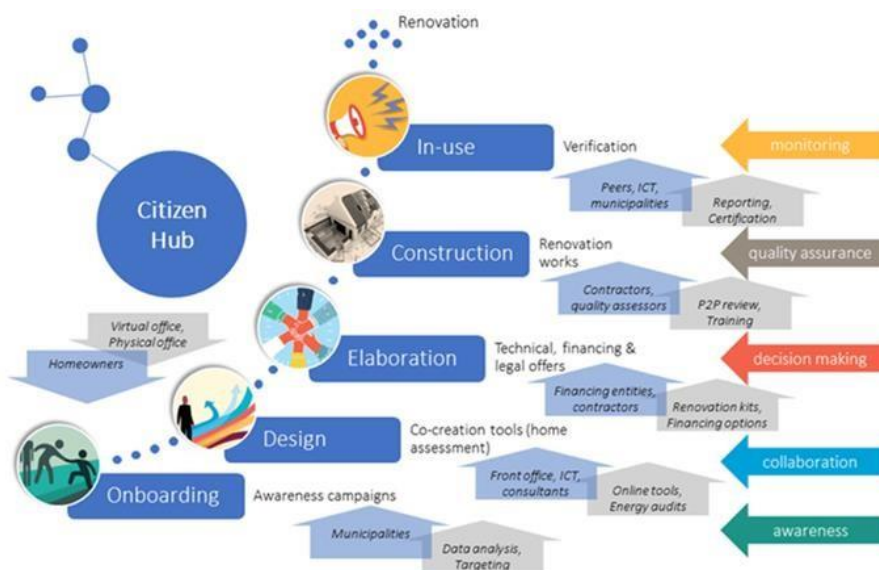
## Integrated Home Renovation Service



Bron: Towards large-scale roll-out of "integrated home renovation services" in Europe by Christophe Milin, Belgium and Adrien Bullier, European Climate, Infrastructure and Environment Executive Agency, European Commission, 2021 ([https://www.ecer.eu/library/conference\\_proceedings/ecer\\_summer\\_study2021/7\\_policies\\_for\\_a\\_green\\_recovery\\_in\\_the\\_buildings\\_sector/towards\\_large-scale\\_roll-out\\_of\\_integrated\\_home\\_renovation\\_services\\_in\\_europe/](https://www.ecer.eu/library/conference_proceedings/ecer_summer_study2021/7_policies_for_a_green_recovery_in_the_buildings_sector/towards_large-scale_roll-out_of_integrated_home_renovation_services_in_europe/))

The two pilot cities Rotterdam and Valencia played a central role in the StH methodology as they were used for benchmarking and to develop, deploy, test, and validate the Citizen Hub model, integrating home renovation services in one place. StH had the following sequential phases:

**Inception phase:** The project started with a full mapping of the demand side (mapping of the citizens' needs, elaboration of personas, and elaboration of the complete home renovation customer journey in the two pilot cities) and a mapping of the supply side (mapping the offered solutions and suppliers, suitable financiers, evaluation of offered quality, definition of the integrated home renovation packages to accompany homeowners on their journey in the two pilot cities). The methodology used in this phase serves as a framework for any other city, region, EU member state to follow and was

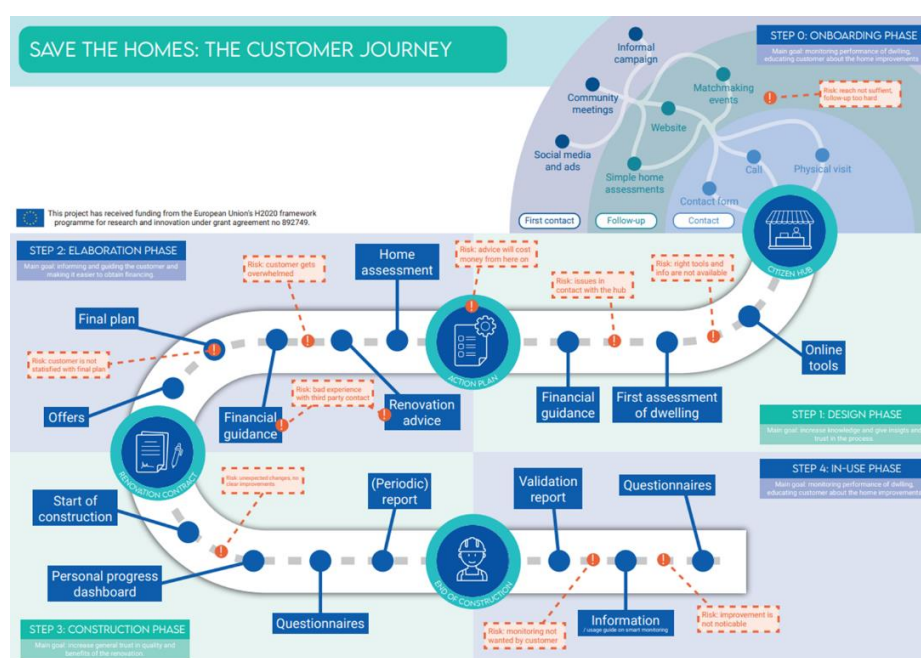


used by the follower cities. In many European countries, there were high-quality market-ready renovation solutions offered by local SMEs; hence, these were before introduced to homeowners in a fragmented manner, without real visible proven quality, clear guidance on the renovation process, explanation of its benefits, or with investment costs that at first glance seemed unrealistic to be paid by an owner. Now this had been analyzed and verified offers were integrated in the holistic OSS offer.

**This mapping was done in Work package 2 (WP2), see Chapter 2 with summaries of the WP2.**

**Development phase:** In this phase, an overall architecture for the Citizen Hub model as well as a tailor-made design of the business model for the two pilot cities Rotterdam and Valencia was devised, including the creation of the network, structure, and procedures.

1. Elaboration of customer journeys for the demand side (homeowners) in the pilots to define all the possible Citizen Hub touchpoints and strategies for interactions.



2. Verification of the supply side (technical suppliers, financial institutions) that were highly suitable for the StH concept (had verified proven quality results, offered financing for green investments) was done. The different key players were approached, and negotiations were done in order to come up with a valid offer for the homeowners (covering technical renovation offer as well as financing options and opportunities). The aim here was to develop the infrastructure and establish communications between the different stakeholders.
3. Citizen Hub architecture: A structure of the Citizen Hub was designed with clearly identified roles for the different renovation steps. One of the core distinguishing elements of Citizen Hub was its customer-centric approach and a user-friendly customer journey put in place to generate a strong pipeline of projects. Focus was on establishing a sound financial pipeline, meaning connecting the homeowners with clearly defined renovation financing options.
4. For the Citizen Hub business model development, a sustainable business model was developed and then adapted for each pilot. The 'Business Model Canvas' methodology was



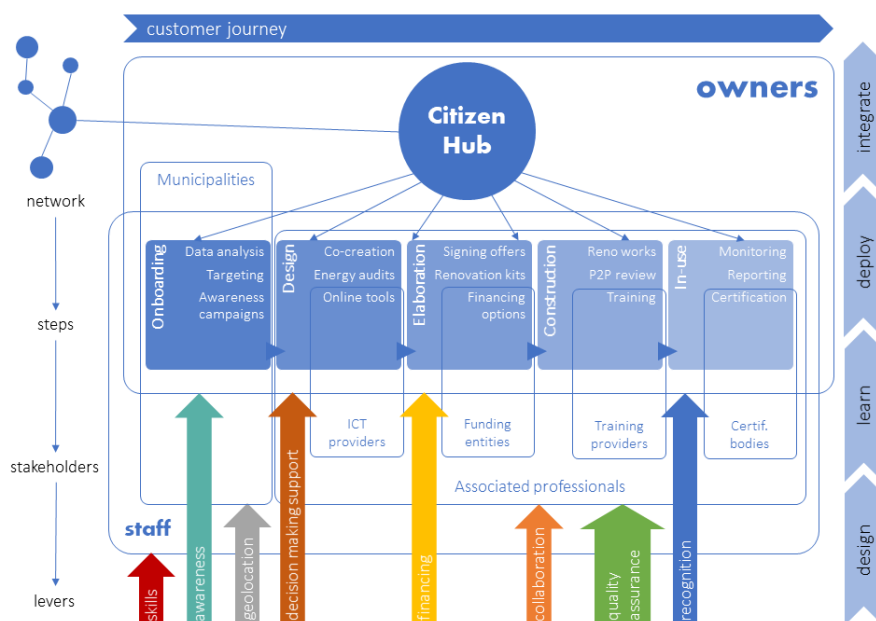
used to crystallize business model components. The emphasis was on ensuring that each Citizen Hub was market-driven and economically sustainable after the project’s completion. The holistic business model involved a strong emphasis on the eco-system of stakeholders from solution providers, manufacturers to installers.

***This verification of the supply side and elaboration of the Citizen Hub architecture were done in Work package 3 (WP3), see Chapter 3 with summaries of the WP3.***

**Deployment phase:** In this phase, the two Citizen Hubs were realized at a local (City of Rotterdam) and regional (Municipality of Valencia) scale, as designed and elaborated in the previous WPs. This phase covered the roll-out of the whole customer journey, from organization of the marketing campaigns to the monitoring after the renovation works. The most important part was signing the contracts and therefore, agreeing on the responsibilities and roles of all the stakeholders involved in the value chain. With this contract, all the contractors from the supply side were legally bound to deliver the quality and on time. During the actual work, it was ensured that the homeowners were informed about the progress. The overall monitoring action and quality assurance plans were laid out and followed to ensure the quality of work and enable sufficient information provision based on the monitored data.

***This work was done in Work package 4 (WP4), see Chapter 4 with summaries of the WP4.***

The following table summarized the networks, steps, and stakeholders brought into the Citizen Hub model. This Citizen Hub structure was fully elaborated in the Inception, Development, and Deployment phase for the two cities to validate and ensure that the proposed Citizen Hub model was economically viable and self-sustainable.



In fact, both cities intended to follow a market-based approach, where the economic viability of the business model was prioritized. StH project was a starting point for both cities to develop a lasting





contribution to their constituents and to create a positive social, economic, and environmental impact in their communities. Thus, cities intended to engage a broad group of local stakeholders in the home renovation market. Citizen Hub was meant to help local stakeholders not only stimulate the demand for renovation but grow their businesses in a sustainable fashion.

**Replication and exploitation phase:** In this phase, the Citizen Hub concept was replicated and exploited on three levels: The first level was a replication in two follower cities: Ljubljana and Sant Cugat. The second level was the exploitation and promotion on a regional and national level, with a pivotal role for the StH Advisory Board working groups and the pilot networks. Several trainings on specific Citizen Hub modules were given upon request. This was supported by the involvement of the regional and national Governments with competences in housing interested in the expansion of the concept all over the country. The third level was on an EU-wide scale, empowered by the two European umbrella organizations (UIPI, ICLEI), representing the StH main target groups: homeowners/condominiums and municipalities. They had a role of addressing their members, to create awareness and to motivate them to promote deep renovation by deploying campaigns prepared in WP6.

***This work was done in Work package 5 (WP5), see Chapter 5 with summaries of the WP5.***

**Promotion and dissemination:** To ensure sufficient promotion of the Citizen Hub concept at the pilots, follow-up cities as also to other local governments EU-wide, sufficient marketing and promotion elements were integral and important parts of the Citizen Hub roll-out process.

***This work was done in Work package 6 (WP6), see Chapter 6 with summaries of the WP6.***

\*\*\*WP1 (Work Package 1) was about the internal project coordination and management and is therefore not part of this final publishable results of the project.



## WP2 – Mapping demand & supply side

The WP2 objective was the mapping of the demand and supply side as a foundation to build successful Citizen Hubs. The demand side aggregation helped in understanding who the customers were, their pain points, and motivational drivers for renovation. For the identified personas, the customer journeys were mapped according to each location context.

Supply side aggregation was fundamental to providing an optimal offer, improving trust and awareness of homeowners, reducing renovation costs and time, and mainstreaming innovative technical solutions adapted to the local context, allowing for regional replicability and reducing business risks.

As part of the Citizen Hub services, energy retrofitting products and services were clustered to reduce fragmentation in the renovation process. To increase trust and ensure sufficient quality, these solutions were verified to assess their applicability, easing decision-making and allowing for a fair and reliable comparison between solutions.

The supply side included everyone who could be a single point of contact in a one-stop-shop solution such as manufacturers, service providers, contractors, architects, engineers, energy consultants, and government entities.

The following sub-chapters comprise of summaries of each particular deliverable, which represent the outcomes of specific tasks within WP2. These summaries highlight the main achievements, results, key learnings, as well as any bottlenecks identified during the task execution. The title of each subchapter includes a hyperlink through which the entire deliverable can be accessed for more detailed information.

### [D2.1 - Sav€ the Homes demand & supply side mapping: Methodology & results from the 2 pilots](#)

The report focuses on the mapping and segmentation of the existing situation at different levels to understand the demand and supply for renovation at local, regional, national, and European levels. It emphasizes the need to identify quick wins for short-term impact and targets for long-term sustainability. The methodology involves a high-level analysis process to prioritize quick wins for rapid consolidation and long-term impact potential based on replicability and scalability of solutions.

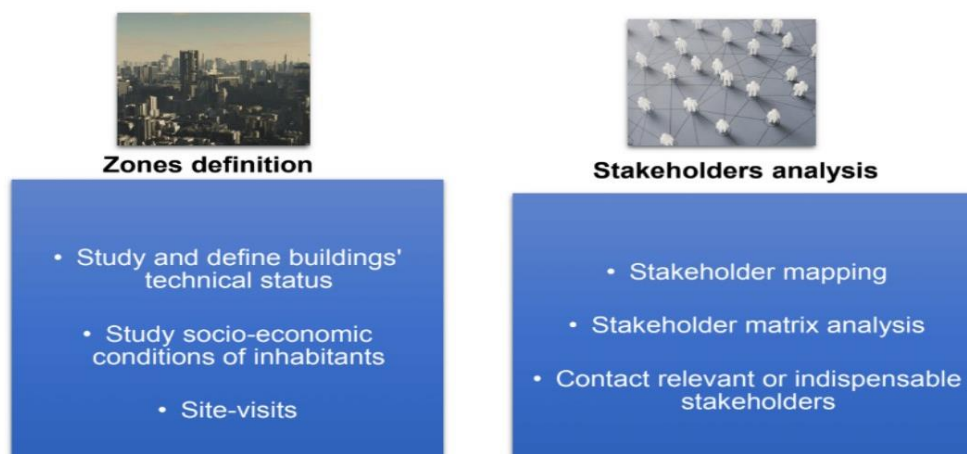
The report also outlines the need to map and segment the studied area, including buildings, citizens, and suppliers, to achieve the greatest effectiveness in implementation quality and user satisfaction through the renovation process. It highlights the importance of understanding the context circumstances, potential drivers, and impact related to the approach in defining profiles, typologies, and supplier characteristics.

