



# Save the Homes

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## 1 Executive Summary

The overall aim of **Sav€ the Homes** is to contribute to an increase of an annual renovation rate of > 5% by offering attractive OSS services to homeowners, managed and implemented or supported by municipalities as being trustworthy entities for citizens. This is achieved by the implementation of OSS Citizen Hub concept, offering renovation offices, both as physical hubs and web-based virtual hubs at local level based on the concept of medium-sized cities and to maximize replicability, at national and EU level.

Sav€ the Homes will:

1. Offer a full customer journey in 5 steps:
2. Create strong networks and trustworthy partnerships with local actors in the whole chain
3. Create locally developed and organized financing and investment pipelines

The integrated home renovation services will be established within already established OSS networks at the city (City of Rotterdam) and regional (Comunitat Valenciana) level in two EU countries, building upon existing energy targets and networks so far well established at the city levels where it brings a new method and mechanism on how to improve the existing interactions between the relevant organizations and stakeholders. It holistically connects renovation advisory, products and services, finance opportunities and legal advice with a building owner at a single point. By involving relevant EU umbrella organizations, the concept will be further promoted in other member states to come to a harmonized method applicable at EU level.

**WP3** consist of the creation of the structure, procedures and network for the Citizen Hub integrated renovation services that are offered at the Citizen Hub facilitators (for the pilots: Municipality of Rotterdam and City of Valencia). The service providers need to be able to connect both supply and demand and to offer the services that cover the whole 'customer journey', from market diagnosis and technical offer (WP2) to also structuring financing options and addressing regulatory aspects (including contractual organization and organization). To make 'integrated home renovation services' real, physical offices will be created or improved with these offers, supported by local platforms.

This report presents the **detailed deployment design of the implementation strategy defined in Task 3.2: strategy and structure to implement the Citizen Hub concepts for the two pilots, in relation to staff training**, in order to ensure the proper service to citizens. Therefore, the task's aim is to define and elaborate the Save the Homes staff training program for the two pilot cities, Valencia (Spain) and Rotterdam (the Netherlands).



## Table of Content

1	Executive Summary.....	- 2 -
2	Introduction .....	- 4 -
3	Citizen hub implementation strategy for the pilots .....	- 5 -
4	The pilot cities ecosystems .....	- 7 -
4.1	Comunitat Valenciana – ES .....	- 7 -
4.1.1	Module 1: Context and framework .....	- 7 -
4.1.2	Module 2: Customer journey stages and functionalities – general .....	- 9 -
4.1.3	Module 3: Tools and services – Technical .....	- 11 -
4.1.4	Module 4: Soft skills .....	- 14 -
4.1.5	Training program.....	- 15 -
4.2	Rotterdam – NL .....	- 19 -
4.2.1	Module 1: Context and framework .....	- 19 -
4.2.2	Module 2: Customer journey stages and functionalities – general .....	- 25 -
4.2.3	Module 3: Tools and services – Technical .....	- 26 -
4.2.4	Module 4: Soft skills .....	- 35 -
4.2.5	Training program.....	- 36 -
5	Follower cities.....	- 37 -
6	Conclusions.....	- 38 -
	Annex 1 – StH D7: Staff training design methodology.....	- 39 -



## 2 Introduction

T3.5 consists of designing and implementing the training programme needed to realize the designed Citizen Hub model within the two pilot cities. Specific action plans for each pilot on training and awareness campaign elaboration will be defined (in connection to T2.2, T3.2). The action plan will define the planned progress, responsibilities, and the necessary resources (financial and human). Training action plan will define the required training of the current staff of Citizen Hub facilitator, staff responsible for the services offered at the physical offices as also offers available on the platforms.

In this context, starting from the implementation strategy designed in T3.2 and business model defined in T3.3, this work is based on the specific needs and expectations of the two pilots' experiences, and aims to collect a series of requirements or steps to help follower cities or other interested regions to implement their own training program.

For doing so, this report is structured in three sections: background or implementation strategies requisites; the specific training programs; and the followers cities assessment. On each of the specific training programs, the different objectives, target groups, requirements, modalities, evaluation and certification will be defined, together with the courses, resources and skills to be gained in order to offer an excellent customer service. The follower cities assessment is explained and will be performed in WP5 activities, so Annex 1 Manual should be seen as a draft whose final version will be part of the Replication Guidelines in WP5.



### 3 Citizen hub implementation strategy for the pilots

Training program for each Citizen Hub must cover the whole services provided by it, including the context, regulations and tools available to solve citizens problems, and the skills to help them understand and implement the potential solutions. Therefore, it starts with the analysis of the implementation strategy defined in T3.2.

#### Functionalities provided by the two pilots and needs for staff training

Staff training is designed according to their own customer journey as defined in D3.2. This includes services in the whole 5 stops, and most of their sub-steps, according to the objectives to be achieved on each of them:

- Stop 0 – onboarding: the objectives of this stage are to establish contact with the citizen with the aim to create an emotional response and then provide more information to increase interest. When citizens take the step of getting involved and do their own research, they go into stop 1. **Key activity is interaction, and soft skills are therefore the core of this stop for staff training**
- Stop 1 – evaluation: the objectives of this stage are to provide information & tools to citizens so they can gain more insights and orientate themselves for simplified version of a home assessment, renovation packages tailored to building type and persona needs and drivers, financial online tools (provided by different banks), and advise on suitable and available financial schemes such as loan options, subsidies, and grants, or simple and clear overview available (on the website and/or in a physical brochure). Then to get a personal appointment and personalized advice on renovation package to improve the performance of the home in a confidential manner. **Key activity is assisting on the resources and tools available and their results meaning, and therefore some technical knowledge is needed.**
- Stop 2 – elaboration: the objectives of this stage are to organize the financing, renovation packages, decision making and preparing for the construction of the renovation works, where real complexity of renovation arises, ensure sufficient support to citizens; guide through process in a holistic and understandable way; assist in choosing the right renovation package; provide contact information of trusted installers and contractors, or support in obtaining the financing. **One of the key activities is decision making support, and therefore need to be perfectly aware of the local context and framework for renovation process.**
- Stop 3 – realization: the objectives of this stage are to realize renovation according to the plan agreed, assess quality during and after the renovation works (verified parties), provide tools (personal project dashboard) where both the homeowner and the professional can track the progress, and, when the renovation works are finished, provide a final report on the taken measures, quality evaluation and benefits. **One of the key activities is to get the user understand where they are and what they need or should expect, therefore accompanying and clearly know about the renovation journey.**
- Stop 4 – validation: the objectives of this stage are to monitor the performance of the dwellings by showing the original dwelling's performance compared to the performance of the improved dwelling, to train about the home improvement and the (optional) installing of smart meters or behavioural changes or offer the opportunity to share their opinion on the renovation works itself and the fully guided process of the hub. **Key activity is assisting on the resources and tools available and their results meaning, and therefore some technical knowledge is needed.**

This analysis is drafted in Figure 1, but obviously, these skills distribution are not 'watertight compartments', and they all permeate the services provided on each stop.

Staff	<b>Stop 0 - ON-BOARDING</b>				
	<b>AWARENESS</b>		<b>INTERACTION</b>		
			scheduling, <b>communication</b> , prioritizing, channeling...		
	<b>Stop 1 - EVALUATION</b>				
	<b>AUTOEVALUATION</b>		<b>ASSISTED EVALUATION</b>		
			understanding <b>tools</b> available, in order to solve doubts or redirect to corresponding professional		
	<b>Stop 2 - DESIGN &amp; FORMALIZATION</b>				
	<b>DESIGN</b>		<b>SELECTION</b>	<b>FORMALIZATION</b>	
	knowledge of regulations and requirements for proper <b>guidance</b> and solve doubts			<b>validation</b> of the documents before starting works	
	<b>Stop 3 - REALIZATION</b>				
	<b>TRAINING</b>		<b>ASSESSMENT</b>	<b>MEDIATION</b>	<b>QUALITY ASSURANCE</b>
	<b>uptodateness</b>		follow-up, <b>registering</b> of activities and documents	<b>deadlines</b> , doubts, direct submissions, communication, meetings...	
	<b>Stop 4 - VALIDATION</b>				
	<b>FEEDBACK</b>		<b>COMPARISON</b>	<b>MONITORING</b>	<b>CERTIFICATION</b>
			understanding <b>tools</b> available, in order to solve doubts or redirect to corresponding professional	understanding <b>tools</b> available, in order to solve doubts or redirect to corresponding professional	understanding <b>tools</b> available, in order to solve doubts or redirect to corresponding professional

Figure 1.- staff customer journey, services and training needs

### Definition of the training program

According to previous analysis, skills’ need are distributed in several learning modules, which can be addressed to the whole Citizen Hub as a service provider team or to specific profiles within the team:

- **Module 1: Context and framework:** Background knowledge of the local context, legislation applying, subsidies and grants availability, competences, etc...
- **Module 2: Customer journey stages and functionalities – general:** Theoretical knowledge of the whole services’ menu, touchpoints, dependencies, etc...
- **Module 3: Tools and services – Technical:** specific materials for supporting tools used within the customer journey stops
- **Module 4: Soft skills:** Communication skills and basic customer service skills

Contents of each Module is defined in terms of knowledge to be gained, and resources, materials or tools facilitating that knowledge acquisition.

Once the modules are defined, a Training Program is designed according to terms below:

- OBJECTIVES & TARGET GROUPS
- REQUIREMENTS
- MODALITIES & PLANNING
- EVALUATION & CERTIFICATES
- NECESSARY RESOURCES (inc. FINANCIAL & HUMAN)

## 4 The pilot cities ecosystems

According to Objective 1 (to make home renovation easier, faster and more affordable for homeowners by designing an economically sustainable citizen-oriented OSS model, 'Citizen Hub', to be deployed by municipalities), the 'Citizen Hub' is an OSS model endorsed by a municipality, a trustworthy entity ensuring that the process is independent, transparent and of high quality for their citizens. It is specifically focused on enhancing the homeowners' experience throughout the home renovation journey, and therefore, the Citizen Hub modules (technical renovation kits, financing offers, audits, etc.) are to be developed by relevant local experts and combined into a holistic offer endorsed by municipalities.

Sav€ the Homes will create innovative 'integrated home renovation services' within already established frameworks for OSS networks at the City of Rotterdam, the Netherlands, and Municipality of Valencia, Spain. The project builds upon the existing climate targets set by the two cities (according to the initiative of Covenant of Mayors (CoM) for Climate & Energy, 15% of the mitigation actions and 9% of the adaptation actions proposed by cities in their Sustainable Energy and Climate Action Plans address residential buildings<sup>1</sup>).

### 4.1 Comunitat Valenciana – ES

The Comunitat Valenciana (Valencia Region) is a region of Spain. With more than 5 million inhabitants, it is the fourth most populous region in the country, and its capital city, Valencia, is the third largest city and metropolitan area in Spain. It is located along the Mediterranean coast on the east side of the Iberian Peninsula.

The geographical scope for this pilot experience will be local at first instance, and then regional, as a replication phase). Therefore, cities involved are the City of Valencia (815,440 inhabitants) as front-runner and partner of the project, and the follower cities in the region: City of Elche (230,000 inhabitants), City of Gandía (74,000), Municipality of Onda (12,000 inhabitants) City of Alcoi (59,000 inhabitants), and Xarxa Xaloc network cities, supported by the Regional Government (all of them signed project Letters of Support).

Nevertheless, many regulations and schemes are national or even EU regulated, therefore this higher level scope is not to be disregarded.