Key results and learnings from the report include the identification of target profiles, the need to quantify and locate quick wins and target profiles, and the importance of understanding the construction sector context. The report also emphasizes the significance of engaging local businesses and stakeholders for energy renovation market solutions and suppliers. Additionally, it provides a



checklist for mapping methodology, objectives pursued through the implementation of the OSS concept, and the study area considerations.

Figure below shows a basic scheme for market analysis which is the foundation task when a municipality wants to start with OSS implementation.



Overall, the report provides a comprehensive framework for mapping and segmentation, targeting different citizen profiles, and focusing on providing trustful services on the most effective supply side sub-sectors. It also highlights the importance of community building, communication strategy, solutions design, supply network establishment, protocols, supporting tools, and financial mechanisms for the successful implementation of the renovation process.

## [D2.2 - Sav€ the Homes guideline for long-term citizen engagement](#)

The report outlines a methodology for drafting itineraries for interaction and onboarding of targeted segments, as well as designing long-term communication strategies to build an involved stakeholders' community. It emphasizes the importance of engagement campaigns that resonate with people and increase awareness of the importance and benefits of renovations.

Key results and learnings from the report include the identification of needs of the demand side, tailored campaign strategies, and the importance of community building and engagement. The report also highlights the use of Maslow's 4 stages of learning to categorize personas and define the information or attention needed to guide them through the renovation process. Additionally, it emphasizes the need for supply side aggregation to provide optimal offers, improve trust and awareness of homeowners, and reduce renovation costs and time. Overall, the report provides a comprehensive framework for engaging stakeholders, designing effective communication strategies, and promoting the renovation process.

## D2.3 - Citizen Hub protocol for supply side community building and network creation

The report focuses on the development of a methodology for establishing and deepening collaboration with stakeholders in the supply side community for the purpose of increasing trust and ensuring high-quality services. It outlines the process of mapping and segmenting the supply side, identifying their capacities, motivations, and opportunities, and designing engagement itineraries and collaboration strategies tailored to each supply side segment. The ultimate goal is to build an involved, durable stakeholders' network and to design a collaboration strategy for the supply side profiles.

Key results and learnings from the task are:

1. The importance of understanding the needs and expectations of the supply side in order to offer the best fitting collaboration agreements.
2. The need to rely on tangible short-term benefits consistent with the objectives of the Citizen Hub when interacting with the supply side.
3. The significance of building recognizable familiar mechanisms to introduce the Citizen Hub renovation services' offer and upgrade the capacities of targeted suppliers and experts.
4. The use of a capacitation approach to enable the validation, improvement, or showcasing of the capacities of the supply side profiles.
5. The development of engagement itineraries and collaboration strategies based on the knowledge of the chosen supply side segments' capacities and drivers, aiming to find approaching opportunities and best fit messages and channels.

Overall, the report provides a comprehensive framework for engaging and building a network with the supply side community, with a focus on practical, real entities running businesses and tangible short-term benefits. It emphasizes the importance of understanding the motivations and opportunities of the targeted supply side profiles and designing collaboration strategies that align with their needs and expectations.

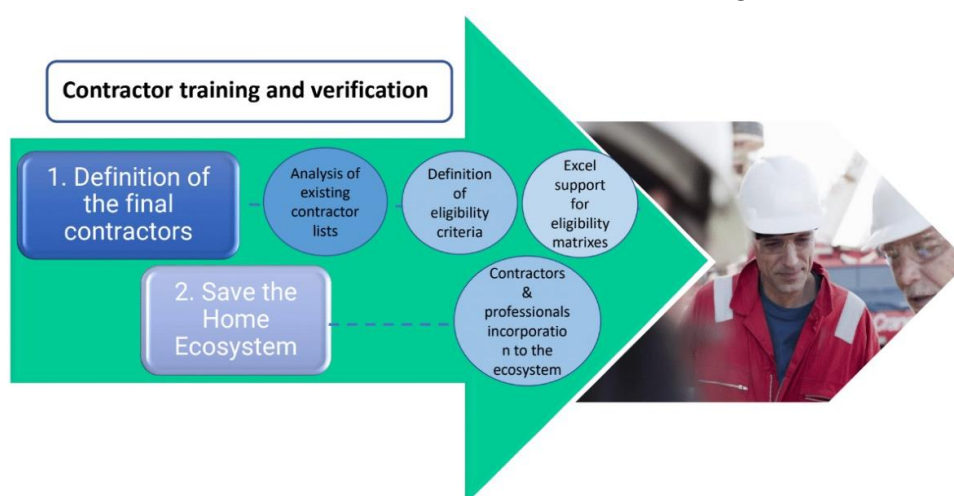
## D2.4 - Mapped suitable protocols and methods for quality control of the renovation works (including skills definition) and for buildings performance monitoring

The report outlines the mapping of existing and applicable training resources, monitoring protocols, and supporting services to ensure the quality of renovation works facilitated by the Citizen Hub. The protocols and methods for quality control are defined to ensure high quality implementation of renovation services within Citizen Hubs in medium-sized cities to empower OSS renovation offices and virtual hubs at the local level. Key results and learnings from the report include:



- Identification of existing training and capacitation support services at the EU, in-house, and local levels, such as PROF-TRAC, BIMplement, and Construction Labour Foundation.
- Mapping of existing and applicable monitoring protocols, including the use of Sensi Sensors and energy consumption feedback for quality control of renovation works.
- The development of a Citizen Hub service menu covering the entire customer journey, including training, certification, and monitoring services.
- The focus on demand and supply side aggregation to understand customer profiles, building typologies, and offer suitable resources for the OSS services.
- The proposal for the roll-out of the Citizen Hub, including the integration of existing local sister initiatives to expand spatial reach and functions.

The figure below shows a scheme on how to define contractor training and verification tasks.



Overall, the report provides a comprehensive overview of the strategies, tools, and methodologies for quality control of renovation works and building performance monitoring within the context of the Save the Homes project. It emphasizes the importance of strong networks, trustworthy partnerships, and locally developed financing pipelines to support the implementation of the Citizen Hub concept.

## [D2.5 - Suitable renovation packages and supporting services for the two pilots](#)

The report outlines a three-step approach for designing solutions, including the verification of mapping outcomes, selection of renovation packages, and the creation of the Citizen Hub offer. It emphasizes the importance of targeted buildings, supply side networks, and the integration of solutions for home renovations in cooperation with the supply network.

The document also discusses the segmentation of the supply side, targeting energy efficiency-related solutions providers and the verification of the quality of mapped renovation solutions and services. It highlights the need for supply side aggregation to provide optimal offers, improve trust, reduce renovation costs, and mainstream innovative technical solutions.

### **Rotterdam**

For Rotterdam, the suitable renovation packages include individual financing solutions, such as the Energy Transition Fund (ETF) introduced in 2021, which offers a revolving fund ranging from 2,500 to

65,000 euros for energy measures and home improvements. The renovation packages also involve collective measures in an integrated approach, such as the HUB Alexander strategy, which allows homeowners to request single measures or unique measures in a component approach. The municipality of Rotterdam is also focused on making homes more sustainable and natural gas-free, particularly through the installation of a High Temperature (HT) heat district network in suitable neighborhoods.

### **Valencia**

In contrast, for Comunitat Valenciana, the suitable renovation packages involve the regulation of hiring a renovation agent or manager to simplify the bureaucracy involved in the renovation of multifamily buildings. The Valencian Citizen Hub promotes renovation measures such as windows, walls, roof, floor, and other energy-related improvements. The focus is on promoting measures that align with the building stock and the budgets that owners of these buildings are willing to spend.

Overall, the renovation packages for Rotterdam emphasize individual financing solutions, collective measures, and making homes more sustainable, while the packages for Comunitat Valenciana focus on simplifying the renovation process for multifamily buildings and promoting measures that align with building stock and owner budgets.

Overall, the report emphasizes the importance of collaboration between municipalities, supply networks, and homeowners to achieve the project's goals.



## WP3 – Citizen Hub: Network, business model & investment pipelines

WP3 consisted of creating the structure, procedures, and network for the Citizen Hub integrated renovation services that were offered at the Citizen Hub facilitators (for the pilots: Municipality of Rotterdam and City of Valencia). The service providers needed to be able to connect both supply and demand and to offer services that covered the entire 'customer journey', from market diagnosis (WP2), technical offer (WP2) to also structuring financing options and addressing regulatory aspects (including contractual organization and organization).

The following sub-chapters comprise of summaries of each particular deliverable, which represent the outcomes of specific tasks within WP3. These summaries highlight the main achievements, results, key learnings, as well as any bottlenecks identified during the task execution. The title of each subchapter includes a hyperlink through which the entire deliverable can be accessed for more detailed information.

### [D3.1 - Save the Homes customer journey](#)

The report outlines the methodology, action plan, and elaboration of the Save the Homes customer journey within the EU H2020 project. The renovation customer journey was defined to set and evaluate a model-based description of reality for the two pilots, Valencia and Rotterdam, with the aim of increasing the renovation rate and improving the health, comfort, and well-being of homeowners. The customer journey is divided into five steps: Onboarding, Design, Elaboration, Construction, and In-use. Each stop has specific objectives and tasks, such as providing information and tools to homeowners, educating them about home improvements and monitoring the performance of the dwellings. It is elaborated for the two pilot cities with the feasibility studies for the follower cities.

The document emphasizes the importance of integrating quality assurance procedures into project execution to instill trust in deeper renovation measures. It also highlights the need to increase perceived reliability by the market and to share the experiences of early adopters to inspire others to join the movement. The report outlines potential touchpoints, such as validation reports and questionnaires, and emphasizes the importance of mapping the customer journey to gain insights into the complete renovation process and manage campaigns effectively.

Key results and learnings from the report include the identification of potential risks, such as privacy concerns and the lack of measurable improvement in renovation works, and the establishment of goals for each phase of the customer journey. The report also emphasizes the importance of educating homeowners about the improved building's state, energy efficiency, indoor environmental quality, and maintaining a sustainable way of life. Additionally, it highlights the need to provide financial guidance and renovation packages tailored to the homeowner's needs and drivers.

Overall, the report provides a comprehensive framework for the StH renovation customer journey, aiming to increase homeowner engagement, satisfaction, and the renovation rate, while also addressing potential risks and barriers in the renovation industry.



## D3.2 - Strategy and structure to implement the Citizen Hub concept for the two pilots

The report presents the implementation strategy for the StH renovation customer journey in two pilot cities, Valencia (Spain) and Rotterdam (the Netherlands). The aim of the report is to define and elaborate the customer journey for the two pilot cities, closely integrating and interrelating with other StH activities such as establishing relevant contacts, collaboration with key stakeholders, renovation and financing action plans, engagement campaigns, and roll-out activities within StH one-stop shops called Citizen Hubs.

The report outlines the strategy and structure to implement the Citizen Hub concept, focusing on the functionalities, services, and tools required at each stage of the customer journey. It emphasizes the need to fill the gaps in the service menu and design services to prevent customers from dropping out of the process. The report also highlights the importance of monitoring the performance of dwellings, providing training on home improvement, installing smart meters, and offering opportunities for homeowners to share their opinions on the renovation works.

### Rotterdam

The key strategy for Rotterdam involves the establishment of a wide network of stakeholders to address the complex playing field of home renovation. In the Netherlands there is a big shortage of workers where most construction businesses go for new builds as more profitable than fragmented renovations. This includes a diverse range of actors such as housing associations, building managers, energy suppliers, contractors, specialists, and various other entities. The strategy aims to provide integrated home renovation services within the existing OSS networks, focusing on small renovation steps that homeowners can undertake themselves, as well as collective and unique renovation assignments. Additionally, the strategy emphasizes the need to raise awareness about environmental challenges and provide various services such as energy coaching and expert advice to facilitate energy reduction.

*HUB Alexander*

### Detailed Challenges



*Detailed Challenge 001*

#### Capacity for support

Renovation is labour-intensive in preparation and execution. Informing people in the neighborhood and determining the existing quality already takes a lot of time.



*Detailed Challenge 002*

#### Stabilizing demand

It's impossible for owner-occupiers to find a party that wants to make their home more sustainable within a short period of time, with minimal inconvenience, in line with their needs and wishes.



*Detailed Challenge 003*

#### Build up skills

The shortage of workers is a problem, but also the lack of the necessary skills to properly carry out such work in occupied homes in one go after good consultation with the resident.

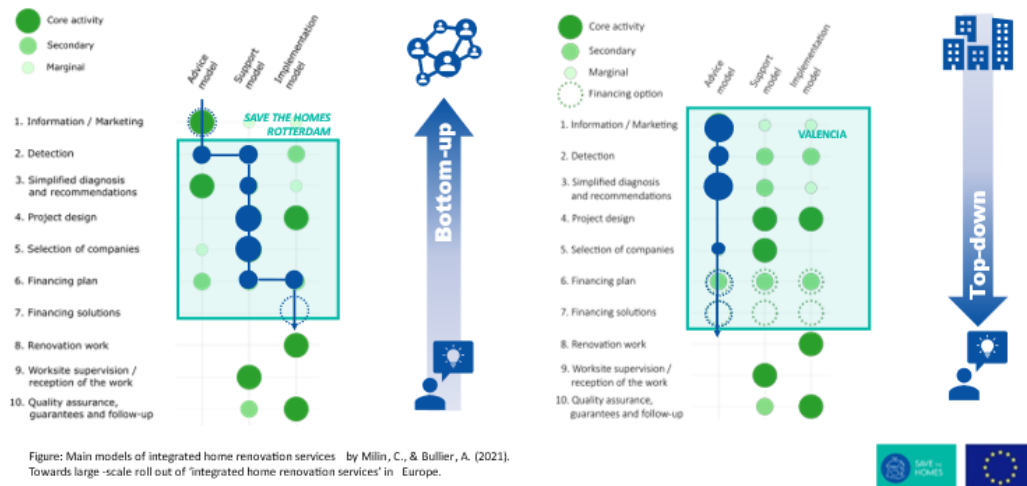
### Valencia





On the other hand, the key strategy for Valencia involves creating an OSS model that caters to the needs of citizens by establishing touchpoints through various channels such as community meetings, social media, and information sessions. The strategy aims to provide emotional responses, increase interest, and guide citizens through the renovation process in a holistic and understandable way. It also focuses on organizing financing, renovation packages, and decision-making processes, while ensuring sufficient support to citizens and assisting them in choosing the right renovation package.

## Main characteristics of OSSs in Rotterdam and Valencia



### D3.3 - Citizen Hub business model for the two pilots cities

The report outlines the development of a business model for Citizen Hubs in the pilot cities of Valencia and Rotterdam. The objective is to establish a self-sustainable model for home energy renovations, leveraging on available resources and local context. The report includes a benchmarking analysis of existing programs in the European Union, with a focus on strategies to create a self-sustainable model for home energy renovations.

The business model canvas for both pilot cases is presented, detailing customer segmentation, value proposition, channels, customer relations, revenue streams, key activities, key resources, and key partners. The report also provides recommendations for the short, medium, and long term horizons for both pilot cases.

#### Rotterdam

The business model developed for the Rotterdam pilot case focuses on single-family dwellings, with an emphasis on simplifying the decision-making process for homeowners. The Citizen Hub model leverages Alex Energie, an existing energy community in Rotterdam, to spearhead the home renovation projects. The geographical focus is initially limited to the Prins Alexander area, with a progressive implementation strategy targeting specific neighborhoods before expanding to the entire area. The financial model for the Rotterdam case is still ongoing several discussions led by municipality and projections being refined in collaboration with local partners to see how to make long term sustainable business model.

#### Valencia



On the other hand, the business model for the Valencia pilot case is centered on multi-family dwellings and benefits from strong support from the public sector at both the city and regional levels. The model incorporates the Xaloc Network, a regional initiative aimed at establishing a network of offices to provide guidance on housing, urban regeneration, and home renovation. Additionally, the Next Generation EU Funds are integrated into the financial model to provide subsidies for triggering demand and stimulating market actors. The Valencian business model places special emphasis on key activities to be performed by the Citizen Hub and the local Xarxas, as well as branding initiatives to create awareness and incentivize home renovation projects.

In summary, the Rotterdam business model focuses on single-family dwellings and leverages an existing energy community, while the Valencia business model targets multi-family dwellings and integrates regional initiatives and EU funds to support home renovation projects. Key results and learnings from the report include the importance of providing OSS programs that offer integrated services for home renovation, including technical advice, contractor relations, subsidies, and financing. The report emphasizes the need for a self-sustaining business model that can thrive in the absence of funding, as well as the importance of engaging with all market actors for the success of the Citizen Hubs.

The report provides detailed financial projections, budget estimations, and a SWOT analysis for both pilot cases, as well as recommendations for strategic partnerships and the transition to a professionalized basis for the Citizen Hubs. Overall, the report serves as a key milestone for the project, providing a tangible starting point for transitioning from the design phase to the implementation phase of the Citizen Hubs in Valencia and Rotterdam.

### [D3.4 - Mapped suitable financing initiatives](#)

The report focuses on mapping existing financing opportunities for citizens in the pilot cities of Valencia and Rotterdam. The report outlines a detailed methodology used to retrieve information on financing solutions, including exhaustive desk research, defining specific criteria for filtering information, performing a gap analysis, and developing a tailored questionnaire for financial institutions.

The report provides a comprehensive overview of available public and private financing alternatives for both pilot cities, with a focus on the requirements for homeowners. It emphasizes the importance of centralizing information on financing tools, integrating financing support with technical and administrative assistance, and strengthening relationships with financial institutions.

#### **Valencia**

In Valencia, the focus is on promoting home energy renovations within homeowners, particularly in multi-family residences. The report outlines various public funding alternatives, including subsidies and loans, and emphasizes the need for easy-to-follow procedures to facilitate access to financing for homeowners. Additionally, private financing alternatives are presented, with a detailed comparison of different options offered by financial institutions.

#### **Rotterdam**



In Rotterdam, the report highlights the significance of the Energietransitiefonds (ETF) loan, which was launched to support sustainable home renovations. The ETF loan offers various subtypes, including loans and mortgages, with different terms and amounts. The report emphasizes the importance of supporting the rollout of the ETF loan through the Citizen Hub and integrating financing support with technical and administrative assistance to ensure a seamless process for homeowners.

Key recommendations for both include encouraging financial institutions to develop products for project financing, extending innovative financing terms, developing credit enhancement mechanisms with public funds, and creating a centralized informational point for financing offers, conditions, and eligibility criteria.

The report also highlights the challenges faced in forming a Financial Advisory Board (FAB) and the reluctance of some banks to share information with the project consortium. It recommends the establishment of an operative Citizen Hub to demonstrate the added value of the project to banks and suggests developing a strong brand and a customer relationship management (CRM) tool to monitor homeowners' success in obtaining private financing.

Overall, the report provides valuable insights into the existing financing alternatives for both pilot cases and offers recommendations for enhancing access to financing for energy-efficient home renovations. It also contributes to the development of a financing brochure that depicts the most relevant options for homeowners.

### [D3.5 - Financial brochures Valencia and Rotterdam](#)

The financial brochures provide information on various financial support options available for individuals who want to renovate in Valencia and Rotterdam and implement energy saving renovation measures. These options include tax deductions, subsidies, loans, and financial assistance from both public and private entities. The criteria for each program vary, including the percentage of energy savings required, maximum financial support, and loan duration. Additionally, contact information is provided for further inquiries and application procedures.

### [D3.6 - Staff training programme for the two pilots](#)

The report details the specific training programs for staff involved in the Citizen Hubs, covering various modules such as context and framework, customer journey stages, tools and services, and urban design. It also emphasizes the need for tailored training programs, working groups, and online courses to address the specific needs of the staff involved in the Citizen Hubs.

The training program is outlined to align with the customer journey, covering stages such as onboarding, evaluation, elaboration, realization, and validation. It also addresses the need for soft skills, technical knowledge, and understanding of local context and regulations. The report highlights the importance of providing excellent customer service and guiding citizens through the renovation process, including financing options, decision-making support, and contractor selection.

The figure below shows HR and staffing guide steps.





Additionally, the report emphasizes the need for resources and customized content to support the training program. It also discusses the use of online training programs, working groups, and tailor-made training days to address the specific needs of the staff involved in the Citizen Hubs. The report also includes details about the evaluation report of buildings and micro-trainings aimed at providing knowledge about energy efficiency and renovation strategies.

### Valencia

For Valencia, the training program includes a basic training program for the Valencia region, focusing on specific contents such as the catalogue of constructive solutions for renovation, online tools for calculating estimated budgets, and guides for incorporating renewable energies in buildings. The program also emphasizes the need for staff to communicate with homeowners in a language they understand and can relate to, addressing social barriers and the lack of information about solutions and financing. The training modalities for Valencia include tailor-made training days, working groups, and online courses, focusing on technical content and thematic modules.

### Rotterdam

Specifics for staff training in Rotterdam include the geographical scope, which initially focuses on the local level and then expands regionally. The program involves collaboration with entities such as Alex Energie and BouwhulpGroep, and it addresses the need for tailored training days, working groups, and online courses. The training content covers modules such as context and framework, customer journey stages, tools and services, soft skills, and technical knowledge. Additionally, the program includes a digital boosting campaign and a physical boosting campaign to engage residents and homeowners.

## [D3.7 - Definition of the Local Citizen Hub Platform functionalities for the two pilots and its integration within existing platforms](#)

The document describes the functionalities of the online OSS related platform (whether part of existing city platform) for both Rotterdam and Valencia, emphasizing the need for a tailored approach based on the local context. The report outlines the customer journey, starting from awareness and interaction, through evaluation and self-evaluation, to the validation stage. It also discusses the challenges related to financing and labor in the renovation process and the need for online support to make certain activities and touchpoint interactions more efficient.

The figure left shows & figure right shows the IT toll set-up in a step by step design process.



Figure 7: IT Toll set-up in a step-by-step design process

Key results and learnings from the report include the importance of providing trustworthy and professional support (online even more important!), the necessity of still engaging and guiding customers through the decision-making process offline, and the significance of disseminating information through various channels to activate and convert people towards sustainable renovations. The report also highlights the need for powerful engaging tools for customers, the development of other tools and services to fulfill the entire customer journey, and the role of the hub in guiding the contact of local companies and worksite supervision.

In summary, the report provides insights into the OSS platform functionalities, the challenges and solutions related to financing and labor, and the importance of engaging and guiding customers through the renovation process both online as offline. It emphasizes the need for tailored approaches based on the local context and the development of (online) tools and services to support the entire customer journey.

### [D3.8 - Monitoring Data Plan for the two pilots](#)

The document is an OSS Monitoring Data Plan focusing on the pilot cities of Valencia and Rotterdam. It outlines the monitoring tools, actions, and protocols for measuring the benefits of renovations, such as energy savings, indoor environmental quality, and occupant well-being. The plan also aims to demonstrate the effectiveness and efficiency of the Citizen Hub services. Data collection method introduces common evaluation templates connected with a data dashboard for monitoring and reporting key performance indicators (KPIs) and impacts. The report emphasizes the importance of before-and-after comparisons and the need to provide evidence of the benefits and co-benefits of the energy renovation process. It also highlights the objective of delivering real benefits to citizens and other stakeholders in the pilot cities, as well as offering guidance and lessons learned to follower cities to ensure the smooth replication of the Citizen Hub concept. The document provides a framework ready to be implemented and promotes the concept to other municipalities on a national level. Key results and learnings from the report include the importance of monitoring campaigns, the need for before-status assessments, and the focus on touchpoints and benefits monitoring at different stages of the customer journey. Additionally, the report emphasizes the significance of demonstrating the



potential of the Citizen Hub concept to regain trust and interest in building renovations and to further expand the Citizen Hub business model (scale-across as scale-up).

### D3.9 - Ethics manual for the two pilots

The document is an ethical handbook for the project pilot cities, focusing on ethical guidelines for data collection and research related to home renovation. It emphasizes the importance of ethical considerations in research involving personal data and sensitive information, providing guidelines for protecting privacy, obtaining informed consent, and complying with ethical standards and relevant legislation, such as the General Data Protection Regulation (GDPR) of the EU. The document also highlights the role of an ethical advisor and advisory board within the project to ensure ethical considerations are integrated into all research activities.

Key highlights from the manual are:

1. The project is aware of ethical, privacy, and data protection issues and aims to comply with the GDPR and other relevant directives.
2. The document outlines the potential for misuse of research results and provides a risk assessment, legal requirements, and measures to prevent misuse.
3. It emphasizes the importance of data confidentiality and security, including the acquisition and storage of human-related information and the use of previously collected data.
4. The report details the ethics assessment and assurance protocol, including ethics reviews, ethics assurance workshops, and the role of the Ethics Advisory Board in continuously checking for compliance with ethical standards.
5. It provides guidance on informed consent procedures, security measures to prevent unauthorized access to personal data, data minimization principles, anonymization/pseudonymization techniques, and justification for processing special categories of personal data.



## WP4 – Citizen Hub: Network, business model & investment pipelines

WP4 aimed at implementing innovative IHRS at the local level (City of Rotterdam) and the regional level (Municipality of Valencia) through the implementation of a 'one-stop-shop' (OSS). Previously developed Citizen Hub models, mapped knowledge, and prepared strategies from WP2 and WP3 were implemented here as part of OSS demonstration in the two cities.

The following sub-chapters comprise of summaries of each particular deliverable, which represent the outcomes of specific tasks within WP4. These summaries highlight the main achievements, results, key learnings, as well as any bottlenecks identified during the task execution. The title of each subchapter includes a hyperlink through which the entire deliverable can be accessed for more detailed information.

### [D4.1 - Documented engagement & recruitment campaigns for the 2 pilots](#)

The deliverable reports upon the implementation of engagement and recruitment campaigns in the cities of Rotterdam and Valencia. The primary objectives include providing citizens with information and tools for simplified home assessments, tailored renovation packages, financial online tools, and advice on available financial schemes. The document details the deployment of engagement campaigns, adaptation to pilot ecosystems, and reporting of implemented actions. It also discusses the different approaches taken by the two pilots and their potential results.

#### **Valencia**

The Valencia pilot follows a top-down approach, supported by strong resources from the regional government, making the achievement of initial objectives relatively easy due to mass media campaigns and continuous information and training events.

The results from Valencia demonstrate a top-down approach supported by strong resources from the regional government, making the achievement of initial objectives relatively easy due to mass media campaigns, continuous information and training events, and the release of an easy-to-use diagnosis tool and validated renovation manager registry. The use of home assessment tool (renovEU) was very effective.

The marketing strategy for the Valencia pilot revolves around grant schemes, with a focus on providing information and assistance related to grant scheme applications. The impact monitoring in Valencia is crucial, and it involves keeping cadastral references of all the dwellings and buildings assessed during the onboarding and evaluation campaigns to compare them with the 2022 grant applicants at the end of the year.

The geographical scope for the Valencia pilot experience starts locally and then expands regionally. The communication strategy involves community mapping and itineraries analysis to successfully deploy the Valencian communication strategy, with a focus on engaging the necessary actors and resources to populate the Citizen Hub orbit.



The channels and activities deployed in Valencia correspond to the defined onboarding and evaluation functionalities, utilizing marketing materials designed for this purpose in different lines of action. The reporting strategy in Valencia includes impact monitoring factors such as appointments, direct participants and viewers at conferences and events, registered users for renovation agent/manager training, clicks on partner websites, newsletters, and social media, among others.

In summary, the results from Valencia showcase the successful implementation of a top-down approach, effective engagement campaigns, and a comprehensive marketing strategy focused on grant schemes. The impact monitoring and reporting strategies are designed to track the effectiveness of the initiatives and assess the achievement of objectives.