#### 4.1.1 Module 1: Context and framework

This module aims at providing a general background knowledge of the local context, including legislation applying, subsidies and grants availability, competences, etc. For the Valencia case, a look on the current regulation related to energy renovation will be in place:

- **Last 5 October, Royal Decree 853/2021 was approved in Spain**, regulating the subsidy programmes for residential retrofitting and social housing under the Recovery, Transformation and Resilience Plan. The RD envisages six subsidy programmes aimed at **promoting retrofitting** and the construction of social rental housing, with the overall objective of reaching, by the second quarter of 2026, the cumulative figure of 510,000 housing renovation actions, multiplying the current rate of retrofitting in Spain tenfold, and so that by 2050, 7 million housing retrofitting

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<sup>1</sup> Covenant of Mayors figures: <https://www.covenantofmayors.eu/about/covenant-initiative/covenant-in-figures.html>



actions will have been carried. Attention to requisites and applicability to local context will be paid.

- One of the six programmes aims to finance "**one-stop shop**" **renovation offices** so that the Autonomous Communities and Local Bodies can offer comprehensive information, management, and support services for retrofitting. The content of this program will be carefully addressed, to facilitate a service according to it.
- Other important aspect is the **retrofitting manager** definition as a particularly important actor. Usually, homeowners' associations rely on the property administrator for the procedures, but now the aim is to promote this figure as a professional who can carry out different tasks, such as drafting technical documentation and applying for grants to obtain financing. The retrofitting manager could even replace the role of one-stop shop renovation offices in the case of the regions unable to implement them. In any case, the citizen Hub service should align with this figure and even act as a trainer for or act as this retrofitting manager profile. Therefore, an overview of the tasks defined under this profile will be carried out in this module.

#### A. Training Resources:

IVE training program:

<https://www.five.es/categoria-producto/formacion/>

- **REGULATION AND MANAGEMENT OF URBAN REGENERATION**

<https://www.five.es/project/normativa-y-gestion-de-la-regeneracion-urbana/>

50 hours online

In the first place, an overview of the legal regime of urban regeneration and the planning of actions in the different management areas at three scales is provided: state legislation, regional legislation and local level. Second, to obtain a general approach to the management of the project, emphasizing its practical dimension of financing and planning. Additionally, an approach is made to the international scale in urban regeneration.

- **IMPROVING THE ENERGY EFFICIENCY OF EXISTING BUILDINGS**

<https://www.five.es/project/mejora-energetica-de-edificios/>

40 hours online

The different applicable alternatives for the improvement of energy efficiency in collective housing buildings are exposed, studying their possible advantages and disadvantages.

The study and planning of possible measures to improve the energy efficiency of a residential building entails, on the one hand, prior knowledge of the possible improvements to be undertaken and, on the other hand, knowledge of the objectives pursued by the owner of the building on which improvements are made. It focuses on providing students with technical knowledge about the possible measures to undertake in relation to the change in behavior of the occupants of the dwellings, the improvement of the envelope, the optimization of the facilities and the incorporation of renewable energies.

The ultimate goal is for students to develop the skills to propose measures to improve energy efficiency in collective housing buildings based on the specific characteristics of each case, prioritizing the aspects that are considered relevant in each case (economic aspects, comfort improvement...etc.)

- **REAL CASES OF ENERGY REHABILITATION OF RESIDENTIAL BUILDINGS**

<https://www.five.es/project/casos-reales-de-rehabilitacion-energetica-de-edificios-residenciales/>

10 hours online

Examples of energy rehabilitation processes in different areas are exposed through the exposure of the professionals involved. The ultimate goal is for students to acquire a global vision of the energy rehabilitation process.



### Regional government resources:

<https://habitatge.gva.es/es/web/arquitectura>

- newsletters and brochures with basic/detailed information: **Subsidies** for the improvement of the conditions of the interior of the houses, within the framework of the Plan of interior reform of housing, Renhata plan  
<https://habitatge.gva.es/documents/20051105/175293372/Bolet%C3%ADn+Renhata+cas>
- webinars and workshops: **European funds** for housing rehabilitation  
[https://habitatge.gva.es/es/web/arquitectura/ajudes-convocatories-2022/-/asset\\_publisher/tapm5zsVBNBW/content/fondos-europeos-para-la-rehabilitacion-de-viviendas](https://habitatge.gva.es/es/web/arquitectura/ajudes-convocatories-2022/-/asset_publisher/tapm5zsVBNBW/content/fondos-europeos-para-la-rehabilitacion-de-viviendas)

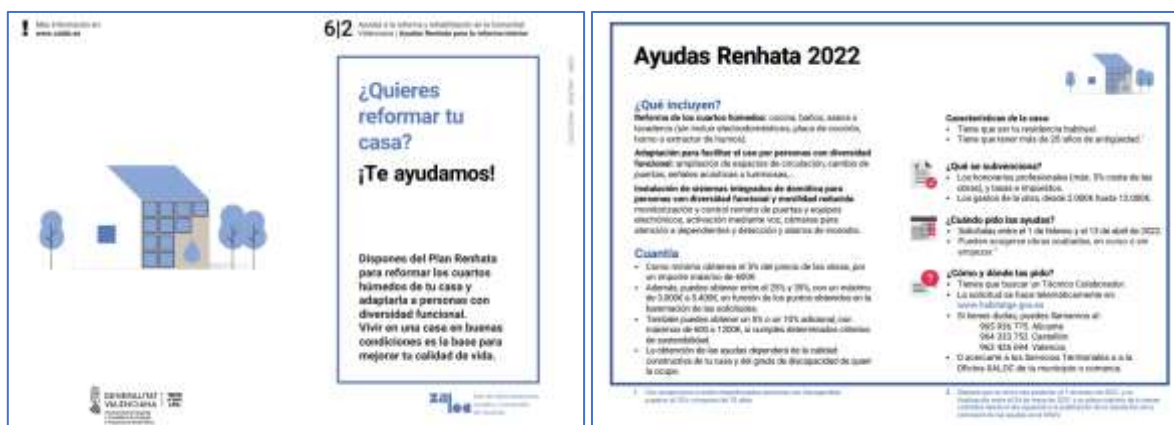


Figure 2.- Brochure for Renhata subsidies plan

- **HABITABILITY, DESIGN AND QUALITY OF HOUSING**  
<https://habitatge.gva.es/es/web/arquitectura/habitabilidad-qualitat-i-disseny-dels-habitatges>

## 4.1.2 Module 2: Customer journey stages and functionalities – general

This module aims at providing a theoretical knowledge of the whole services' menu, touchpoints, dependencies, etc... based on the customer journey stages. For this end, we will focus on the retrofitting manager definition.

In the context of RD 853/2021, and according to other regulation, a retrofitting manager is considered to be *“a natural or legal person, or public or private entity able to carry out actions to promote, monitor, manage and receive public aid, through mechanisms for the assignment of collection rights or similar, access to financing, preparation of documentation or technical projects or other actions necessary for the development of retrofitting or improvement actions that can be financed through any of the programmes included in the RD”*.

This definition implies **support from the retrofitting manager to homeowners at each and every stage defined in the customer journey**.

Since the retrofitting manager will need to have deep theoretical knowledge of the whole services offered throughout the entire renovation process, the training will be aligned with the stages of the customer journey is more than justified.

According to Article 8. Retrofitting agents and managers of the RD 853/2021, explained above, the Autonomous Communities may determine the specific functions of the retrofitting agents and managers. In the Valencian Community, the creation of a specific training programme for retrofitting managers is being developed.

Finally, this module has to take into account the specific services to be provided on the Citizen Hub regardless the specific stop (and described in Task 3.6, Deliverable 3.7), in order to choose the supporting tools and services that will compose the next module. In the Valencia case, workflow will look like figure below:

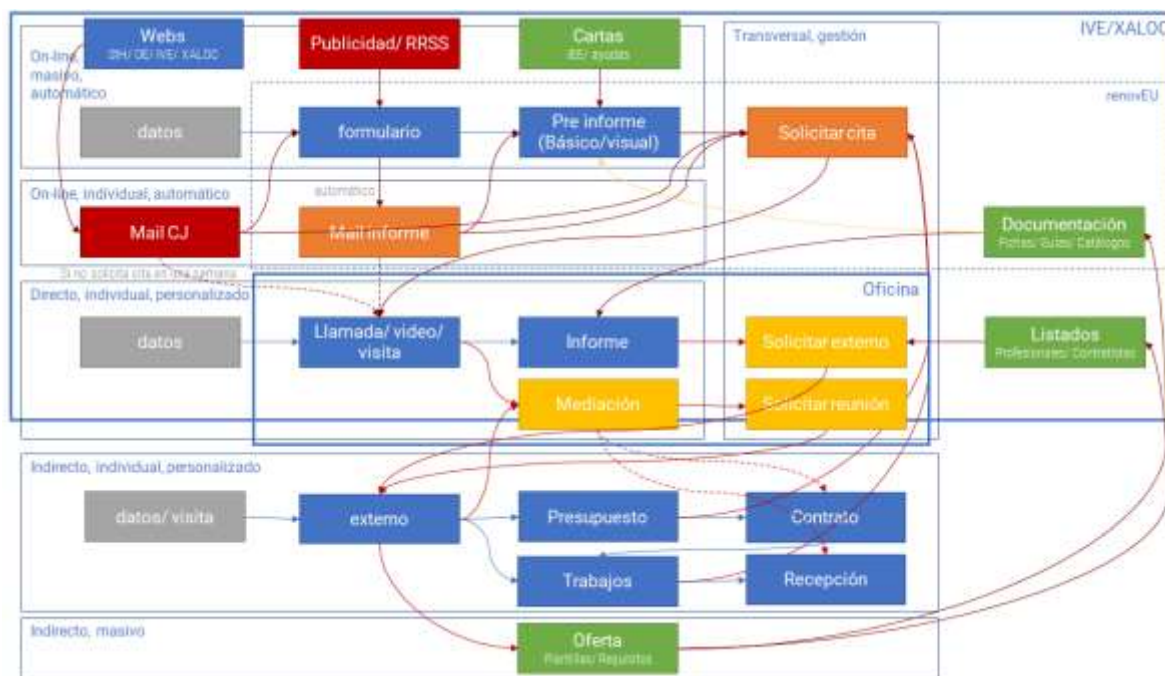


Figure 3.- spanish pilot theoretical functional workflow and needed tools

These will be adapted as a workshop covering:

- **Aids for the rehabilitation of buildings and homes** (Next Generation, personal income tax deductions, IBI and ICIO deductions...)
- **Ad-hoc training course on the tools and protocols of the service offered**

#### A. Training Resources:

IVE training program:

<https://www.five.es/categoria-producto/formacion/>

- With the support of IVE, the Valencian regional government will offer a **basic course on energy retrofitting in the framework of the Next Generation funds, which will be discussed with Citizen Hub staff**. Below is a first draft of the contents related to the general customer journey:
  - Technical tools available for the design and execution of retrofitting.
  - Economic analysis of retrofitting actions: financing and taxation.
  - Retrofitting manager. Functions and experiences.
- **BUILDING REHABILITATION MANAGEMENT**  
<https://www.five.es/project/gestion-de-la-rehabilitacion-de-los-edificios/>  
 30 hours online

This subject deals with the necessary techniques to carry out the management and control of the different stages of a building rehabilitation action. The content of the course covers the entire rehabilitation process, from the duty of property conservation, the economic estimation of this type of project, the search for financing mechanisms in order to carry out a feasibility analysis and



economic-financial profitability. of these actions, and the completion and maintenance of the works.

Regional government resources:

Future web <https://xarxaloc.es/>

- **Service manual for XALOC network offices**

Has the purpose of detailing the activities to be carried out by the local and regional administrations adhered to the RED XALOC initiative, which come contained in the collaboration agreement established between these administrations and the Second Vice Presidency and Ministry of Housing and Bioclimatic architecture.