### **Rotterdam**

The results from Rotterdam indicate a bottom-up approach to the implementation of integrated home renovation services. The city has a significant task ahead due to the large number of homes in the region, with a focus on upscaling the initiatives. The approach involves experimenting with a small number of dwellings and buildings to test, learn, and correct the process for future large-scale implementation. The city has already conducted several experiments to reach out to citizens, including the establishment of citizen-owned energy cooperatives such as Alex Energy. The municipality supports participation from the ground up, and the communication with Alex Energy is ongoing to discover tasks and responsibilities that they can deliver. The city aims to cover the entire city with local offices over time, and the focus lies on the specific area of Prins Alexander, which has a large number of houses and inhabitants. The municipality is also looking to support local energy collectives and exchange solutions and processes between active communities in Rotterdam.

In terms of the customer journey, the focus lies with Alex Energy, which reaches out to citizens in the specific area of Rotterdam. The entity has several steps in its approach to get people on board, including the formation of a working group, energy scans, energy plans, and measures. The municipality supports Alex Energy in achieving the agreed targets, and the OSS 'Hub Alexander' has a strong foundation to build upon due to the trust and support it receives from both Alex Energy and the municipality.

The platform functionalities in Rotterdam involve the implementation of sunroofs on behalf of local cooperatives, with a focus on supporting the cooperatives with back-office support. The city aims to cover the entire city with local offices and facilitate the exchange of solutions and processes between active communities.

Overall, the results from Rotterdam demonstrate a comprehensive and community-focused approach to the implementation of integrated home renovation services, with a strong emphasis on citizen participation and local energy cooperatives.

To conclude, the report provides valuable insights into the implementation of integrated home renovation services, the effectiveness of engagement and recruitment campaigns, and the different approaches taken by the two pilots. These learnings can be used to inform future initiatives and replicate successful strategies in other cities.





## D4.2 - Citizen Hub model agreement including quality control system for the business model elements and monitoring protocols for evaluation of partners' activities

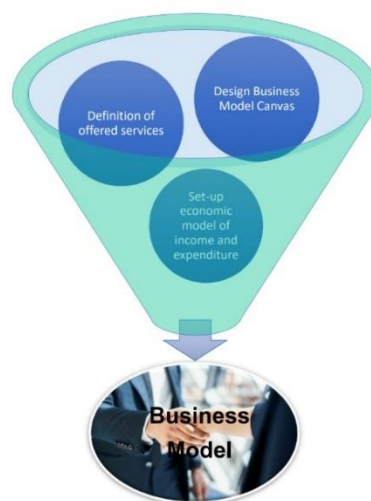
The deliverable presents a model agreement outlining the monitoring methodologies and KPIs for the project's pilots in Rotterdam and Valencia. It includes the development of relevant KPIs, data collection strategies, and the monitoring of activities adapted to the local contexts of the pilots. The report emphasizes the importance of a data-driven approach to business model monitoring and the need for a comprehensive data collection strategy.

Key results and learnings from the task are:

- The importance of using existing systems, such as Enterprise Resource Planning (ERP) and CRM tools, for data collection and prioritizing KPIs that can be automated.
- The significance of monitoring the sustainability of Citizen Hubs, the pipeline, support, and execution of renovation projects, as well as the economic, environmental, and social impact generated by the Citizen Hubs.
- The need for a data-driven management strategy and the establishment of a quality control system for the business model elements and monitoring protocols for evaluating partners' activities.
- The use of quantitative values for measured data evolution and the transformation of qualitative monitoring into a quantitative scale.
- The importance of setting baseline performance and comparing actual and planned scores to interpret variation in KPI monitoring.
- The use of surveys throughout the customer journey and the recommendation for a combination of data collection methods to ensure effective and reliable data monitoring.

Overall, the report provides a comprehensive framework for monitoring the activities and KPIs of the Citizen Hub pilots, emphasizing the importance of a data-driven approach and the need for a quality control system to evaluate the effectiveness of the business model and partner activities.

The figure shows the necessary components to set up Business model for the specific city.



### D4.3 - Overall Citizen Hub model implementation guide

The deliverable presents Citizen Hub model implementation guide. The key tasks include market analysis, business model definition, setting up a physical office, contractors training, IT tools development, HR and staffing, communication and marketing strategies, and defining KPIs and a monitoring system.

The implementation involves addressing challenges such as data collection, integration of the Citizen Hub into local strategies, and developing communication and dissemination strategies to create awareness and inform citizens about the benefits of energy-efficient renovations. The report also highlights the importance of tailoring the approach to each city's unique characteristics, such as building stock, administrative situation, and socio-demographic characteristics of homeowners.

The next figure shows basic four tasks to consider when establishing a successful front office/physical OSS.



#### **Valencia**

In Valencia, a top-down approach is being used, focusing on stimulating high demand for renovations and engaging a large number of citizens. The project aims to provide homeowners with technical assistance, contractual list, access to affordable and transparent financing, monitoring and verification of work progress, and quality assurance guidelines. The focus is on creating a high demand for renovations and engaging a large number of citizens where citizens have to go from one step to the other on their own (ensuring noncommercial interest, independence).

#### **Rotterdam**

On the other hand, Rotterdam is taking a bottom-up approach, concentrating on single-family homes, which make up a large part of the area and are owned by individual homeowners. The decision-making process for single-family owners through community approach is considered. The project in Rotterdam is led on the pilot level by Alex Energie, and the focus is on forming collectives of individuals to make the renovation process more attractive to contractors and to provide room for external advice.

and project management. The project aims to ensure that there is room for holistic professional advice and project management, which individuals may not be able to afford when operating alone. Overall, the report provides valuable insights into the challenges, strategies, and best practices for implementing the Citizen Hub model in the context of housing renovations, with a focus on the unique characteristics and needs of each pilot city.

#### [D4.4 - Report on the financing advice services outlining the services, KPIs and modifications throughout the project](#)

The document is a report on the financial activities and services provided by the project partners and its local ecosystem partners in Rotterdam and Valencia. The focus is on advising homeowners on accessing funding for energy retrofitting. The report outlines the financial framework, tools, and materials developed for this purpose. It also details the back-office and front-office financial services, including financial advice, printed materials, and specific advice provided to homeowners. The report also covers the measurement of financial KPIs and modifications to services throughout the project.

##### **Valencia**

In Valencia, the financial advice and tools provided to homeowners were defined in three phases during the project. The Valencia pilot considered both single dwellings and multi-family buildings, with a focus on multi-family buildings. The Valencia initiative is larger in scale, with targets for renovating a significant number of homes over several years. The Valencia Citizen Hub provides comprehensive financial advice on grants, subsidies, and tax deductions, and also has a web platform where citizens can receive financial advice (integrating the newly developed financial calculator, grants compatibility tool). However, due to the public nature of the pilot, specific recommendations for private financing options are not provided on their websites. The types of funding advised on in Valencia include grants, subsidies, and tax deductions.

##### **Rotterdam**

In Rotterdam, the financial advice was provided through the web-based platform of the municipality, as well as physical interactions. The cooperation with Alex Energie also plays a significant role, as they regularly organize community events to inform residents about funding possibilities for energy renovation. The financial framework for the Rotterdam pilot was defined in three distinct phases during the project. The back office of the Rotterdam Citizen Hub received specific advice throughout the project, including recommendations for updating brochures and informative charts to support both back and front office staff in assisting homeowners with funding alternatives (ETF funds).

Key results and learnings from the report include the development of web platforms, CRM monitoring forms, and financial calculators to support financial advice. The report also highlights the importance of providing jargon-free, comprehensive financial information to homeowners and the organization of events to educate them about energy retrofitting options and subsidies. Additionally, the report emphasizes the significance of combining public funds with private financial products and the need for transparency and support in the credit assessment and underwriting processes. The document also underscores the role of physical and digital information points in providing reliable financial information to citizens. Overall, the report demonstrates the comprehensive efforts made to provide financial advice and support for homeowners in accessing funding for energy retrofitting.



## D4.5 - Action plan, risk assessment and quality assurance of the renovation activities

The report discusses the roles of different OSS elements in the establishment of the actual OSS and reports on the various levels of decision making in the pilots based on the outcomes of technical workshops and interviews, emphasizing the importance of trust as a key element in providing reliable information. It also highlights the varying demand for technical and financial advice, as well as the importance of execution and aftercare in renovation projects.

The document outlines the action plan, risk assessment, and quality assurance of renovation activities, with a focus on the execution of pilot renovation activities. It also addresses the challenges and changes encountered during the project, leading to a shift in the project's aim towards creating circumstances for a platform to function, rather than a single OSS.

Overall, the report provides insights into the development and execution of the Citizen Hub, the challenges faced during the project, and the strategies for successful renovation activities. It serves as a valuable resource for understanding the role of the Citizen Hub in promoting sustainable renovations and addressing the needs of homeowners and stakeholders involved in the process.

### **Valencia**

- Energy renovation is not a priority for homeowners or occupants. Therefore, including conservation, aesthetic, or accessibility renovation works in the grant schemes is crucial to attract citizens to energy renovations.
- Presenting a small set of conclusions with their costs and potential benefits at an early stage of the journey is necessary.
- The role of the staff in the Hubs is of key importance (human interaction), as they gain the trust of citizens. Promoting peer-to-peer exchanges and collective activities among homeowners who want to renovate has proven to be very impactful.
- Directing citizens to certified professionals is a good idea, but some work is still needed when renovation projects are not large enough to interest 'big' companies. Establishing registries for smaller companies or local craftsmen would help.
- Monitoring campaigns are challenging to plan and execute, but they greatly appeal to citizens and reassure owners.
- Decision-making processes in multi-family buildings are still slow, complex, and uncertain. Even with highly attractive public subsidies, obtaining consensus in medium and large buildings is difficult.
- The free-based service is costly for the HUB, which depends on the public budget each year, leading to uneven service delivery in different municipalities, depending on their capacity to secure other sources of financing.

### **Rotterdam**

- The organization needed to assist citizens as well as contractors does not exist as an entity, and no one is willing to take the risk for it to fulfill that role.



- No one is willing to invest money upfront to establish an entity that would enable a one-stop-shop (OSS). This explains why people think it is a good idea, but nobody wants to participate and take a risk.
- There are several risks (overall economy and availability of materials) involved in setting up a successful Hub that can be found in different locations.
- It is crucial for a Hub to offer stable and reliable renovation solutions that ensure a certain level of quality, in agreement with what homeowners had in mind. Therefore, the Hub must start off strong.
- Due to the lack of labor, it was difficult to guarantee renovations. Instead of solely promoting renovation to citizens, we tried to find solutions to increase the workforce for executing the work, but this lies beyond the scope of the consortium.
- The energy community needs to view it as a continuous stream of renovations rather than just a project for 10 homes. However, this requires guarantees that the energy community cannot provide.
- When the initial idea of StH was presented to municipalities, it was about the lack of money and labor. In Rotterdam, with the ETF loan, the problem of people being unable to pay for renovations became much smaller. However, the labor shortage issue remains unsolved and is even worsening.

## D4.6 - Documented quality and achieved targets of the renovation activities

The report focuses on how was the quality and achieving the goals of renovation activities achieved. In **Rotterdam**, quality control was a specific request from homeowners to ensure that the results of the renovations met their expectations. The report emphasizes that people are willing to pay for certainty and professional assistance when it comes to their own home projects. Quality control was an integral part of the pilot project in Rotterdam, and recommendations for monitoring include offering quality control as a paid service and using labels to track the outcome of renovations.

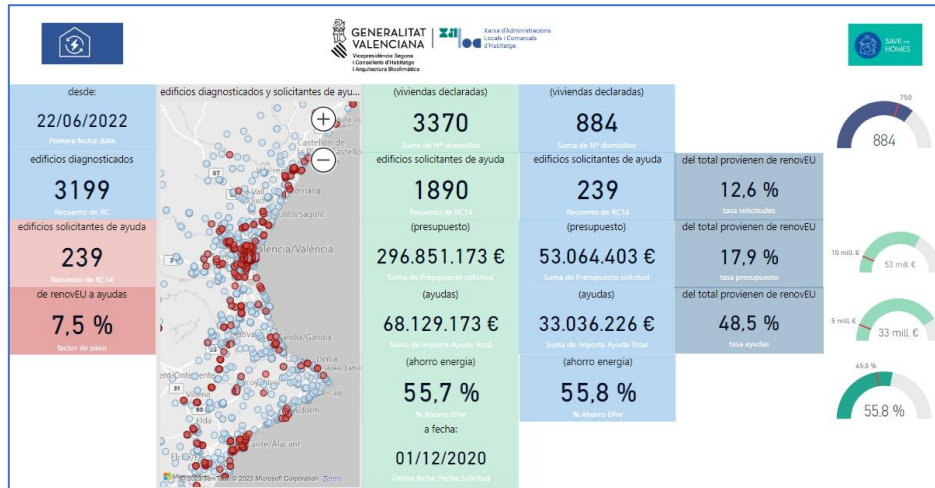
### Quality control

As part of work for the collective, paid for by the citizens



In **Valencia**, there is no direct quality control from the Energy Office, but lessons can be learned from available data, subsidies application analyses, grants and known reductions, to incorporate into new

policies and future monitoring. The report highlights that the Energy Office in Valencia does not track homeowners after providing advice, leading to a lack of influence on the outcome of renovations and quality control. However, follow-ups were done manually, contacting some of the people that gave consent.



## Follow-up



The report also discusses the challenges and initiatives related to quality assessment in different stages of the renovation process, from onboarding and design to execution and evaluation. It emphasizes the importance of reliable market data and insights to improve transparency and decision-making for homeowners.

Overall, the report underscores the significance of quality control in renovation projects and the need for trust, reputation, and professional guidance throughout the process. It provides insights into the specific steps taken for quality assessment in both Rotterdam and Valencia, as well as recommendations for future monitoring and improvement of quality control measures.

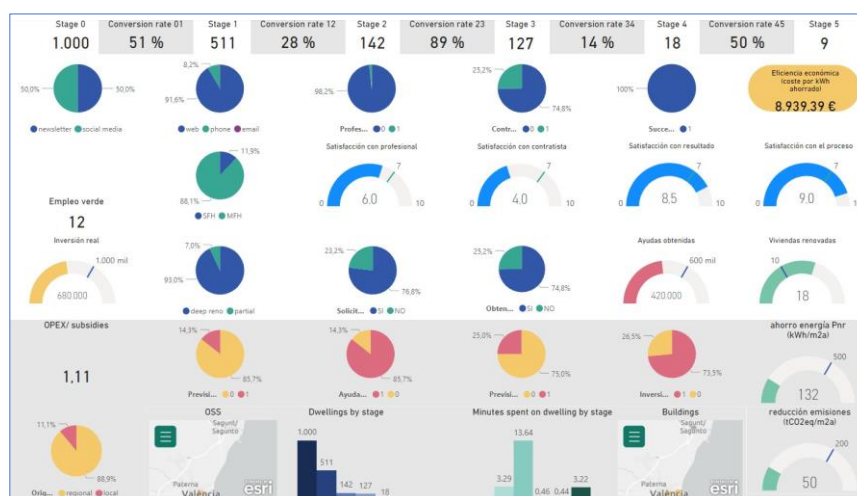


## D4.7 - Evaluation of the monitored data and the extracted information

The report evaluates the monitoring campaigns and the extracted information from the Citizen Hub project in Valencia and Rotterdam. The objective was to deliver real benefits to citizens and stakeholders in these cities and to demonstrate the potential of the Citizen Hub concept to other municipalities. The monitoring plan included assessing the success of the monitoring campaigns, dissemination of renovation stories, and the evaluation of the monitoring data gathered. The report also discusses the assessment of the monitoring campaign's success, including the number of people targeted, views, clicks, and dwellings registered in the monitoring campaign.

Specifically, the evaluation of the monitoring campaign in **Valencia** shows that onboarding actions targeted and reached many citizens through events and publications. The report highlights the effectiveness of different monitoring campaign actions, such as publications and site visits, and suggests a higher level of automation in monitoring activities to allow for repeating these campaigns at least once a year. Additionally, the report emphasizes the importance of sharing success stories with the user community.

### Dashboards in Valencia

The evaluation for **Rotterdam** focused on the design and implementation of the monitoring plan to achieve energy reduction. The report highlighted the early stage of the pilot in Rotterdam, which involved house visits and detailed analysis of energy consumption. Experts from Alex Energy dissected energy bills and measures were aimed at reducing individual heat losses. The monitoring plan emphasized the need for systematic assessment to comply with the Paris climate goals and the Dutch Climate Agreement, which aims to transition from fossil fuels to sustainable energy sources. The report also addresses the use of a checklist for monitoring cases, an explanation and consent form for renovation stories, and a mock-up of the recommendations report with monitored data.





Overall, the report provides insights into the success and challenges of the monitoring campaigns in Valencia and Rotterdam, and it offers recommendations for improving the effectiveness of future monitoring activities.

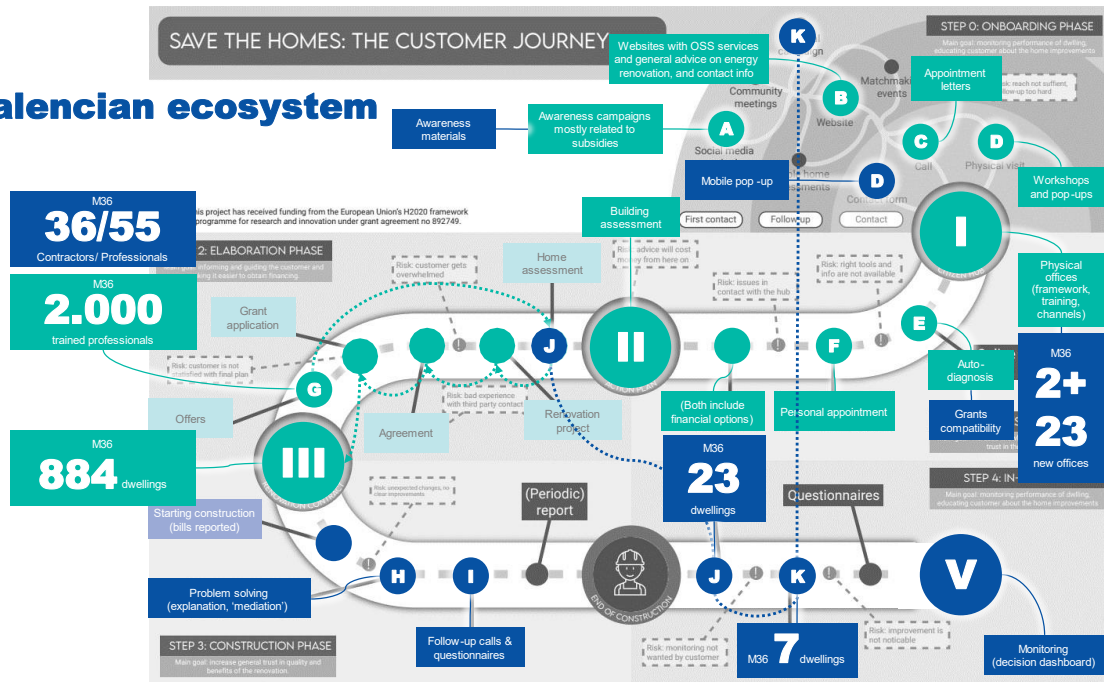
## [D4.8 - Evaluation of the Citizen Hub holistic renovation services and the customer journeys](#)

The report evaluates the holistic renovation services and customer journeys of the Citizen Hub project in Valencia and Rotterdam. It provides a comprehensive analysis of the customer journeys, valuable KPIs, meaningful takeaways from the KPI evaluation, lessons learned, and recommendations for the future.

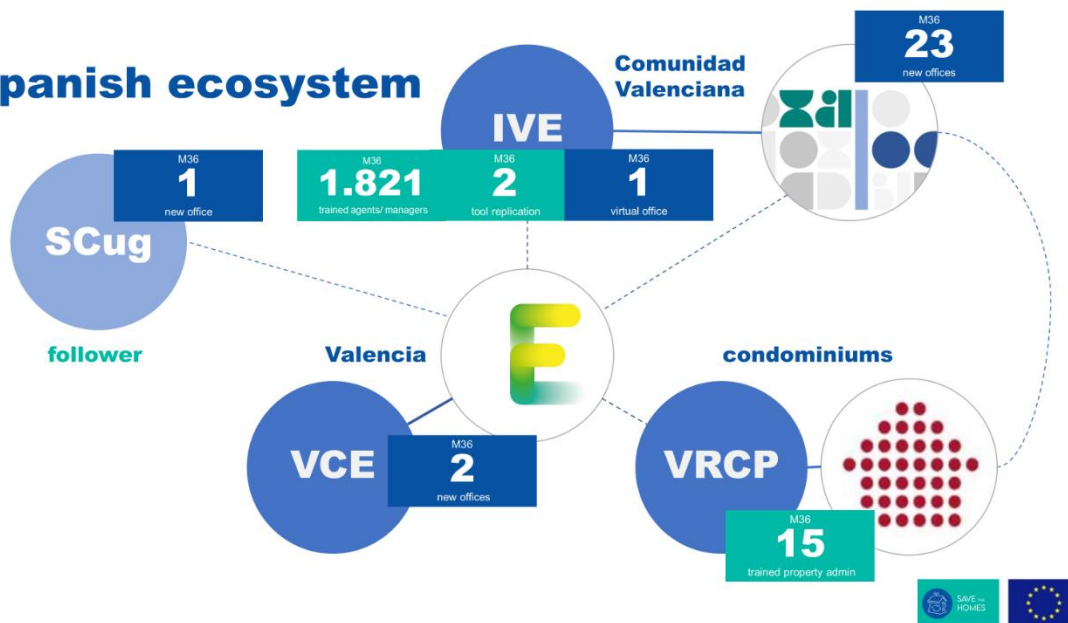
In **Valencia**, the focus was on improving touchpoints at the initial stages of the customer journey, such as onboarding and design, with the goal of enhancing customer understanding of renovation needs and instilling confidence in the process. The In-Use phase campaigns focused on examining dwellings with and without renovation measures, aiming to compare energy performance before and after renovation. The report also highlights the monitoring campaigns designed to allow comparison before/after renovation, validate renovation predicted benefits, and evaluate satisfaction with the renovation and/or the assessment provided by the Citizen Hub services.



## Valencian ecosystem



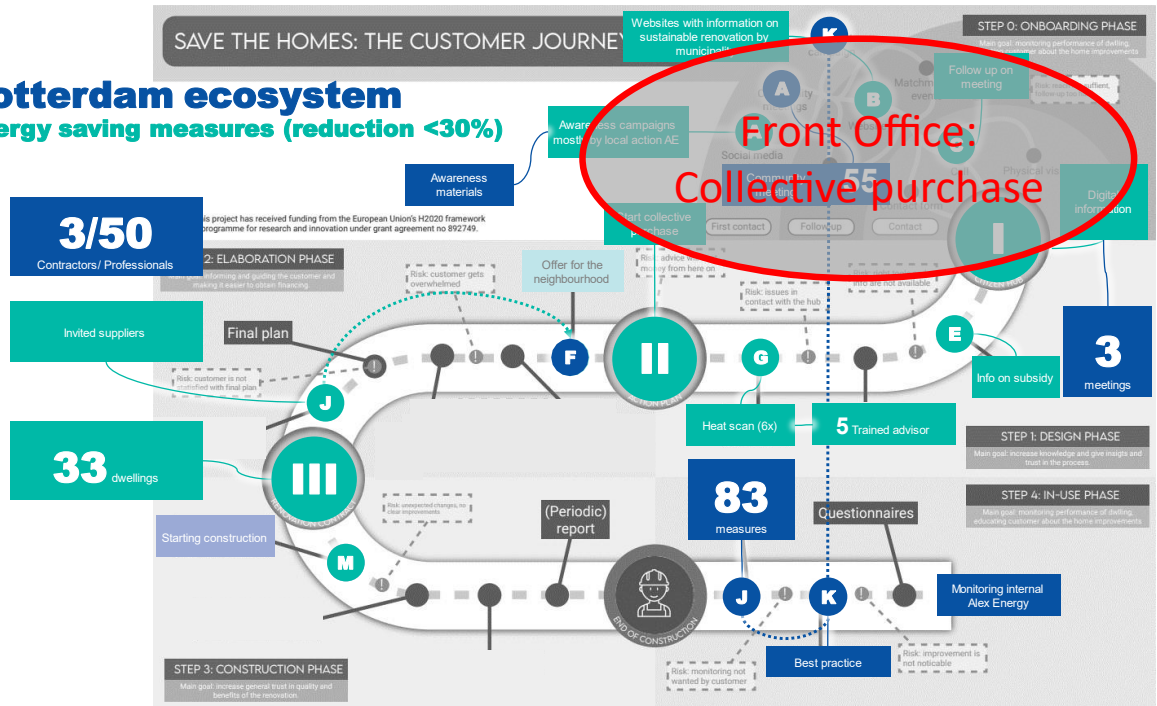
## Spanish ecosystem



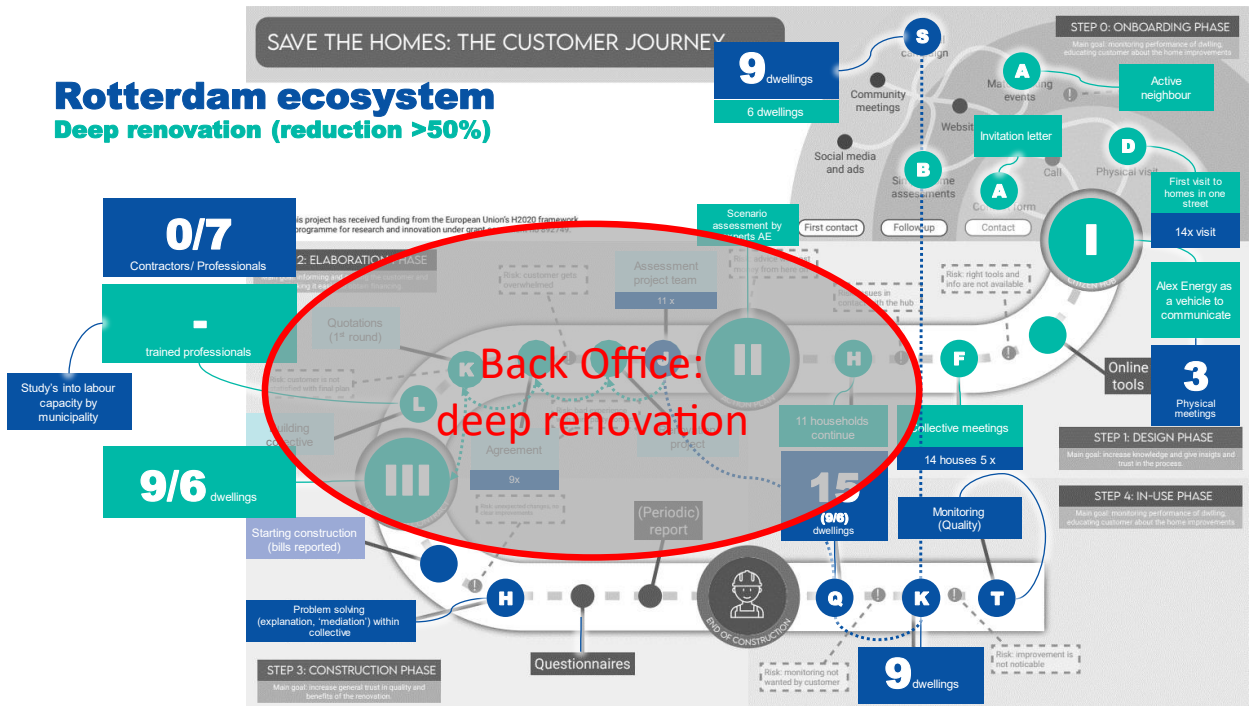
In **Rotterdam**, the report discusses the realization and reporting of the StH customer journey, with a qualitative focus on the entire renovation process and the In-Use stop experiences. It also details the impacts achieved at various touchpoints of the customer journey, including deep renovations with energy reductions exceeding 50%. The report emphasizes the challenges in finding an entity willing to undertake the role of the Hub and the need for a sustainable model to fulfill the vital role of the Hub in fostering sustainable renovation initiatives.