Complementary tools derived from the Manual:

- Operational sheets of the actions
- digital material
- Graphic and dissemination material
- Planning of dissemination campaigns
- Training plan for municipal technicians
- Data collection sheets

### 4.1.3 Module 3: Tools and services – Technical

One of the objectives of the project is to centralise the large amount of information and tools available to support dwelling retrofitting. For this reason, the development of new training material will only be limited to making up for possible shortcomings identified after in-depth analysis of the material found.

In the Valencia region, in addition to materials adapted to the regional context in terms of legislative framework, procedures, financial support and funding options, already available specific materials will also be used for:

- **STAGE 1: Building assessment.** The IEE (Building Assessment Report, *Informe de Evaluación del Edificio*) will be promoted, which includes the result of the assessment of a building, after inspection, in terms of its state of conservation, accessibility and energy efficiency. It is an essential document for owners to know the state of their buildings to plan and undertake renovation and maintenance works. It is also part of the duty of conservation.

The offices will communicate and disseminate the obligation to carry out this assessment in buildings older than 50 years, as well as the economic aid available for it. Two types of material will be available:

- Outreach material: basic information bulletins and detailed information brochures.
- Technical material:
  - ⇒ [On-line tool for estimating the cost of drafting the IEE.](#)
  - ⇒ [On-line tool for developing the IEE.](#)
  - ⇒ [On-line tool for drawing up the Programme of Maintenance Operations in Existing Buildings \(POMEES, Programa de Operaciones de Mantenimiento en Edificios Existentes\).](#)

- **STAGE 2: Design of solutions and study of technical feasibility** prior to decision making. For all three modalities, in general, use will be made of existing material, the contents of which will be adapted to the format and target groups of the training sessions. Both the sessions and the material will follow the same structure as the customer journey, making it clear what material will be used and how at each of the stops.



The existing material to be used includes, among other contents:

- Catalogue of constructive solutions for renovation.
- On-line tools to calculate estimated budgets.
- Guide to the climatic conditions of the Valencia region.
- Guide to the incorporation of renewable energies in building.
- Guide to passive design strategies.
- Documents in support of the regulations.
  - ⇒ All of them can be downloaded/used free of charge (<https://www.five.es/categoria-producto/publicaciones/>). Among the technical training, specific information on renovation packages tailored to the characteristics of the specific building stock will be included.
  - ⇒ A first approach for solution applicable to an specific building can be found here (<http://renoveu.five.es>), where the overview of the calculations assumptions is also included. The specific calculations will be explained to trainees and extra materials will be handled in order to make for them easier the explanation to customers and adapt the complexity level to their customers' profiles.
  - ⇒ Other tips and advises can be consulted at [TIPS TO REHABILITATE YOUR HOME](#)
- **STAGE 3: Follow-up of the renovation works:** in the context of the **basic course on energy retrofitting in the framework of the Next Generation funds**, the first draft of the contents includes a second block for design and implementation of energy retrofitting, comprising the energy assessment of buildings (explained for STAGE 1), and the 'Documentation: reports and retrofitting project', with Practical cases, to be known by the citizen Hub staff in order to assess and mediate in any doubt the citizen may have related to the works performed in their homes.
- **STAGE 4: evaluating performed works:** tools here are parallel to those in STAGE1, but a module about certification and monitoring available will be added.

These materials are also intended to be useful for the users themselves (**inclusion in virtual offices**), so emphasis will be placed on making them attractive and easy to read.

In general, all the material described above will be minimally adapted for StH use.

#### A. Training Resources:

IVE training program:

<https://www.five.es/categoria-producto/formacion/>

- **CERMA 5**

<https://www.five.es/project/cerma-5/>

8 hours online

CERMA is an official and free computer program, which has the status of a recognized document, for the Certification of Energy Efficiency of Buildings for private residential use in Spain. This course presents the CERMA program in its latest version (5). The operation of each of the tabs is exposed in a theoretical way, going into the detail of the definition possibilities offered by the program, emphasizing the additional functionalities with respect to the previous version (4.2.5). A series of practical examples of the use of the program are also offered.

- **UPDATE (DECEMBER 2019) OF THE TECHNICAL BUILDING CODE**

<https://www.five.es/project/actualizacion-diciembre-2019-del-codigo-tecnico-de-la-edificacion/>

6.5 hours

Presentation and explanation of the novelties of the Technical Building Code after its modification through Royal Decree 732/2019, incorporating a new Basic Energy Saving Document



- **The Evaluation Report of the building (IEEV.CV)**  
<https://www.five.es/tienda-ive/cursoel-informe-de-evaluacion-del-edificio/>  
 Characterization of injuries in buildings and writing of the IEEV.CV report”  
 Students are provided with sufficient knowledge to prepare this report through the IEEV.CV procedure, specially designed for residential construction, since it is the typology on which the IEE is mostly requested. Likewise, basic knowledge is offered in the field of pathology in construction and accessibility evaluation, addressing the most common aspects in inspection of residential buildings for the drafting of the IEE. This training has been designed under the framework of Component 2 – Housing Rehabilitation and Urban Regeneration Plan of the Recovery, Transformation and Resilience Plan, to facilitate the proper management of European Next Generation funds.
- **Micro-trainings**  
 Short videos (10 -15 minutes) in friendly language about energy Efficiency on residential buildings and renovation strategies, addressed to citizens or non-technical customer service:
  - Introduction to EE-buildings
  - How to improve the EE
  - User behaviour
  - Insulation
  - Windows
  - Thermal installations
  - Existing thermal installations
  - Lightning
  - Home appliances
  - Renewable energies
- **Pills**  
<https://www.five.es/formacion/oferta-formativa/pildoras/>  
 Addressed to professionals, IVE makes available free of charge, brief excerpts of online training on highly topical topics and suggest training activities around them in different formats: courses, intensifications or master’s degrees:
  - Guidelines to follow for the application of measures to improve energy efficiency
  - What does the energy efficiency certification depend on?
  - Do you know the procedure to follow to carry out an energy audit?
  - Strategies to apply the principles of the circular economy to the design and rehabilitation of our buildings
  - Characterization of the stock of residential buildings in relation to their energy efficiency
  - EECN in existing building

Regional government resources:

Future web <https://xarxaloc.es/>

- **FINANCIAL SUPPORT FOR HOUSING**  
 Customized training day for municipal technicians on the actions that are already defined in the agreement
  - Direct economic aid for citizens: the purpose is to make them aware of all the aid available from the different administrations so that they can inform them directly.
  - Economic aid for municipalities: so that they know the aid that is convened at the municipality and how to request them.
- **SUPPORT FOR THE IMPLEMENTATION OF THE BUILDING ASSESSMENT REPORT**  
 The IEE in the Valencian Community. Regulatory framework, registration and tools for its preparation. Possible municipal initiatives to promote the IEE:

- Aid complementary to that of GVA for the IEE in certain vulnerable neighborhoods
- Generate a census of vulnerable homes with the information from the IEEV.CV
- Ordinance model and experiences of some Municipalities
- **Worktables with municipal technicians**  
Meetings to share information of interest to municipal technicians on initiatives and experiences carried out in some municipalities related to housing, which serve as experience for the rest of the participants For example:
  - Streamlining and simplification of procedures
  - Reduction of municipal taxes and fees
  - Implementation of the IEE CV ordinances
  - Municipal aid programs

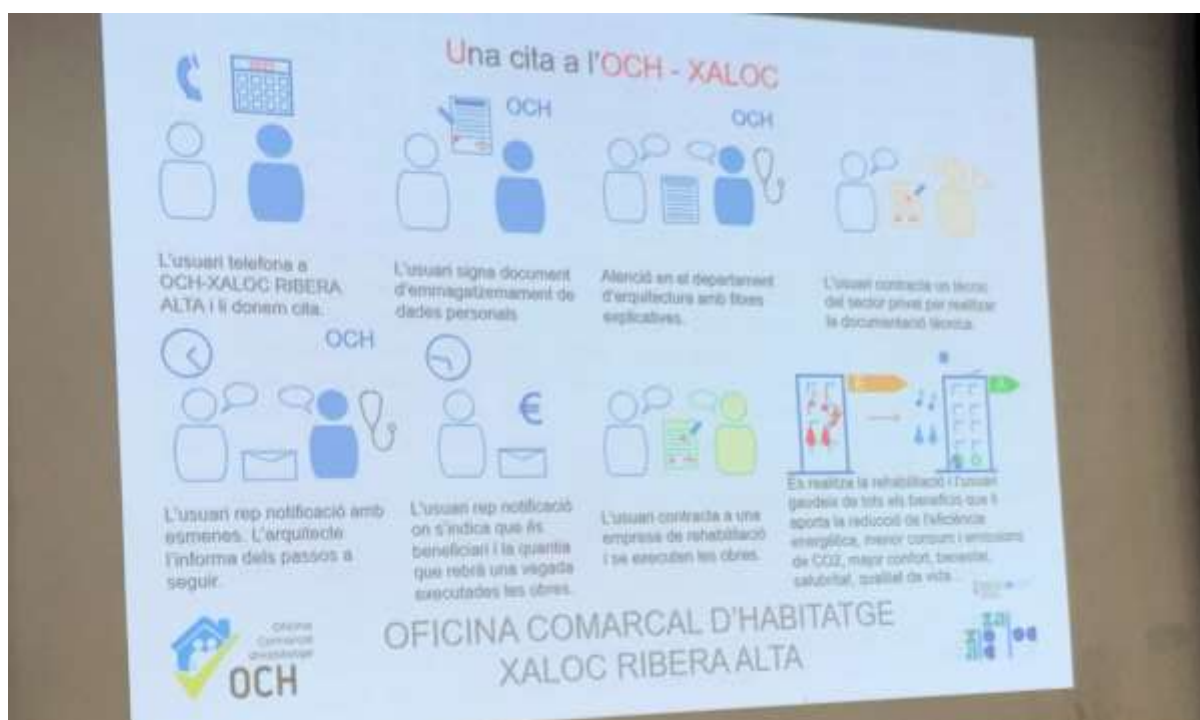


Figure 4.- Actual functional workflow and tools by OCH La Ribera (Xaloc network pilot office)

#### Energy Office of Valencia resources:

Intended to users, it is also interesting for new offices staff to learn the basics of energy renovation in these half-day workshops:

- **Energy rehabilitation**
- **Connect to the sun**

#### 4.1.4 Module 4: Soft skills

Attention will also be paid to the development of soft skills for staff working in the Valencia Citizen Hubs. In this regard, emphasis will be placed on **communication skills and basic customer service skills**. This is mainly based on the assumption that the retrofitting managers and staff involved in the different phases of the customer journey will basically be providing a public service with a wide variety of people expected to use it.



#### A. Training Resources:

This will be studied during the implantation phase of each Citizen Hub and contracted to a local specialized agency. The topics to be discussed would be:

- **Training in skills for direct customer service**
- **Training in skills to give workshops and make presentations in public**

### 4.1.5 Training program

The action plan will define the planned progress, responsibilities, and the necessary resources (financial and human). Training action plan will define the required training of the current staff of Citizen Hub facilitator, staff responsible for the services offered at the physical offices as also offers available on the platform.

#### Objectives & Target

The objective is that people operating the Citizen hub and auxiliary services delivers a complete and high-quality service, being able to accompany the customer from the beginning to the end of their whole renovation journey, by themselves, or assisted by the proper interlocutor on each stage.

The target group is therefore mainly the Citizen hub staff (also property administrators and retrofitting managers?) but also the municipality servants in charge of housing politics or responsibilities or staff in partner services related to the Citizen Hub.