**Rotterdam ecosystem**  
Energy saving measures (reduction <30%)



**Rotterdam ecosystem**  
Deep renovation (reduction >50%)



The report provides insights into the effectiveness of various channels used, the validation of the Citizen Hub offers, and the interaction with homeowners during renovation. It also compares monitored results before and after renovation to validate and fine-tune the process, ensuring completeness, consistency, and absence of contradictions in the information provided. The report concludes with a protocol for evaluating the transferability of the Citizen Hub to other cities and regions, considering ethical guidelines and the transparency and independence of the services offered.

Overall, the report highlights the importance of community engagement, quality assurance, and the role of the Hub as a trustworthy source of information and a facilitator of connections between



citizens and stakeholders. It also emphasizes the need for collaborative efforts to establish sustainable models that foster sustainable renovation initiatives.

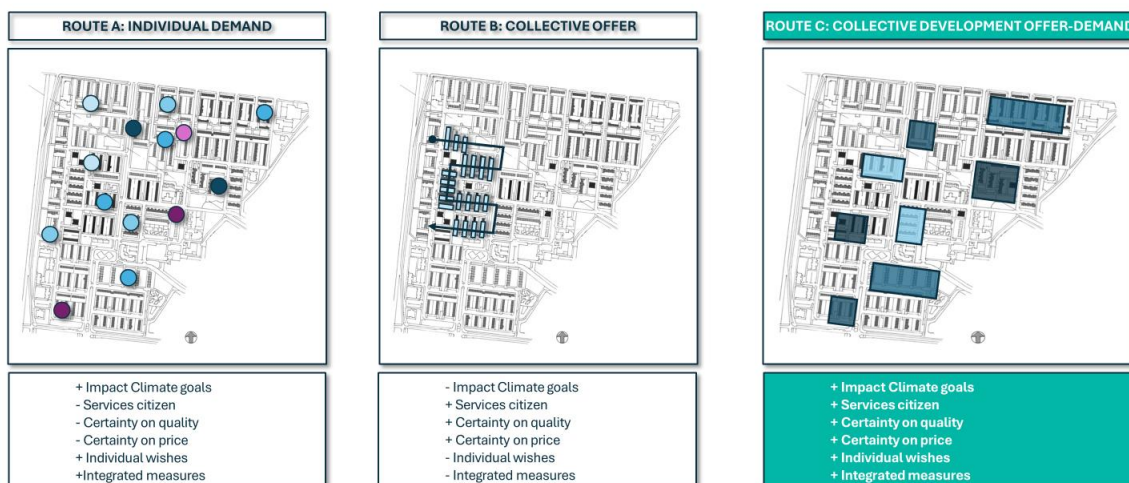
## D4.9 - Common protocol to evaluate transferability of Citizen Hub concept

The document is a report on the evaluation of the transferability of the Citizen Hub concept, based on assessment of the realization and satisfaction evaluation of the customers. It outlines a common protocol for evaluating the transferability of the Citizen Hub, based on the implementation steps in two pilot cities, Valencia and Rotterdam.

In **Valencia**, the focus was on targeting specific building stock and creating the need for energy renovation by leveraging available subsidies. They also selected a multifamily building typology and analyzed their components and owners' needs together with sectorial suppliers' expectations. This led to the formation of proposed renovation packages or itineraries, which were assessed in terms of cost, energy, CO<sub>2</sub>, and comfort through a simulation tool connected to the suppliers' registry.

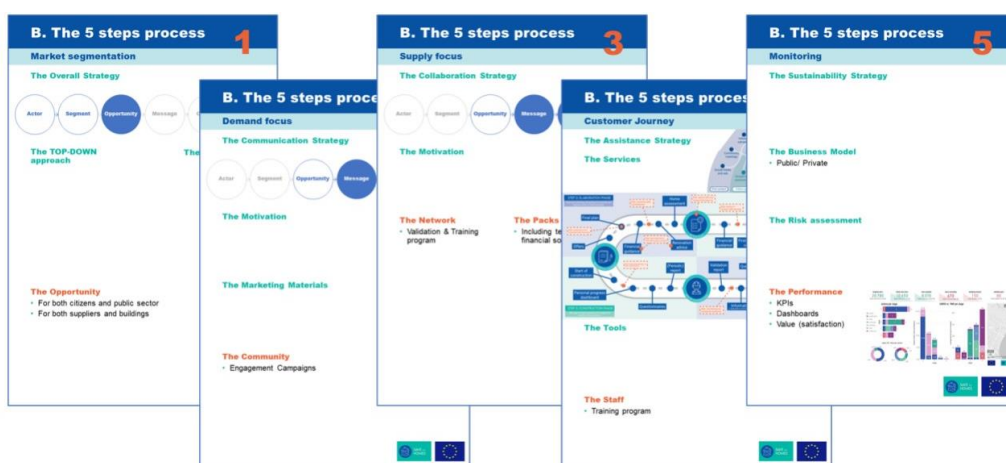
On the other hand, **Rotterdam** found an opportunity in the repetition of building components in Dutch building stock, which facilitated the implementation of proven energy-efficient solutions and organizing collectives around this repetition. They also identified three routes (see figure below) for renovation: individual, collective, and organizing collectives, each with its own level of ambition and collective involvement.

### Different paths of customer journey Co-existing next to each other



The key takeaways from Valencia include the importance of leveraging available subsidies and analyzing building components and owners' needs to form proposed renovation packages. In Rotterdam, the focus was on leveraging the repetition of building components and organizing collectives for energy-efficient solutions. These insights can be valuable for other cities looking to implement the Citizen Hub concept and stimulate home renovations.

The report includes a 5-step process for replication (see figure below), with a focus on market segmentation, demand and supply side focus, customer journey, and follow-up. It also emphasizes the need for high-level analysis to prioritize quick wins and long-term impact potential. The report provides DIY templates for each step of the implementation guidelines and offers guidance on designing renovation packages and targeting suppliers' capacities. It also discusses the importance of monitoring data and feedback loops for assessing replicability. The document aims to establish a protocol for the transferability of the Citizen Hub and provides insights and lessons learned from the pilot cities to guide the replication of the concept in other cities and regions. The figure below shows the 5-steps replication process to assess transferability.



### Market segmentation

This involves mapping and segmentation of the **current state of both demand and supply sides**. On the demand side, the focus is on **buildings and their owners**, aiming to grasp their needs for effective engagement campaigns. Segmentation of buildings allows to understand better which neighbourhoods should be renovated first (buildings typologies). Aggregation of dwelling or buildings allows a better understanding for later renovation process steps. The supply mapping and segmentation defines the **supply stakeholders** that should be negotiated to **channel their offer** through the office.



### Demand side focus

The demand side aggregation helps understanding **who the customers are**, their **pain points and motivational drivers** for the renovation. In this context, to create **campaign strategies** that will resonate with people and increase their awareness on importance and benefits of renovations is key for renovation process onboarding stages.



### Supply side focus

The supply side means **everyone who can be a single-point of contact in a one-stop-shop** solution like manufacturers, service providers, contractors, architects, engineers, energy consultants, government etc. Supply side aggregation is fundamental to provide optimal offer, improve trust and awareness of homeowners, reduce renovation costs and time, and mainstream innovative technical solutions.



### The StH customer journey

A customer journey framework is created to get a **complete overview of all the touchpoints** during the renovation process and to see how people go through decision making. The steps of the StH customer journey **follow the decision-making process of the customer**. The transition from one step to the next is crucial. The points of interaction between the customer and the company or brand are so-called 'touchpoints'. The touchpoints link directly to the experience of the customer in each step of the journey and each step has its own drivers and barriers which show the reasons for the potential customer to continue or to quit the process.



### The follow-up

Finally, not only the service has to be designed, but the way of **ensuring continuation on the mid-long term**, measuring success and **implementing improvements** where needed.



## D4.10 - Results' integration into the web-based information systems

The report presents a matrix that structures the 66 tools based on the phases, extent, and city, acting as a gateway to the available tools. It outlines the different approaches of the pilot cities, Valencia and Rotterdam, in setting up OSS for citizens seeking advice on home renovation. Valencia follows a top-down approach, focusing on advice, while Rotterdam uses a bottom-up approach, incorporating both advice and support.

The tools are categorized based on the StH customer journey phases, such as onboarding and design. They range from simple checklists to sophisticated digital tools, with some aimed at citizens, professionals, projects, or the entire city/region. The report emphasizes that setting up a comprehensive OSS covering all functionalities is a significant challenge, and it may not be feasible to incorporate all aspects of sustainable renovation into one entity.

Specific tools and instruments used in Valencia and Rotterdam are detailed, such as RenovEU, workshops, and local actions. The report highlights the need for a point of contact, such as a Hub or OSS, for citizens to access information on sustainable renovations. It also notes the varying maturity of the instruments, with some being fully developed and others at the idea stage.

The report concludes that while the integration of these instruments into a web-based information system is a possibility for the future, the priority should be on organizing a holistic OSS. It emphasizes the importance of understanding the added value of incorporating these tools into one system before proceeding with a web-based solution.

In summary, the report offers valuable learnings on stimulating sustainable renovations through the use of web based services but still emphasizes the need for a centralized point (most often based physically in local proximity) of contact for citizens seeking guidance on home renovation.



## WP5 – Follow-up replication and EU wide exploitation

The WP5 objective was to ensure that the successfully validated Citizen Hub model (in WP4) was directly taken further, thus ensuring an increase in renovation rates EU-wide via different networks at the following levels:

- The first level involved one-on-one, tailor-made replication in two follower cities, Sant Cugat and Ljubljana, both linked to the main pilots.
- The second level focused on exploitation and promotion at a regional and national level, with a pivotal role for the Sav€ the Homes Advisory Board working groups and the pilot networks.
- The third level aimed at exploitation on an EU-wide scale targeting the Sav€ the Homes main groups through the 2 European umbrella organizations: homeowners/ landlords/ condominiums via UIPI and municipalities via ICLEI.

The following sub-chapters comprise of summaries of each particular deliverable, which represent the outcomes of specific tasks within WP5. These summaries highlight the main achievements, results, key learnings, as well as any bottlenecks identified during the task execution. The title of each subchapter includes a hyperlink through which the entire deliverable can be accessed for more detailed information.

### [D5.1 - Replication guideline based on the lessons learnt from the follower cities](#)

The report provides a detailed overview of the replication guidelines based on lessons learned from follower cities. Specifically, the report highlights the use of open geographical data sources for mapping supply side, engagement opportunities for citizens based on the mapped customer personas in applying for solar energy subsidies, and the motivation of citizens and suppliers (supply side mapping) to engage in energy renovation. It also emphasizes the need for supply side aggregation to provide optimal offers, improve trust and awareness of homeowners, reduce renovation costs and time, and mainstream innovative technical solutions adapted to the local context.

Specifically, Sant Cugat leveraged the Open Sant Cugat GIS tool to access valuable geographical data sources, including Cadaster, Energy Efficiency building maps, ICGC heat leaks map of the buildings, and information on the suitability of roofs for PV systems within the city. This allowed for data translation and integration for diverse analyses. The city also combined the OSS initiatives with the relevant ongoing initiatives such as IBI tax reductions for PV panels, refurbishment subsidies from the Spanish government, and tax credits. Both cities offered various engagement opportunities such as workshops, activities during Energy Week, and assistance for citizens in applying for solar energy subsidies through the city council. These initiatives attracted homeowners interested in renovation projects. Subsidies, tax incentives, and energy reduction initiatives were identified as key motivators for citizens to embark on renovation projects. These incentives were crucial in stimulating the energy renovation sector. Both cities emphasized the importance of supply side aggregation to provide optimal offers, improve trust and awareness of homeowners, reduce renovation costs and time, and mainstream innovative technical solutions adapted to the local context. Ljubljana and Sant Cugat were working on long-term citizen engagement strategies. They were also developing online tools and workshops for citizens to learn how to use these resources effectively.



The figure below shows the Citizen Hub blueprint & implementation script.

B. THE CITIZEN HUB BLUEPRINT AND IMPLEMENTATION SCRIPT		YOUR CITY/REGION
<p><b>4</b> The StH business journey</p> <p><b>5</b> The follow-up</p> <p><b>1</b> Market registration</p> <p><b>2</b> Demand side focus</p> <p><b>3</b> Supply side focus</p>	M. The assistance strategy	
	N. The Services	
	O. The tools	
	P. The Staff	
	Q. The Sustainability Strategy	
	R. The Business Model	
	S. The Risk assessment	
	T. The Performance	
	A. The overall strategy	Which are your targeted buildings? Which building typology should be renovated first to get greatest effectiveness in the impacts through the renovation process? Which are your targeted subgroups? Which user's profiles should be targeted to get the greatest effectiveness in the showcasing and engagement with the renovation process? Which are your targeted suppliers? Which segment of suppliers should be targeted to get the greatest effectiveness in the implementation quality and user satisfaction?
	B. The top-down approach	Which are your official/statistical data sources? How can you combine and filter them in order to qualify, quantify and measure your targets?
	C. The bottom-up approach	Which are your participatory processes? What kind of information are you getting from them? How can you use these data to derive/ extrapolate market behaviour, needs or expectations?
	D. The opportunity	What would move citizens into renovation? Why would more suppliers into the energy renovation?
	E. The communication strategy	How to drive demand side motivation into the market opportunity?
F. The motivation	Which are the motivations of homeowners? Which is the correct message to guide demand interests into OSS content opportunity? Which channels should be used to reach our targeted audience?	
G. The marketing materials	Which are the correct marketing materials and activities to resonate with the different target motivations and clearly deliver the message?	
H. The community	Which are your local well-known existing places and channels for distributing and exploiting the marketing materials? Which are your local stakeholders and potential allies to fine-tune campaigns and implement specific actions?	
I. The collaboration strategy	How to drive supply side motivation into the market opportunity?	
J. The motivation	Which are the motivations of the supply side profiles for engaging in the OSS renovation services network? Which is the message to orient supply capacities within the OSS content opportunity? Which are the correct channels to ensure their participation?	
K. The network	Which measures can avoid the current fragmented market and lack of coordination? How can a services network be built?	
L. The packs	Which packs of solutions are applicable in your context to ease the decision-making and allow for a fair and reliable comparison?	

Overall, the report provides insights into the strategies, challenges, and successes of implementing the Citizen Hub concept in various cities, offering valuable lessons for replication in other locations.

## [D5.2 - Save the Homes Exploitation and Replication Plan](#)

The report outlines the Save the Homes Replication and Exploitation Plan, focusing on the evaluation and identification of interested parties for upscaling and further roll-out in target cities. It includes feedback from pilot cities, replication experiences in follower cities, and from the exploitation workshops across various EU countries. The plan also involves testing the applicability of materials and activities in follower cities, gathering feedback through support materials and follow-up activities, and conducting workshops to assess the viability and smoothness of transfer. The document emphasizes the need for professional training and targeted marketing materials to drive demand and support the replication process.

Specifically, the report highlights the replication process in follower cities, Sant Cugat del Vallès and Ljubljana, and the challenges that they identified analyzing the StH Citizen Hub model implementation guide. It also discusses the lessons learned from previous OSS practices, practical experiences with StH OSS related tools, and the challenges encountered in developing and replicating them. The feedback from follower cities underscores the well-structured and adaptable nature of the replication process, while also highlighting challenges in completing certain steps and addressing barriers such as language differences and context specificity.

The report also details the workshops conducted to consolidate the impact of the StH project, gather stakeholder insights, and identify best practices. It emphasizes the potential for further replication and the long-term sustainability of the tools developed during the project, as well as the need to consider variations in language, legislative context, and housing stock when replicating the model. Additionally, it discusses the interest of local and regional governments in replicating the Citizen Hub



approach and specific components of StH, as well as the challenges and bottlenecks identified during the workshops.

Overall, the report emphasizes the need for coordinated market development, tailored services based on local needs, and robust financial ecosystems to support the replication and exploitation of the StH project materials throughout the European Union.

### D5.3 - A self-instruction guide for the Citizen Hub model










The report outlines the StH Replication and Exploitation Plan, focusing on the evaluation and identification of interested parties for upscaling and further roll-out in target cities. It includes feedback from pilot cities, replication experiences in follower cities, and from the exploitation workshops across various EU countries. The plan also involves testing the applicability of materials and activities in follower cities, gathering feedback through support materials and follow-up activities, and conducting workshops to assess the viability and smoothness of transfer. The document emphasizes the need for professional training and targeted marketing materials to drive demand and support the replication process.

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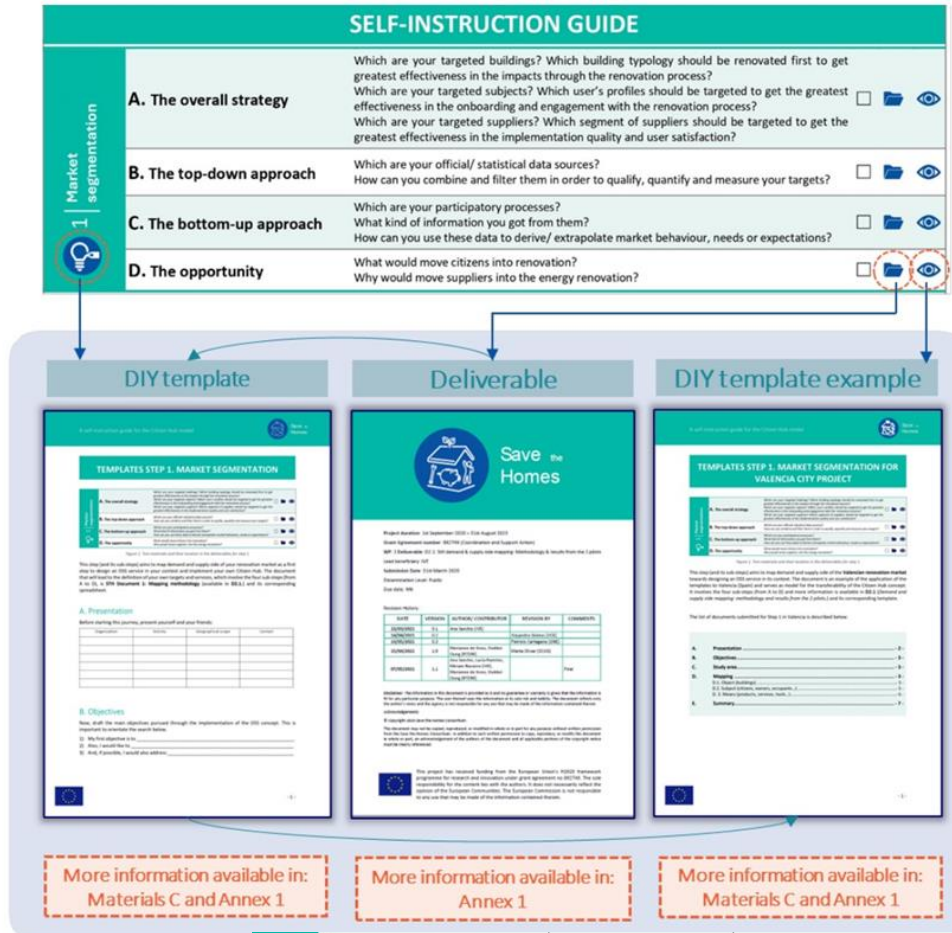
Overall, the report emphasizes the need for coordinated market development, tailored services based on local needs, and robust financial ecosystems to support the replication and exploitation of the StH project materials throughout the European Union.

The figures below show how the self-instruction guide is made and how all the various templates can be used.

	<b>A. The overall strategy</b>	Which are your targeted buildings? Which building typology should be renovated first to get greatest effectiveness in the impacts through the renovation process? Which are your targeted subjects? Which user's profiles should be targeted to get the greatest effectiveness in the onboarding and engagement with the renovation process? Which are your targeted suppliers? Which segment of suppliers should be targeted to get the greatest effectiveness in the implementation quality and user satisfaction?	<input type="checkbox"/>  
	<b>B. The top-down approach</b>	Which are your official/ statistical data sources? How can you combine and filter them in order to qualify, quantify and measure your targets?	<input type="checkbox"/>  
	<b>C. The bottom-up approach</b>	Which are your participatory processes? What kind of information you got from them? How can you use these data to derive/ extrapolate market behaviour, needs or expectations?	<input type="checkbox"/>  
	<b>D. The opportunity</b>	What would move citizens into renovation? Why would move suppliers into the energy renovation?	<input type="checkbox"/>  







<b>1</b> Market segmentation	<b>A. The overall strategy</b>			
	<b>B. The top-down approach</b>	<a href="#">C1_Templates Step 1. Market segmentation.pdf</a>	D2.1. <a href="#">Demand &amp; supply side mapping: Methodology &amp; results from the 2 pilots</a>	C1V_Templates Step 1. Market segmentation for Valencia city project
	<b>C. The bottom-up approach</b>	<a href="#">C1_Templates Step 1. Market segmentation.docx</a>		
	<b>D. The opportunity</b>			
<b>2</b> Demand side focus	<b>E. The communication strategy</b>			
	<b>F. The motivation</b>	<a href="#">C2_Templates Step 2. Demand focus.pdf</a>		
	<b>G. The marketing materials</b>	<a href="#">C2_Templates Step 2. Demand focus.docx</a>		
	<b>H. The community</b>			
<b>3</b> Supply side focus	<b>I. The collaboration strategy</b>		D2.3. <a href="#">Citizen Hub protocol for supply side community building and network creation</a>	C3V_Templates Step 3. Supply focus for Valencia city project
	<b>J. The motivation</b>	<a href="#">C3_Templates Step 3. Supply focus.pdf</a>		
	<b>K. The network</b>	<a href="#">C3_Templates Step 3. Supply focus.docx</a>		
	<b>L. The packs</b>			
<b>4</b> The Sth customer journey	<b>M. The assistance strategy</b>		D3.2. <a href="#">Strategy and structure to implement the Citizen Hub concept for the two pilots</a>	C4V_Templates Step 4. The Sth customer journey for Valencia city project
	<b>N. The Services</b>	<a href="#">C4_Templates Step 4. The Sth customer journey.pdf</a>		
	<b>O. The tools</b>	<a href="#">C4_Templates Step 4. The Sth customer journey.docx</a>		
	<b>P. The Staff</b>			
<b>5</b> Up	<b>Q. The Sustainability Strategy</b>		D3.3. <a href="#">Citizen Hub business model for the two pilots cities</a>	
	<b>R. The Business Model</b>			
	<b>S. The Risk assessment</b>	<a href="#">C5_Templates Step 5. The follow up</a>		



## D5.4 - Exploitation campaigns rolled-out through the EU umbrella member organizations and municipalities

The report details the exploitation campaign of the project, focusing on the rollout of workshops and renovation tours in the Netherlands, Slovenia, and Spain. The campaigns aimed to promote the replication of citizen hub concepts and OSS concept through targeted workshops, outreach efforts, and complementary activities.

In the Netherlands, the workshops were organized by the national city-level project manager network VPNG, the City of Rotterdam, and ICLEI staff. The targeted audience included property owners, condominium managers, local and national policymakers, and stakeholders from banking institutions, the construction sector, and architects. The workshops aimed to pave the way for the scaling and replication of OSS and the citizen hub concept.

In Slovenia, the City of Ljubljana harnessed existing relationships with local government contacts to invite them to take part in the workshop. The targeted audience included local government staff and national government counterparts. Little additional promotion activities were needed due to the capital city's ability to easily reach national government counterparts.

In Spain, the workshops were strongly carried out by the active promotion and direct engagement of StH partner València Clima i Energia. The event was widely promoted on websites and social media, and an event banner was produced to promote the workshop. The targeted audience included stakeholders interested in housing sustainability, energy efficiency, and public-private collaboration at the local and regional level.

Key results and learnings from the organized national exploitation workshops include:

### **Netherlands Workshop:**

- Local governments expressed interest in the intricacies of setting up OSS and the role of citizen hubs in decarbonizing heating in buildings.
- Interest in contractor training/certification, organization of OSS services and processes, and supporting IT tools was comparatively low.
- The concept of OSS was seen as addressing financial and labor barriers to sustainable living.

### **Slovenia Workshop:**

- The workshop provided an opportunity to bring local and national government stakeholders together to reflect on the organization of renovation initiatives.
- Discussion topics included promoting full renovations, addressing challenges in renovating multi-unit apartment buildings, and the role of district heating and natural gas infrastructure.

### **Spain Workshop:**

- High replication interest was related to the definition of citizen hub/OSS services, adoption of supporting IT tools, and the establishment of performance indicators and monitoring of impact.
- Stakeholders showed less interest in guidance for physical OSS setup, business models, contractor training/verification, and OSS staffing/HR issues.

The workshops facilitated sharing project outcomes, testing tools, and tailoring discussions for stakeholders to shape future policy recommendations. They highlighted the tool's role in supporting individual owners during renovation, especially regarding the recast Energy Performance of Buildings Directive (EPBD).



Overall, the workshops proved valuable in securing replication interest, engaging property owner associations, and validating and gauging interest in specific StH outputs. They also provided a platform for direct contact with property owners to receive a reality check on policies and projects' deliverables.

Local Governments for Sustainability network (**ICLEI**), in collaboration with local government partners and other stakeholders, played a pivotal role in driving the exploitation and replication of the project results at both national and EU levels. The organization leveraged project outcomes to enhance visibility and secure replication interest from subnational governments, with a focus on Slovenia, Spain, and the Netherlands. ICLEI's activities included the planning and organization of workshops, the development of locally tailored agendas, and the facilitation of engagement with relevant stakeholders. Additionally, ICLEI engaged in complementary activities to magnify the reach and impact of StH, such as promoting workshops, disseminating outcomes, and publishing articles related to the project.

Furthermore, ICLEI represented Save the Homes at various events and stands, including the European Sustainable Energy Week (EUSEW) and the World Congress of Architects, to engage with stakeholders and explore collaboration opportunities. The organization also leveraged its knowledge to implement an OSS workshop in Germany, securing replication interest from local governments. Additionally, ICLEI published articles and redesigned their webpage to create a repository of project outputs for local governments, supporting future exploitation of OSS and StH results.

International Union of Property Owners (**UIPI**), in collaboration with various organizations and local government partners, organized a series of Renovation Tours and workshops also under the umbrella of the project. These events were designed to engage property owners, condominium managers, and relevant stakeholders to promote the replication of citizen hub concepts and One-Stop-Shops (OSS) at the national and EU levels. The goal was to secure interest and commitment to roll out OSS leveraging StH outputs by at least 20 UIPI member organizations and 20 local governments.

The Renovation Tours were held in various locations, including Bilbao, Barcelona, and Brussels, targeting local property owners and stakeholders. The workshops and tours aimed to bridge the gap between policy and citizens, foster locally relevant policy discussions, and offer practical solutions built upon existing European and local initiatives. Additionally, UIPI hosted an online workshop focused on exploring OSS to streamline European home renovation, aiming to simplify the process under the Horizon 2020 program.

ICLEI's and UIPI's efforts resulted in securing replication interest of 21 local governments and at least 8 property owner associations. The workshops and tours facilitated sharing project outcomes, testing tools, and tailoring discussions for stakeholders to shape future policy recommendations.

In summary, the report provides insights into the exploitation campaign's efforts to promote the replication of citizen hub concepts and OSS, as well as the specific outcomes and learnings from the organized exploitation workshops in the Netherlands, Slovenia, and Spain.

## [D5.5 - Report on trainings carried out](#)

The report highlights various capacity building efforts, including leveraging the European Covenant of Mayors (EUCoM) and engaging in complementary activities to pave the way for broader OSS roll-out. These efforts resulted in enhanced capacity to replicate OSS in at least 11 further local governments, with a total of 56 local governments being supported.



The report emphasizes the effectiveness of peer-exchanges and bilateral settings in transferring knowledge and building capacities. It also discusses the challenges and opportunities in setting up and operating OSS, such as the need for funding, data, and quality of service. The document underscores the importance of engaging with local government stakeholders and the value of learning from real-life examples and successes, as well as the challenges faced in establishing OSS.

Key results from the organized trainings include the enhanced technical OSS capacities of 43 local government representatives through EUCoM engagement, the successful replication workshops delivered by ICLEI and StH partners, and the impact of bilateral exchanges in sharing good practices and addressing bottlenecks. The report also highlights the need for national-focused events to overcome language barriers and address country-specific conditions.

Overall, the report provides valuable insights into the capacity building activities conducted, the challenges faced, and the lessons learned in the process of facilitating the rollout of OSS for sustainable buildings and neighborhoods in Europe.