#### Requirements

A background on renovation and housing, for both legal and technical issues. These requirements can belong to one person or be distributed into the Citizen Hub staff team. In this case, completion of courses can also be distributed according to each person speciality.

At the moment of contracting or assigning Citizen Hub competencies for the services providing, these requirements are taken into account. For example, Xaloc network framework requires for architectural, legal and administrative backgrounds for contracted profiles.

#### Modalities & Planning

Three training modalities are envisaged for the staff involved in the Citizen Hubs. The planned teaching formats are:

- A) Tailor-made training days.** Through this modality, technicians will be trained in specific contents adapted to their needs to fill the current gaps identified. These training sessions will be organized **around thematic modules** (such as a module on financing, including updated information on subsidies). The training days will be offered in both **face-to-face and on-line formats**.
- B) Working groups.** With the main goal of boosting retrofitting through the contagion effect and based on the knowledge/experience of other stakeholders involved in the different stages of the retrofitting process, **face-to-face meetings** for sharing information will be organized. These workshops will be organized **around the specific stages of the customer journey**.
- C) Training courses.** These courses will be in **on-line format** and will **focus on technical content**. The contents will cover the initial design phases through to the completion of the works and subsequent use and maintenance.

An initial draft of the main contents, modalities and planning is depicted below:

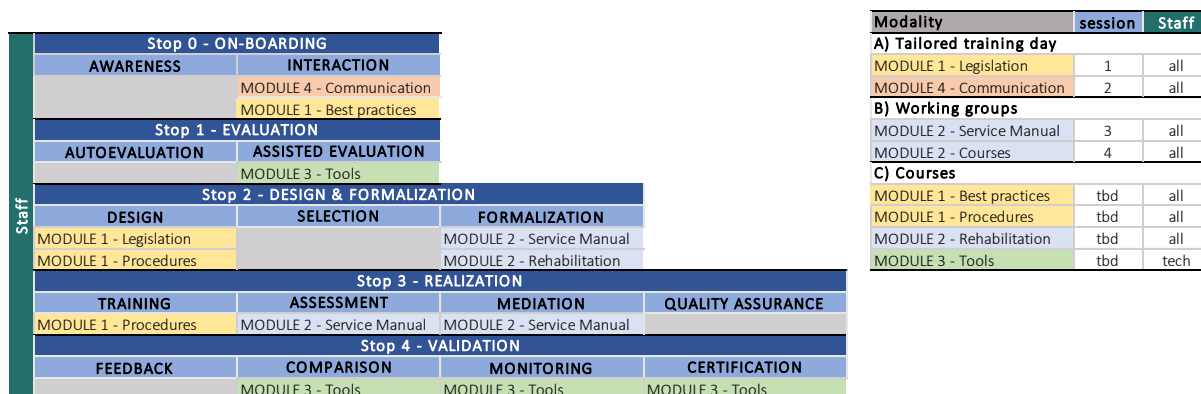


Figure 5.- Modalities and planning

Therefore, the completion of this program will be scheduled in 2 to 4 presential sessions and an on-line training program, where:

- Training days for framework and soft skills (can be unified in one day, double session)
- Working groups for discussing on the customer journey and tools to be used (also can be unified in one day, double session)
  - Nevertheless, it is recommended to not program too much content for a day
- Finally, it is recommended to book a recurrent training day, out of public attention schedule, for the on-line training on the use of the selected tools and procedures

**Evaluation & Certificates**

For the presential modules, the trainer will evaluate presence, participation and profit based on observation. Used material (guidelines and scripts) will be handled to trainees for consultation during their service. Certificates will be issued for the Citizen Hub as a team or office, not personally.

For on-line modules (specific tools use), a final on-line evaluation has to be performed by the trainee, which can be passed or failed, in a personal basis. Nevertheless, the Citizen Hub as a team or office needs to have always present passed staff for all the courses.



Modality	Main Stages	Profiles	Requirements	Evaluation	Certificate
<b>A) Tailored training half day</b>					
MODULE 1 - Legislation	Design	all	>=1 legal background related to housing and administrative procedures	Observation	Team
<b>Housing renovation: regulation and management context and opportunities</b>					
An overview of the legal regime of urban regeneration and the planning of actions in the different management areas at three scales is provided: state legislation, regional legislation and local level. Customized training day for municipal technicians on Royal Decree 853/2021, Direct economic aid for citizens: the purpose is to make them aware of all the aid available from the different administrations so that they can inform them directly; and Economic aid for municipalities: so that they know the aid that is convened at the municipality and how to request them.					
MODULE 4 - Communication	Interaction	all	-	Observation	Team
<b>Soft skills</b>					
<b>B) Working groups - half day</b>					
MODULE 2 - Service Manual	Formalization; Mediation; Assessment	all	>=1 technical background related to building renovation	Observation	Team
<b>Service manual for XALOC network offices</b>					
Has the purpose of detailing the activities to be carried out by the local and regional administrations adhered to the RED XALOC initiative, which come contained in the collaboration agreement established between these administrations and the Second Vice Presidency and Ministry of Housing and Bioclimatic architecture. Complementary tools derived from the Manual: Operational sheets of the actions; digital material; Graphic and dissemination material; Planning of dissemination campaigns; Training plan for municipal technicians; Data collection sheets					
These are meetings to share information of interest to municipal technicians on initiatives and experiences carried out in some municipalities related to housing, which serve as experience for the rest of the participants For example: Streamlining and simplification of procedures; Reduction of municipal taxes and fees; Implementation of the IEE CV ordinances; Municipal aid programs					
MODULE 2 - Courses	Evaluation; Validation	all	-	-	-
<b>Energy retrofitting in the framework of the Next Generation funds</b>					
To be discussed with Citizen Hub staff, related to: Technical tools available for the design and execution of retrofitting; Economic analysis of retrofitting actions: financing and taxation; Retrofitting manager, functions and experiences.					
Worktable will follow to design the best fitting courses for the specific office team, covering: Aids for the rehabilitation of buildings and homes (Next Generation, personal income tax deductions, IBI and ICIO deductions...), Ad-hoc training course on the tools and protocols of the service offered					
<b>C) Courses</b>					
MODULE 1 - Best practices	Interaction	all	-	-	-
<b>REAL CASES OF ENERGY REHABILITATION OF RESIDENTIAL BUILDINGS</b>					
10 hours online					
Examples of energy rehabilitation processes in different areas are exposed through the exposure of the professionals involved. The ultimate goal is for students to acquire a global vision of the energy rehabilitation process.					
MODULE 1 - Procedures	Training	all	>=1 legal background related to housing and administrative procedures	Test	Individual
<b>REGULATION AND MANAGEMENT OF URBAN REGENERATION</b>					
50 hours online					
In the first place, an overview of the legal regime of urban regeneration and the planning of actions in the different management areas at three scales is provided: state legislation, regional legislation and local level. Second, to obtain a general approach to the management of the project, emphasizing its practical dimension of financing and planning. Additionally, an approach is made to the international scale in urban regeneration.					
MODULE 2 - Rehabilitation Manager	Formalization	all	>=1 technical background related to building renovation	Test	Individual
<b>BUILDING REHABILITATION MANAGEMENT</b>					
30 hours online					
This subject deals with the necessary techniques to carry out the management and control of the different stages of a building rehabilitation action. The content of the course covers the entire rehabilitation process, from the duty of property conservation, the economic estimation of this type of project, the search for financing mechanisms in order to carry out a feasibility analysis and economic-financial profitability. of these actions, and the completion and maintenance of the works.					
MODULE 3 - Tools	Evaluation	customer service	-	Test	Individual
<b>Micro-trainings</b>					
Short videos (10 -15 minutes) in friendly language about energy Efficiency on residential buildings and renovation strategies, addressed to citizens or non-technical customer service: Introduction to EE-buildings; How to improve the EE; User behaviour; Insulation; Windows; Thermal installations; Existing thermal installations; Lighting; Home appliances; Renewable energies					
<b>Energy rehabilitation &amp; Connect to the sun</b>					
Intended to users, it is also interesting for new offices staff to learn the basics of energy renovation in these 3-4 hours workshops.					
MODULE 3 - Tools	Design	technician	technical background related to building renovation	Test	Individual
<b>CERMA 5</b>					
8 hours online					
CERMA is an official and free computer program, which has the status of a recognized document, for the Certification of Energy Efficiency of Buildings for private residential use in Spain. This course presents the CERMA program in its latest version (5). The operation of each of the tabs is exposed in a theoretical way, going into the detail of the definition possibilities offered by the program, emphasizing the additional functionalities with respect to the previous version (4.2.5). A series of practical examples of the use of the program are also offered.					
<b>TECHNICAL BUILDING CODE</b>					
6.5 hours					
Presentation and explanation of the novelties of the Technical Building Code after its modification through Royal Decree 732/2019, incorporating a new Basic Energy Saving Document					
MODULE 3 - Tools	Evaluation; Validation	technician	technical background related to building renovation	Test	Individual
<b>The Evaluation Report of the building (IEEV.CV)</b>					
Characterization of injuries in buildings and writing of the IEEV.CV report					
Students are provided with sufficient knowledge to prepare this report through the IEEV.CV procedure, specially designed for residential construction, since it is the typology on which the IEE is mostly requested. Likewise, basic knowledge is offered in the field of pathology in construction and accessibility evaluation, addressing the most common aspects in inspection of residential buildings for the drafting of the IEE. This training has been designed under the framework of Component 2 – Housing Rehabilitation and Urban Regeneration Plan of the Recovery, Transformation and Resilience Plan, to facilitate the proper management of European Next Generation funds.					

Table 1.- Valencia Region basic training program

## Resources

According to the contents, timelines and profiles addressed, each citizen Hub should hold specific budget for staff training, both at the time of starting the service, and for continuous training, in order to maintain updateness in the services provided.

- Profiles: Baseline offices staff is composed by 3 profiles (persons): administrative – customer service, legal, technician. Some training is addressed to all of them, some is addressed only to technicians
- Contents: IVE training cost ranges from 0.00€ to around 250.00€ (8.00€/hour online courses – 10.00€/hour presental courses), time needed to perform them ranges from 1 hour for micro-training to 50 hours for courses. According to the drafted program, it is composed of around 4 courses, 2 tailor-made training days, 2 working groups and several updating sessions, according to upcoming events (new subsidies, changes in regulation, etc...)  
<https://www.five.es/categoria-producto/formacion/>
- Timelines: At the beginning of the service, the citizen hub staff will run the whole program, then, each year the program will update in order to maintain the updateness of the service, this means to reserve time and budget for at least 1 course and 1 tailor-made training, and several updating sessions, according to upcoming events (new subsidies, changes in regulation, etc...) a year.

year 1													
Modality	h/M	Staff	h	€/h	Cost	W1	W2	W3	W4	W5	W6	W7	W8
<b>A) Tailored training day</b>													
MODULE 1 - Legislation	4	3	12	10	120								
MODULE 4 - Communication	4	3	12	10	120								
<b>B) Working groups</b>													
MODULE 2 - Service Manual	4	3	12	10	120								
MODULE 2 - Courses	4	3	12	10	120								
<b>C) Courses (on-line)</b>													
MODULE 1 - Best practices	10	3	30	8	240								
MODULE 1 - Procedures	50	3	150	8	1200								
MODULE 2 - Rehabilitation	30	3	90	8	720								
MODULE 3 - Tools	10	1	10	8	80								
MODULE 3 - Tools	10	1	10	8	80								
MODULE 3 - Tools	10	1	10	8	80								
<b>Total</b>			<b>348</b>		<b>2880</b>								

Table 2.- Cost & timeline for set up

each year					
Modality	h/M	Staff	h	€/h	Cost
<b>A) Tailored training day</b>					
MODULE 1 - Legislation	4	3	12	10	120
<b>B) Working groups</b>					
MODULE 2 - Service Manual	4	3	12	10	120
<b>C) Courses (on-line)</b>					
MODULE 3 - Tools	10	1	10	10	100
MODULE 3 - Tools	10	1	10	10	100
MODULE 3 - Tools	10	1	10	10	100
<b>Total</b>			<b>54</b>		<b>540</b>

Table 3.- Regular training yearly cost

## 4.2 Rotterdam – NL

The geographical scope for this pilot experience will be local at first instance, and then regional, (as a replication phase). Rotterdam is one of the top 5 cities in the Netherlands. As per January 1, 2021, Rotterdam has 651,269 inhabitants, and more than 315,000 buildings. Prins Alexander is the largest of the city's fifteen districts with a population of 95,445 and 45,869 dwellings.

City district PrinsAlexander consists of eight residential neighborhoods: Kralingseveer, 's-Gravenland, Prinsenland, Het Lage Land, Oosterflank, Ommoord, Zevenkamp, and Nesselande. There is an energy community active in Prins Alexander, called Alex Energy. This energy community has a focus on Prinsenland and Het Lage Land, but is active in the city district Prins Alexander. This energy community is one of five energy communities that are active in the City of Rotterdam. These five are part of a larger community, called Energie voor Rotterdam, EVR (Energy for Rotterdam).

Within Save the Homes Alex Energy is on board to participate as part of the HUB-functionality. From that point on the municipality of Rotterdam aims for an upscaling from this community towards the other four energy communities, via Energie voor Rotterdam. This is the first upscaling within the city. More local communities are needed to cover the whole city, but for now this is the starting frame of the Rotterdam situation.

neighborhood	total # dwellings (2020)	# owner-occupied (2020)	# terraced houses (2020)	# houses built < 1990 (2020)
Het Lage Land	5,904	2,100	1,169	5,052
Kralingseveer	738	483	632	587
Nesselande	4,510	3,141	3,520	81
Ommoord	13,183	4,525	4,853	12,115
Oosterflank	5,587	1,708	1,520	4,947
Prinsenland	5,153	1,768	1,790	2,272
's-Gravenland	3,499	1,762	2,274	245
Zevenkamp	7,295	2,905	3,722	6,868
Total Prins Alexander	45,869	18,392	19,480	32,167

Table 4: Data on houses in district Prins Alexander

### 4.2.1 Module 1: Context and framework

The total size of the necessary emission reduction in the built environment in the Netherlands is nearly 21,5% of the overall Dutch climate challenge, expressed in CO<sub>2</sub> equivalents. To achieve the sustainability goals, an unprecedented effort will be necessary. This is due to the following factors:

- The size of the challenge.
- The timeframe (or deadline) of 2050, with a significant first effort to be made between now and 2030.
- The lack of existing proven solutions that are scalable in sufficiently integrated.
- The structural lack of properly (up)skilled workforce (that drives price increases)

The combination of these factors makes the challenge so complex. What we do know, however, is that the existing practice of sustainable renovation has focused largely on social housing because of the limited number of partners one is dealing with in such trajectories. The current climate crisis, however, demands a collective, bottom up, urban neighborhood level approach with a view to move away from the use of fossil fuels towards more sustainable sources for heating and domestic energy consumption.

### A task bigger than ever

With 17 million inhabitants and a stock of more than 7.5 million homes, the Dutch built environment is standing before a bigger task than ever. Independent of time and responsibility, this task will determine the (social) context in which this transition will take place. Following the growth prosperity during the last decades, our housing stock has not only grown in number, the potential for sustainability has also grown. With the 2.5 million homes in 1950 to the current 7.5 million homes, the social and economic value is much greater than the planned 1 million new homes until 2050.

This number of homes is responsible for a saving of more than 24.3 Mton CO2 as laid down by our government in the sustainability ambition of the current policy. Not to mention the potential savings of 17.9 Mton CO2 for the construction-related industry, traffic and transport and energy. Building, housing and energy account for almost 20 percent of the total savings target and the owner or owner-occupant has a direct responsibility in this regard.

In addition, the ownership ratio of these homes has shifted from 40 percent to 60 percent owner-occupant in barely 50 years, and the task has shifted from corporations to individual owner-occupiers. The shortage of affordable housing and the arrival of a generation of baby boomers who want to live at home or in their own house for longer make the task even more complex.

And finally, the price development for large-scale improvement of a home has been under pressure for years. The main cause is the gap between the selling price of a solution and the cost price of the individual products. This space is filled in by us humans. Whether you are the resident, the craftsman, the supplier, the designer or the client, the price for our labour continues to rise every year and its availability decreases enormously.

Renovation touches on many aspects that determine the quality of life in a neighbourhood. From pleasant and affordable living to social cohesion and employment. The influence of the willingness of the owner-occupier to take his responsibility in this matter differs per municipality but is tangible in all municipalities.

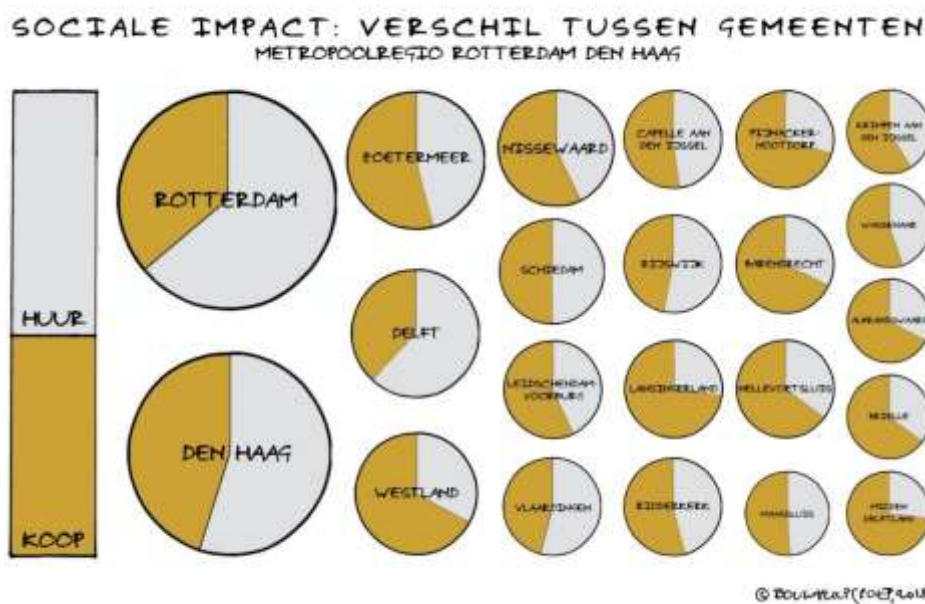


Figure 6: division of ownership Metropole Region Rotterdam/ The Hague (grey: Rent / brown: owner)

## Circular Economy and Waste

Sustainable home renovations do not only have an impact on the building sector, but also affect the transport (bringing building materials and people to the site), industry (producing materials) and infrastructure (energy production) sector. As a total of all CO<sub>2</sub> emissions related to the built environment (21,5%) there is the construction sector itself (24,7 Mton), Transport (2,24 Mton), Industry (7,45 Mton) and infrastructure (7,77 Mton). All adding up to 42.2 Mton CO<sub>2</sub>, which is 21,5%.

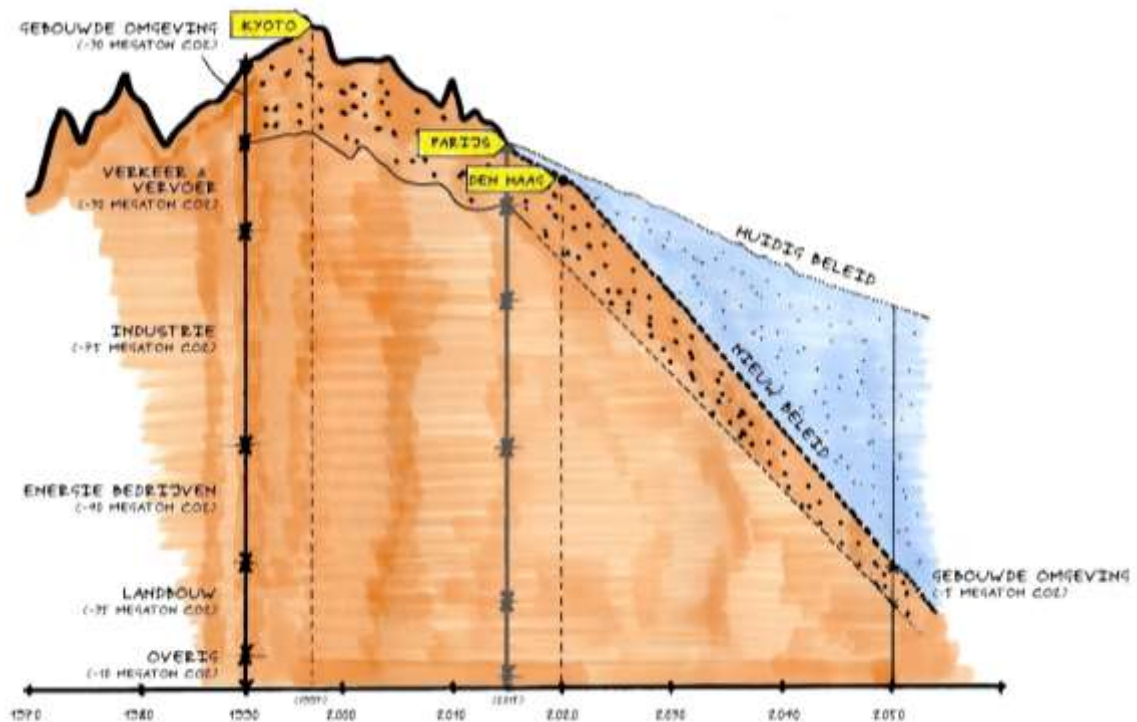


Figure 7: CO<sub>2</sub> exhaust of the Netherlands (1990) and division in sectors

The figure below shows the environmental impact of a building over the life span of 120 years. Blue is energy related (domestic and home bound), red is material related. In the energy transition, the step is being made from column 2 towards column three (getting rid of energy use in the built environment.) But we must be aware not to create a new problem; by adding new materials like insulation and installation the material part of the environmental burden will increase. In the nearby future columns 4 and even column 5 have to get additional attention, by building in a more circular way and even 100% circular. Because we use components as a means to renovate, it even has a larger potential to use circular components, because they contribute to accelerate to column 4 and even column 5. Also from training point of view, this approach indicates what competences are needed.