## D5.6 - Note with Policy recommendations

The document is a note with policy recommendations from the project, which aims to enhance the deployment of OSS as a crucial tool to meet the goals of EU climate and energy legislation. The recommendations are based on input from consortium partners, national property owner organizations, desk research, and stakeholder engagement activities.

The key policy recommendations from the project include:

- **Adequate policy frameworks:** Ensuring that policy frameworks are in line with the requirements of the Energy Performance of Buildings Directive (EPBD) and its implementation, and that they favor the massification and deployment of One Stop Shops (OSS).
- **Coordinated renovation market development:** Establishing a unique centralized platform or database to facilitate communication and collaboration among stakeholders, encouraging the formation of industry alliances or associations to promote information sharing, and providing special support targeting small municipalities and areas with low household density.
- **Ensuring consumer trust:** Providing training and employment of "energy/OSS agents" and financial advisors, allowing OSS staff to manage subsidies and permits themselves, and fostering better and easier communication with homeowners through various channels.
- **Communication and raising awareness:** Deploying ambitious communication campaigns to inform citizens about the existence of OSS, facilitating better communication with homeowners through different sources, and ensuring feedback to share renovation experiences.

Specifically, the recommendations emphasize the importance of multi-level and coordinated actions, increased funding programs for local public administrations, feedback mechanisms for sharing renovation experiences, ambitious communication campaigns, and the establishment of a unique centralized platform or database to connect all stakeholders. Additionally, the document highlights



the need for training and employment of "energy/OSS agents" and the creation of industry alliances or associations to promote information sharing.

These recommendations aim to address the multifaceted challenges and barriers hindering the widespread deployment and effectiveness of OSS across Europe, and to foster collaboration, improve market coordination, enhance financial clarity, develop a skilled workforce, and facilitate decision-making processes within the construction industry.

Overall, the report provides comprehensive insights into the challenges and opportunities for promoting integrated home renovation services in Europe and emphasizes the importance of collaboration between different stakeholders and policymakers to address existing barriers and promote the widespread deployment of OSS for renovation.



## WP6 – Promotion, Dissemination and Communication

The specific objective of WP6 was to realize dissemination, communication, and promotion activities at different levels:

- Pilot level: Marketing elements were implemented to ensure the citizen-attractive roll-out of the Citizen Hub model and communication towards the advisory board members.
- Regional, national, EU level: Support was provided for the exploitation of the Citizen Hub model, including communication towards replication stakeholders groups and identified target key groups (Consumers and Final Users' Associations or Associations of Property Managers, Regional Governments of Housing and/or City councils).
- Project level: Communication of project results and outputs was conducted EU-wide to a broader audience, including different stakeholder groups such as scientific communities.

Furthermore, this WP acted as support for all activities in other WPs related to the engagement of different stakeholder groups. Various dissemination and marketing strategies (including the medium, channels, content) were elaborated for the identified target groups and different levels to support promotion and exploitation at the pilot level, as well as wider exploitation on regional/national/EU levels as part of overall dissemination efforts.

### Summary of the WP6 dissemination and marketing

All reports from Promotion, Dissemination and Communication Workshpackage are available on the StH website: <https://savethehomes.net/knowledge-hub/>.

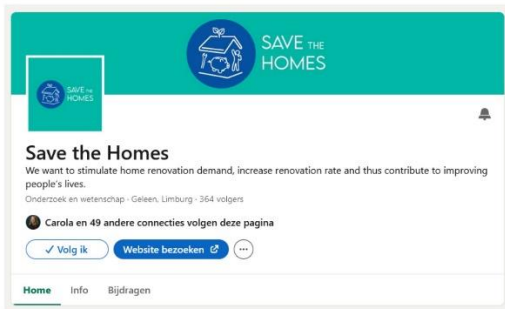
Key outcomes from these documents include the development of promotional materials such as posters, social media posts, and regular half yearly newsletters. The goal was to raise awareness about the impact of renovations on healthy living environments, make renovation information easily accessible, and promote the results and progress of the project. The reports also emphasize the importance of targeting specific audiences, such as home owners, landlords, municipalities, and the scientific community.

Marketing and communication strategies and marketing materials and activities for the pilot sites in Rotterdam and Valencia were prepared under this WP. It covered the support on the customer journey development, marketing activities, and the impact on residents. The marketing materials included financial visuals, a visualization of the customer journey, fact sheets, and presentations. Interviews with sustainability enthusiasts were conducted, and monitoring campaigns communications were prepared. The work also included the strategy elaboration for construction collectives, communication strategies, and the production of communication videos. The step-by-step guidance for residence and clear communication was crucial and the need for validated providers in the renovation process. It also emphasized the significance of testimonials from occupants who have renovated their homes in convincing others to do the same (peer-to-peer communication). The WP6 documents **[D6.2 \(communication and dissemination plan\)](#)**, **[D6.4 \(marketing and promotion plan for the pilots\)](#)**, **[D6.5 \(dissemination campaigns across EU\)](#)** and **[D6.7 \(final report on communication and dissemination activities\)](#)** provide insights into the communication and dissemination efforts at the



project, pilots as EU level as well as the key results and learnings derived from these activities. Overall, the report demonstrates the comprehensive marketing efforts and the positive impact on residents' experiences and engagement in the renovation process.

Additionally, the use of various communication channels, both online and offline, is highlighted to reach the intended audience effectively. The documents also stress the need to collaborate with external partners and organizations to disseminate the project's main messages. Overall, the key outcomes revolve around creating targeted promotional materials, utilizing diverse communication channels, and engaging with relevant stakeholders to maximize the project's impact.



## Conclusions

### Save the Homes OSS implementation guide

The section below outline the necessary steps for implementing a Citizen Hub based on the framework developed in the StH project. The implementation work plan (see D4.3) serves as a comprehensive guide, detailing essential measures and specificities throughout the process. These sections not only highlight the importance of each step in the citizen hub execution process but also provide general guidance on how to carry out these steps effectively.

The implementation work plan describes nine main tasks and their corresponding project tasks. For a more in-depth analysis and understanding of each task, we recommend referring to the following reports of the Save the Home project, where each task is explained in detail.

	Phases of the implementation work plan	Related Save the Homes Report (Deliverables)
a	Market analysis	<u><a href="#">D2.1 - Save the Homes demand and supply mapping</a></u>
b	Business model definition	<u><a href="#">D3.3 - Citizen Hub business model for the two pilots</a></u>
c	Set-up and physical office definition	<u><a href="#">D3.2 - Strategy and structure to implement the Citizen Hub concept for the two pilots</a></u>
d	Citizen Hub's ecosystem - contractor training and verification	<u><a href="#">D2.1 - Save the Homes demand and supply mapping</a></u> <u><a href="#">D2.3 - Citizen hub protocol for supply side community building and network creation</a></u>
e	Services and process flow	<u><a href="#">D3.1 - Home renovation customer journey methodology</a></u> <u><a href="#">D2.5 - Suitable renovation packages and supporting services for two pilots</a></u>
g	IT Tools	<u><a href="#">D3.7 - Definition of the Local Citizen Hub Platform functionalities for the two pilots and its integration within existing platforms</a></u>
g	HR and staffing guide	<u><a href="#">D3.6 - Staff training programme for the two pilots</a></u>
h	Communication, sales and marketing tools	<u><a href="#">D2.2 - Save the Homes guideline for long-term citizen engagement</a></u> <u><a href="#">D4.1 - Documented engagement recruitment campaigns for the two pilots</a></u>
i	KPIs and monitoring system	<u><a href="#">D2.4 - Mapped suitable protocols and methods for quality control of the renovation works and for buildings performance monitoring</a></u> <u><a href="#">D3.8 - Data monitoring plan for the two pilots</a></u> <u><a href="#">D4.2 - Citizen Hub model agreement including quality control system for the business model elements and monitoring protocols for evaluation of partners' activities</a></u>

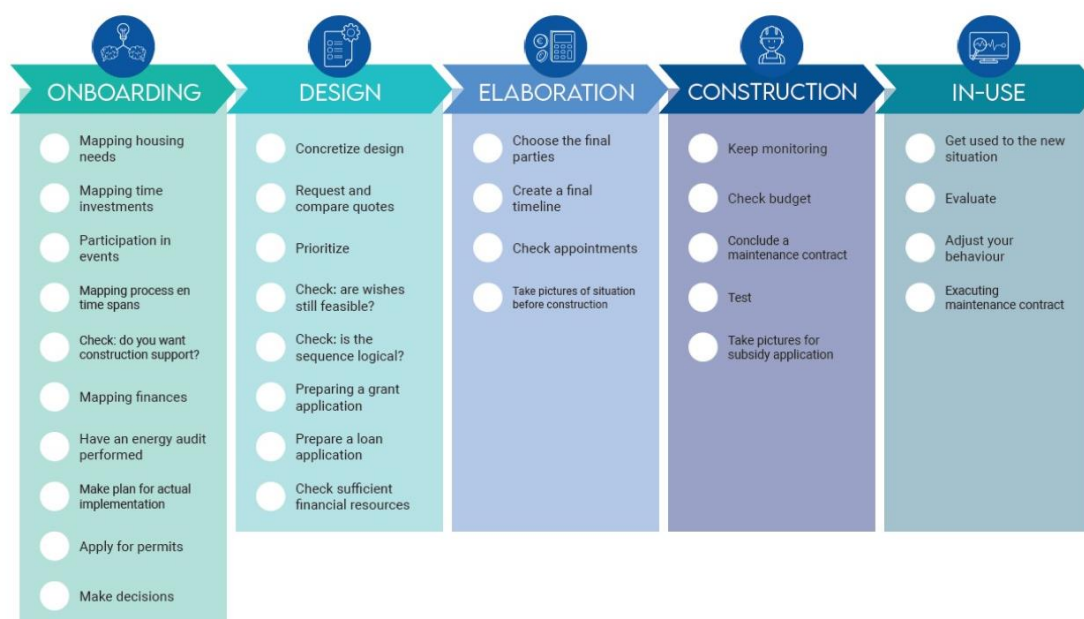




### D4.5 - Action plan, risk assessment and quality assurance of the renovation activities

Visit: [savethehomes.net/knowledge-hub/](https://savethehomes.net/knowledge-hub/) for all the reports!

See below the Save the Homes customer journey checklist.



## Main recommendation for local governments setting up OSS

Local governments seeking to support building renovations can leverage the resources provided by the Save the Homes project, which details how to establish One-Stop-Shops (OSS) and assists in making homes more energy-efficient.

Save the Homes has created an overview of key steps that local governments should consider when exploring the establishment and operation of OSS. The setup of OSS requires:










- Political support at various levels of governance
- A robust understanding of the local building stock
- The engagement of a broad ecosystem of stakeholders
- The establishment of an effective business model, usually involving stable and long-term financial support
- OSS should be integrated into local strategies and plans
- OSS must be adapted to local legal frameworks

The establishment of OSS needs to be guided by a well-defined customer journey, a concrete catalogue of services to be provided, and an overarching communications strategy.

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

## IN NINE MAIN STEPS



 <p><b>1</b> POLITICAL SUPPORT</p>	<p>Consistent and lasting funding is crucial for public citizen hubs, to 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.</p>	
<p>Before establishing an OSS, 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, a clear overview of technical solutions adapted to the local building stock enables homeowners to make informed choices, addressing their needs such as overall energy savings or improved thermal comfort in specific areas of their homes.</p>		 <p><b>2</b> BUILDING STOCK</p>
 <p><b>3</b> STAKEHOLDERS</p>	<p>Key players in the renovation ecosystem should be identified. On the demand side, contact property owners, tenants, and colleagues in other local authority departments to understand the priorities and challenges of different customer groups. This will help tailor support offerings and communication strategies, ensuring the protection of vulnerable groups. 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.</p>	
<p>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 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.</p>		 <p><b>4</b> FINANCIAL SUPPORT</p>
 <p><b>5</b> LOCAL PLANS</p>	<p>The gathered data should be used to create comprehensive cross-sectoral plans. They 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.</p>	
<p>Depending on its functions, a citizen hub can be purely public, fully private, or a public-private partnership. A private model may be impractical in less mature renovation markets. Fully public OSS face some restrictions under EU State Aid rules regarding the services they can offer. To identify the most suitable model for the local context, it's recommended to consult guidance from Save the Homes and other EU-funded OSS projects, and to exchange with existing national or subnational OSS.</p>		 <p><b>6</b> LEGAL</p>
 <p><b>7</b> CUSTOMER JOURNEY</p>	<p>The customer journey describes the experience a customer goes through during a purchasing process. Mapping the customer journey helps you understand how people go through this process, 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.</p>	
<p>The OSS services should be adapted to local needs as well as technical and financial capacities: raising general awareness about the advantages of energy renovations, offering advice on renovation choices (building insulation, renewable energy solutions, energy efficient technologies, behavioural changes) or guiding homeowners on available financing options. The OSS can also provide training for small and medium-sized enterprises to enhance their abilities in delivering high-quality deep renovations.</p>		 <p><b>8</b> DESIGN OF SERVICE OFFERS</p>
 <p><b>9</b> MARKETING COMMUNICATIONS</p>	<p>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.</p>	

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## Partners information

Participant organisation	Short name	Country	Role
<a href="#">Huygen Engineers &amp; Consultants</a> 	HI&A	NL	Coordinator, Dutch Citizen Hub member
<a href="#">Global New Energy Finance S.L.</a> 	GNE	ES	Financing
<a href="#">Bouwhulp Groep</a> 	BHG	NL	Dutch local pilot leader
<a href="#">City of Rotterdam</a> 	RDAM	NL	Dutch Citizen Hub member (front office)
<a href="#">Valencia Institute of Building</a> 	IVE	ES	Valencia local pilot leader
<a href="#">Fundación Valencia Clima i Energia</a> 	VCE	ES	Valencia Citizen Hub member (energy office)
<a href="#">Valencian Regional Council of Property Administrators Associations</a> 	VRCP	ES	Valencia Citizen Hub member (condominium manager)
<a href="#">Sant Cugat Municipality</a> 	Scug	ES	Follower cities
<a href="#">City of Ljubljana</a> 	CoL	SI	
<a href="#">International Union of Property Owners</a> 	UIPI	EU	EU umbrella organizations for replication, exploitation
<a href="#">ICLEI Local Governments for Sustainability</a> 	ICLEI	EU	