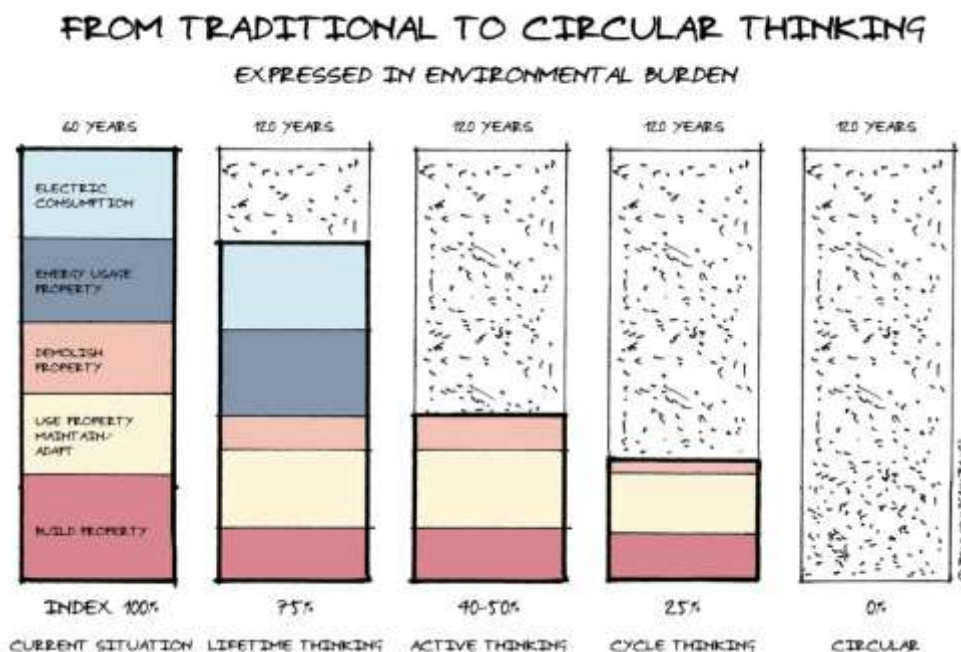


Figure 8: Environmental burden of buildings (materials and energy)

### Typology

To characterize the Dutch housing stock, we must first indicate how we want to do this. There are many different designations of housing types. The word housing typology starts with the principle that houses can be classified into specific types. A type then stands for the entirety of characteristic features and properties that a group of houses and/or residential buildings have in common, which distinguishes them from other types. The term housing typology says nothing about a specific type of home, but it does say that the total stock can be divided into types. The distinction between types makes it possible to say something about housing on general grounds. About their origin and their potential. The Dutch stock is classified and made accessible on the basis of the housing types. There are five characteristics and properties that provide guidance when classifying housing types. Each type has evolved over time. There is, for example, a difference between the terraced house from the fifties and seventies. This ensures that in addition to the above-mentioned characteristics, there are also a number of characteristics that change over time. Context, regulations and knowledge determine the structure of a home. The characteristics and properties give substance to the concept of housing typology. It will be possible to name recognizable housing types, which are distinctive in structure and construction.

The approximately 7.3 million homes currently in the Netherlands are very similar due to the limited number of housing types that have been completed in a short period of time and at a rapid pace. More than 80 percent of the current stock dates from after 1945. And the houses built before 1945 have often been adapted to the requirements of the times in the past thirty years and are therefore closer to the other houses from the later construction period, because only a limited number of the original dwellings have survived. Theoretically, seven basic types can be distinguished, which are determined by the interconnection of the houses and the access to the residential buildings. This distinction makes it easier to train people for certain jobs.

## VERDELING VAN WONINGSTYPEN NAAR BOUWJAAR d.d. 11/2012

BOUWJAAR → WONINGTYPE ↓	< 1945	1946-1964	1965-1974	1975-1991	1992-2011	TOTAAL
1 VRIJSTAANDE WONING	216.000	225.000	119.000	221.000	256.000	1.037.000
2 'TWEË-ONDEK-BEH' KAP	140.000	145.000	142.000	224.000	249.000	900.000
3 RIJWONING	523.000	478.000	606.000	879.000	509.000	2.995.000
4 KARRENWONING	113.000	113.000	22.000	94.000	57.000	399.000
5 GALEERWONING	~ 5000	64.000	174.000	109.000	162.000	514.000
6 PORTIEKLOUWONING	256.000	269.000	112.000	142.000	101.000	878.000
7 OVERIGE FLATWONING	49.000	52.000	125.000	125.000	196.000	545.000
TOTAAL	1.302.000	1.342.000	1.300.000	1.394.000	1.528.000	7.266.000

BRON: - A.F. DE WILDE  
- BOUWENDE WERK  
© 2012

Figure 9: dividing the housing stock into archetypes

### Quality over time

Over time, all kinds of changes have taken place with regard to the quality of the homes to be built, of which the size and construction technique have been the most decisive changes. Although the aspects of urban design and architecture should not be underestimated when determining the adaptation options and future value of homes. They form the conditions for a meaningful future. All qualities together determine the value of a house or residential building and guide the desired and possible quality adjustments. The size of the house size fluctuates over time. It has not been continuous growth. The economic situation influences the size of the homes in a period. Although this is not immediately apparent in the development, which is given for each construction period. For example, in the second half of the 1920s, the 1950s and the 1980s, relatively small buildings were built. And now, with the financial crisis, it threatens to happen again. It seems to be a recurring phenomenon with a thirty-year cycle, which affects the size of the home downwards.

When we look at figure 4 one can see that typology and quality combined lead to 35 archetype of buildings.

### Archetypes

About two thirds of the Dutch housing stock shows more similarities than differences. The terraced, maisonette, porch and gallery houses are especially part of this. It is precisely the discovery of the patterns of similarities within this group of homes that offers opportunities for a new offer that utilizes the scale and at the same time leaves room for the call for an individual approach. It allows for menus and concepts to develop renovation solutions for a larger scale.

It is the patterns, based on the properties and characteristics, that make the type classification possible. The qualities used vary. However, that variation is not random. The context determines how we build. The economic situation, regulations and the social context determine how a house is built and thus form the potential for the future. This means that the past determines what is possible with a home in the future. This also means that, because there is variation, different homes can be used for different target groups.

### Renovation specialist

The young craftsman or professional woman who will start her career tomorrow with the renovation of existing homes is assured of a lifetime of work. All homes in our country must undergo a sustainable improvement sometime in the next 30 years, after which they are beautiful, sturdy, functional and CO2 neutral again. But who are these professionals, who will soon ring your doorbell to get started in your home? Where do they come from? How are they trained and what guarantee do you have that they will do everything right at your home the first time?

The task of meeting the climate targets in 2050 with the built environment means quite a bit for employment in the construction industry, given the already tight labour market. The EIB (Economic Institute for Construction) outlines in its publication: “Election program against the light: the housing market<sup>2</sup>” the extra investment required to make existing homes with a certain label comply with the climate target. When you link this to the Energy Label database of RVO, the Netherlands Enterprise Agency (WOO<sub>N</sub>2018), you reach an additional investment of more than 10 billion euros if you spread this over a period of 30 years. The EIB publication: “Prospects for construction production and employment in 2021<sup>3</sup>” provides a picture of the expected employment in executive construction, broken down into new construction, maintenance & repair and renovation. When you convert these figures to housing construction and correct for the difference in labour productivity (the EIB maintains the same labour productivity for the three categories), you get an idea of what that extra environmental investment in existing construction can mean for employment. It follows from the calculations that an additional 16,000 man-years are required each year<sup>4</sup>. According to the EIB, without that extra environmental investment, 16,000 man-years would already have to be found. So this number is doubled. All these figures do not include the fact that the age of our housing stock will increase the need for repair, renovation and maintenance, especially among private individuals, and environmental measures will be combined with this. In other words: investment in existing buildings will only increase and with it the need for additional, adequately trained labour. The simple principle remains that in order to actually save CO2 in the built environment, people must first actually be available to carry out the intended work.

To train the renovation specialist of the future<sup>5</sup> in all these aspects, an extension of the current training<sup>6</sup> program is necessary. Training courses are certainly open to this, but cannot do this alone. Collaboration with market parties, such as housing associations and construction companies (learn-work companies, Het nationaal leerwerkakkoord / the national from learning to work agreement) that offer the opportunity to practice in practice, is necessary. In addition, it is of course also a question of financial resources to develop, promote and implement such an education programme. To this end, it is important that society is widely aware that well-trained and adequately trained renovation specialists are the precondition for making neighbourhoods more sustainable and that there is currently a major shortage of them.

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<sup>2</sup> [https://www.eib.nl/pdf/Verkiezingsprogrammas\\_tegen\\_het\\_licht\\_-\\_de\\_woningmarkt.pdf](https://www.eib.nl/pdf/Verkiezingsprogrammas_tegen_het_licht_-_de_woningmarkt.pdf)

<sup>3</sup> <https://www.eib.nl/publicaties/verwachtingen-bouwproductie-en-werkgelegenheid-2021/>

<sup>4</sup> <https://www.ed.nl/eindhoven/verduurzaming-panden-in-de-knel-door-tekort-aan-handjes~a9526824/>

<sup>5</sup> <https://www.ed.nl/eindhoven/verduurzaming-panden-in-de-knel-door-tekort-aan-handjes~a9526824/>

<sup>6</sup> <https://www.cirkelstad.nl/wp3/wp-content/uploads/2021/10/TNO-2021-Rapport-Banen-in-beeld-Rotterdamse-energietransitie.pdf>



## 4.2.2 Module 2: Customer journey stages and functionalities – general

BouwhelpGroep is a specialist in making neighbourhoods and districts more sustainable together with residents. Since 1978 the office has been working in public housing, architecture and industrialization in the existing city. For more than 30 years the office has also worked as an (house) advisor for governments and for over 30% of the Dutch housing associations. More than half a million homes of the Dutch housing stock have been examined in the daily practice of developers, architects and consultants, with a focus on step-by-step renovation of existing homes for all forms of ownership. This menu offers a global overview of our architectural and consultancy services to support (collectives of) residents.

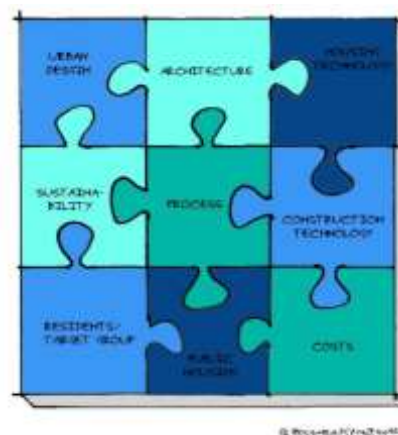
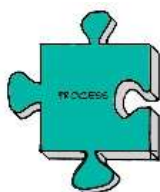


Figure 10: Integral quality of a renovation

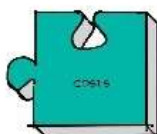
### A. Training resources

#### **A. Process**



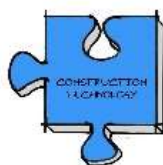
The more clients involved in a renovation, the more complicated the decision-making process. When renovating a house or residential block, it is important that it is clear to everyone where the plan is linked to collective participation and where there is room for individual choice and decisions. By working together on an integrated plan based on support, it is possible to achieve smart and fast results. The process grants access to a schedule during execution, but also makes sure that the owners take the right decisions.

#### **B. Costs**



The most important part of decision making when renovating is price. Not only the price now, but also the price to maintain the quality and what impact this has on housing costs. Mapping out the current costs naturally involves the expected price and possible variants in order to arrive at a definitive plan. The (partial) result is advice in the form of scenarios with underlying budgets based on composite measures to arrive at certainty about the budget. The costs consist of labour and product, as well as all additional costs necessary for a sustainable improvement.

#### **C. Construction technology**



Assessing and guaranteeing the quality of the home requires a lot of knowledge and expertise when we renovate. By assessing the current quality of materials and providing insight into which measures will lead to improved quality such as comfort, appearance, functionality or less maintenance, it is decisive for a good, realistic and feasible plan. An important part of this are the legal provisions laid down via permits and the building decree. The (partial) result can consist of the location, construction, destinations, facilities for use, the architectural appearance and the integration of constructive and installation-technical aspects. Not only concerning the wanted measures at this moment, but also the implications for the future. So when adding solar panels, as regard the existing quality of the roof.

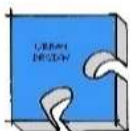
#### **D. Sustainability**



More and more people are starting to consider the environment when choosing products and services. Choosing a green energy contract, saving energy and working with local products are examples of this. But what is the actual impact of these

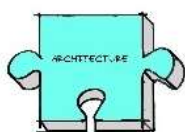
measures on the CO<sub>2</sub> footprint and what influence does it have on our wallet? The (partial) result is advice in the form of roadmaps and scenarios, that contribute to sustainability.

### **E. Urban design**



Study of the current and future urban quality and/or historical awareness of the district or neighbourhood. The (partial) result is an analysis with a recommendation. Especially when a collective of home-owners wants to start, or if plans go beyond the single dwelling. This links directly to the architecture of the building.

### **F. Architecture**



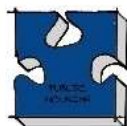
Study of the current and future architectural quality and/or historical awareness of the district or neighbourhood. The (partial) result is an analysis with a recommendation. A technical choice is made easy, but that decision can have an impact on the appearance of the building. For example the location of solar panels, the connection at the edge of the roof when combined with more insulation, or the colour and division of window frames. Sometimes the smallest decisions have an impact on the end result.

### **G. Housing technology**



Study of the current and future quality of use of the home. Making a home more sustainable demands a large investment that is why a renovation is the right moment to look for alterations in the building. For example the number of bedrooms or the lay out of the floor plan. Some of these measures can be combined with the improvement of sustainability.

### **H. Residents/target group**



Often residents already have an idea of the current plans and plans for the future. But people do not always think about the opportunities that arise when we talk about home improvement. In our advise we always look further than just the question that is being asked and we try to discover which adjustments are desired in the long term. Are children leaving the house, it are people getting older, is there a need for extra workspace, etc. Not everything can be linked to sustainability, but sometimes the residents can already be taken into account in simple ways.

### **I. Public housing**



Quality of living is a complex concept. Housing is culture and is determined by a unique pattern of activities and the symbolic structures that these activities form. The neighbourhood in which you were born, the stones and the trees around you and the people you grew up with, form the backdrop. All these aspects have contributed to the period in which you grew up and which determines what you experience as quality. The question is how can we make these qualities visible and what rhythm do they offer for the design of living for the future? We take culture into the plans we develop.

## 4.2.3 Module 3: Tools and services – Technical

There are several tasks needed in the Save the homes HUB. The question is whether the tasks must be dealt with inside the hub, or that the hub is a gateway towards specialists who can help the homeowner with that specific task. For example, getting the financial advice is that something the people within the hub answer, or do they refer the homeowner towards the grant application, the address of a bank with a fitting product, or a subsidy advisor?

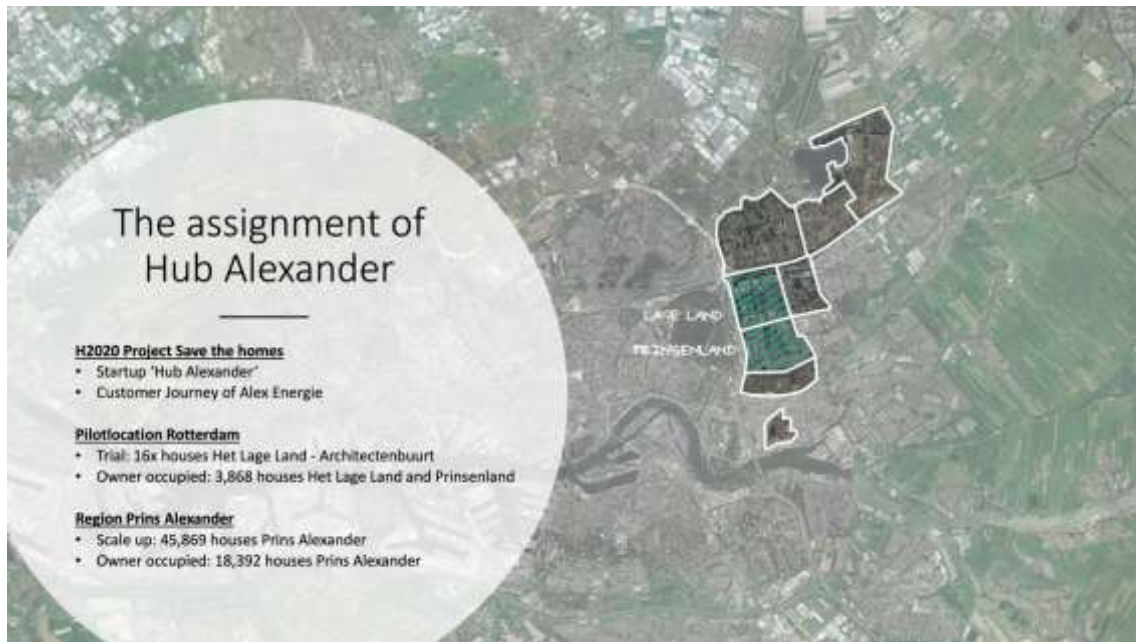


Figure 11: coherence between Prins Alexander, Het Lage land & Prinsenland and the 16 homes

At this moment there are four entities contributing to the hub in Rotterdam. These entities work from the Save the Homes project. In the future, the Hub should be a self-supporting entity. But for now, the services are delivered by these four:

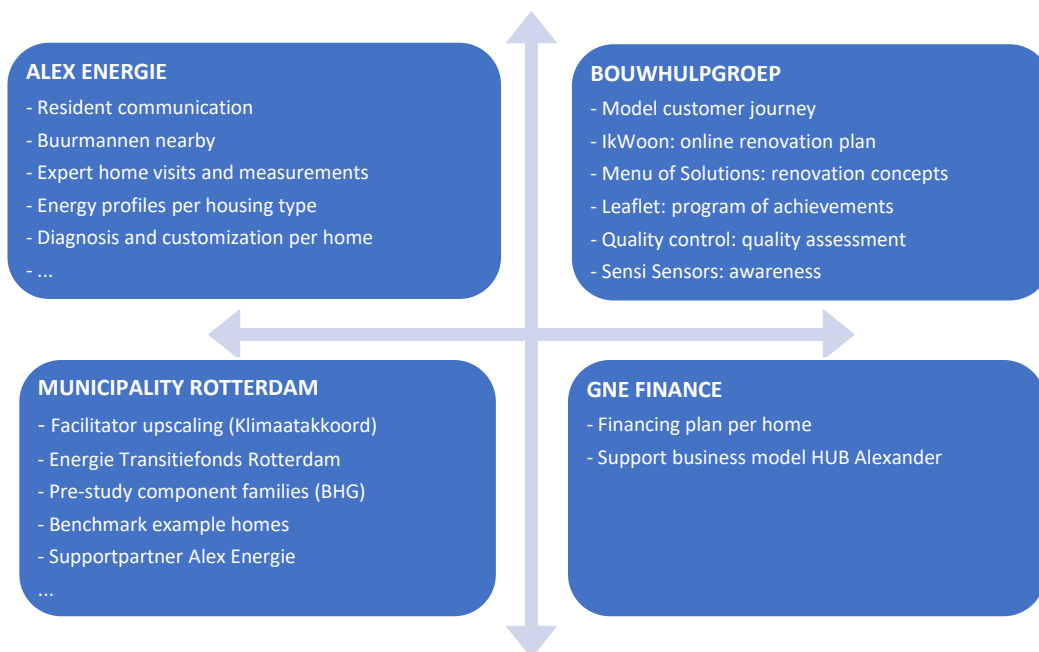


Figure 12: Tasks per consortium partners in the Rotterdam HUB

Within Rotterdam we described a route to market (1) and a route to realisation (2). All these functionalities can be argued whether the hub is responsible or not, and if the hub is responsible is extra staff training needed? Therefore we will describe the steps needed and mention to what extent Alex Energy can provide those services or what is needed in staff training.

- Alex Energy did a study of the sixteen houses (buurmannen m/v)

This is the task of an energy coach or expert who can detect and advise the existing quality. For one project Alex Energy can manage, when upscaling is needed, there is a need for training extra people, or money to hire them, for example from WoonWijzerWinkel, Energiesamen ZH.

- *The existing 65 + solutions are combined with the wishes of the homeowners*  
This results in suitable solutions and based on replication in the neighbourhood. The study performed by BouwhulpGroep in commission by the municipality of Rotterdam has helped to indicate this replicability.
- *Leaflets with performances*  
Based on the selection that the occupants made, technical sheets (leaflets) are developed. For now, these are developed within Save the Homes, but in the future, this is an expert job that cannot easily be fitted in the task of a hub. However, when these are finished, the hub can easily use them to come to quotations.
- *Inquiry and selection*  
Interesting offer for contractors, based on the number of similar buildings in the neighbourhood. During the quotation round, the aspect of replicability can be used to attract contractors.
- *Implementation*  
After these steps the implementation can take place. This means that execution and dealing with contractors is in place. Although this is not part of the competences of Alex at this moment, in the future they can perform this task.

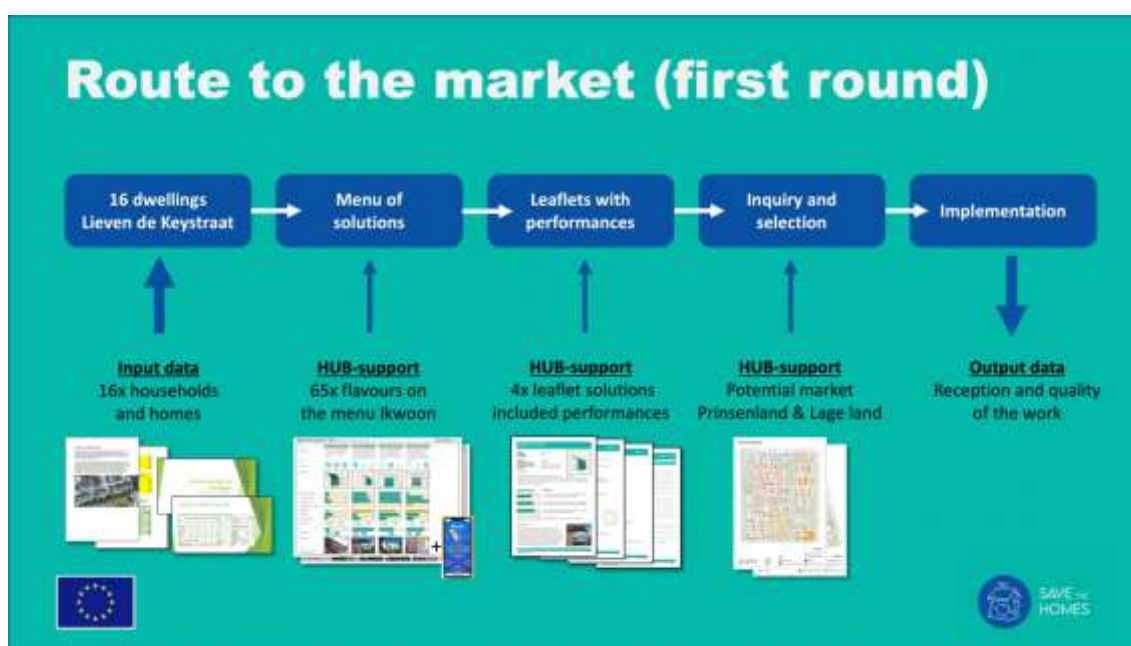


Figure 13: description of route to market and the role of the hub.

At that moment home owners know what they want to do. The next step is to look for local companies, and set up the execution.

- *Contacting local companies*  
One of the steps is to know what companies are available in the area. This goes towards knowing which companies could do the job, but also to inform if they are willing to do so. Currently the market is still heated and companies mainly focus at their current practice. So one of the tasks of the hub should be to produce a longlist / shortlist with companies. This list can be used to guide staff training. This directly connects to the economical national program 'Leerwerkakkoord' bringing companies and educational organisations together where at a city level, the municipality

is looking to get people actively involved in working in the energy transition. This is knowledge that perfectly fits the hub.

- **Selection**  
At this moment the process of selecting companies and giving them the job is not defined or put in a protocol. The wish is to use the shortlist and define the process with the supply side. But at this moment the market is not fitted for this kind of approach. In the future this task fits well to the hub.
- **Work and supervision**  
When a certain party is found to do the work, the contract should specify how the work will be performed and how this will be proven. In the Dutch law, private quality assurance is in place. That means with smaller projects (such as building a home or renovating a home) the contractor and the client should discuss how to prove the quality. If the contractor gets a complaint he has to prove that the work was performed according to the codes. For example he needs to photograph the construction that he put in place, so it can be compared to the drawing and calculations.
- **Repetition**  
in the future the aim is to work with a long/shortlist of contractors. This goes hand in hand with judgement of the work performed. This can be done by the hub, and gives a feedback on the work, but also on the way the contractor and its employees acted when working at the home. This can be compared to the review on websites like booking.com or travel sites, like tripadvisor.com. Based on this feedback training can be adapted to the specific needs of one party or if a broader problem is detected, a more general training can be provided.

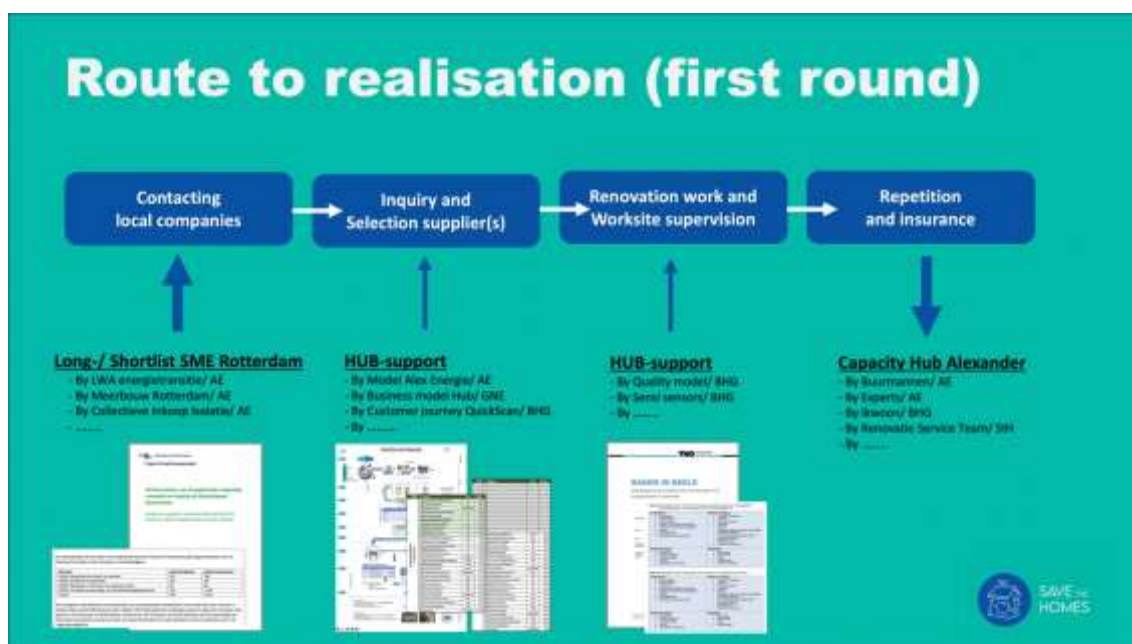


Figure 14: Description of the route to market and the role of the hub

#### A. Tools per partner

In the following paragraph for each partner in the project a short description is given for the possible tools and services they can provide.

HUB Alexander can offer several services for home-owners in order to make their homes more sustainable. The four companies mentioned in the figure above contribute to the HUB Alexander and offer different solutions for the different stages of a renovation process. Alex Energie is the local initiative of home-owners that are willing to take on the challenge of renovating their neighborhood.



In this case they look at 16 homes in that neighborhood. They offer services such as communication with residents and talks with other home-owners who have already renovated their homes. Next to being a contact liaison they offer an in-dept overview of the home done by measuring and visiting the home, looking at the energy profiles and giving a diagnosis custom-made per home, or per cluster of the same kind of homes. The municipality of Rotterdam is looking for their role in the HUB. The municipality is working from the perspective of the government, in order to reach climate goals and has already done several projects in the last couple of years, but nothing on a large scale. This set up of the HUB is one they hope to roll out – in time – in the whole of the municipality of Rotterdam, not just Prins Alexander.

For the first round – the route to the market (1), there are still several risks visible where this could go wrong. The first sixteen homes are selected to start the renovation together, as they have the same type of dwelling and could use the same solutions. However, the risk here is that some home-owners may not want to partake in this renovation after all, or if over some time they do not agree with the renovation, and want to quit this process. What does the HUB Alexander and Alex Energie do then? Based on the homes in Prins Alexander, BouwhulpGroep together with Alex Energie made a menu of solutions for the area. This menu of solutions contains 65 different solutions, with the possibility for customization where necessary. The risk here, is to offer such a large amount of solutions, that home-owners do not know where to start anymore. This risk is taken away by Alex Energie, as they offer a selection of these 65 solutions and the home owners are supported in making choices. These offered solutions all pertain to the energy of the homes and insulation of the walls and the roof. In this way, the home-owners will not be overwhelmed by the huge amount of solutions.

Several parties can take a role in the energy transition. Partners of the consortium, but also partners from outside of the consortium.

#### **Gemeente Rotterdam**

- *Energy Transition Fund (ETF) Rotterdam*

Energy transition loans for homeowners and (small) landlords. The Energy Transition Loans are intended for energy-saving and home-improving measures. Inhabitants of Rotterdam with their own house (ground-bound, apartment or houseboat) can continue to live in their home more comfortably and with more pleasure. Owners who rent out their home(s) – a maximum of three – can also make use of the loan. All homes are located on Rotterdam territory. To be eligible for the loan, you must carry out at least one energy-saving measure and one home improvement measure, so at least two measures. There is an exception for solar panels. The measures must be carried out registered at KvK contractors and/or installers. You request quotes from these contractors and/or installers and send them along with your application. Tips for finding a good contractor can be found via the Woonwijzerwinkel.

The municipality is no banking licence. That is why the municipality is working together with the Stimulation Fund for Public Housing in Dutch Municipalities (SVn) for the Energy Transition Loans. If the municipality has approved your application, go to SVn to take out the loan.



Figure 15: advertisement of 'Power voor je huis'

- *'Power voor je huis' (Rotterdam municipality in cooperation with WoonWijzerWinkel)*

A more energy-efficient house contributes to reducing CO2 emissions. 'Power for your home' helps with this, for free. The Municipality of Rotterdam works together with the Woonwijzerwinkel for this. Between December 1, 2021 and December 1, 2022, 1,000 homeowners in Rotterdam can use this service for free. Power for your home consists of five steps:

1. An online scan that provides an overview of possible measures that suit the home.
2. The Woonwijzerwinkel energy advisor will contact you by phone for an intake interview based on the online scan.
3. A personalized advice from the Woonwijzerwinkel with two measures that best suit your home and a statement of the costs and revenues.
4. The municipality wants to stimulate regional employment and has therefore made agreements with contractors from the Rijnmond region. The Woonwijzerwinkel will request quotes for you.
5. You can use the ISDE subsidy service for homeowners to finance the measures. ISDE stands for investment subsidy for sustainable energy. The subsidy is intended for measures with which energy is saved or with which sustainable energy is generated by the resident himself. To be eligible for the subsidy, you must have two measures carried out. Unless you opt for a heat pump or a solar boiler.

### Alex Energie

- *Duurzame energie in Prins Alexander*

Alex Energie is an initiative of residents who believe that we should use less energy and that the energy we need, is sustainable and contributes to the broad sustainable development of Prince Alexander. They do this by collaborating with other organizations and by taking the initiative to accelerate the energy transition. There are plenty of options to make Prins Alexander more sustainable. Alex Energie is committed to this. Alex Energie is a non-profit cooperative. The money that is possibly earned goes to the small overhead, possible discount to the customers, and is reinvested in the neighborhood<sup>7</sup>. Alex Energie can be a large part of the hub, if not the complete hub.



Figure 16: Logo Alex Energie

<sup>7</sup> <https://www.hier.nu/themas/stroom-en-gas/wat-is-een-energiecooperatie>

### BouwhulpGroep

In 4.2.2. the advice services are already discussed. Below these are further elaborated on in specific products.

- Sensi: With a Sensi sensor you can easily solve the lack of knowledge about the current indoor climate. By placing this sensor in your home for a measurement period of four weeks, you will quickly and easily receive an overview of the (air) quality. It is a low key way to get more information of your home (awareness).
- Digital self-recording: As an expert on living in your own home, you know exactly where the pleasant and bad places are. Based on a questionnaire drawn up by our expert, you can easily map out the current quality of your home, and with that information as a starting point you can make plans to improve your home (assurance).
- Ikwoon: Ikwoon is a web application that helps homeowners to show interesting sustainability options that suit their home and living situation (see also D3.7). In this app, after completing a number of questions about your home and housing requirements, you will immediately see what the smartest, fastest and cheapest solutions are to make your home more sustainable (awareness and information).



Figure 17: IkWoon, web - application to inform people of renovation possibilities

- Leaflets: With a number of design sessions it is possible to shape any plan. The concepts and sketches from various sub-studies are presented and discussed and commented on from different angles. After feedback to the client, the consequences in terms of space, image, measures, price and nuisance have been brought together into one plan. Because there is a certain amount of replicability, these leaflets can be re-used.
- Potential in the neighbourhood: If we look through our eyelashes, we see only nine different roof families, seven facade families and five floor plans. From this classification of all homes in a neighbourhood according to component families, we manage to digitally retrieve individual demand and wishes from the kitchen table and connect it with a wide and sustainable range of suppliers based on components that can be used in any random neighbourhood.
- Check on investment and housing costs: To help make this process of decision-making easier, we have a calculation model at our disposal that, with the help of your information, can help you decide whether to start implementing, or to inform people or start saving more before you definitively says yes to the plans. Although this model needs expertise to operate, it provides accurate information.
- Menu with proven suitable solutions: The time has come to make final choices about what your plan will be. In a number of workshops the chosen concepts are transformed from performance into concrete measures. These measures are the next step that will form the basis for the search



for a suitable offer: the menu has been chosen! With the first menu, the ingredients are chosen. The next step will be to realize these flavors together!

- From sketch to final design: In this phase, a global representation of the building is developed, such that it provides a good picture of the location, structure, destinations, facilities for use, the architectural appearance and the integration of constructive and installation-technical aspects.
- Test on legislation and required permits: By having us as an expert enter into discussions with the municipalities, you will gain more clarity in advance about the feasibility. In addition, it gives you insight into matters to take into account during implementation.
- Quality control: quality control is needed to guarantee the work performed is done well. In most cases it is not necessary to prove the work is done well, but in dispute or cases where the guilty one is looked for, it is good to have quality control during the build in play.

### ISSO

ISSO is a party involved in other EU projects, such as Re-modules, Interreg Triple A and Triple A reno. ISSO is an open knowledge club. They provide expertise to professionals in the built environment. Knowledge that you can do something with. Dissemination of knowledge in print or in courses is their main expertise. Therefore when training is needed it is a suitable party.

- BUILD UP Skills advisor app, awareness and further training: Are you working on the energy transition in the built environment or do you want to get started in it. With the BUILD UP Skills advisor app you quickly get an overview of topics that are of interest to you and the available additional training.
- The Energy Transition Game, awareness, training and customer conversation: With this board game you are challenged to sustainably renovate an existing home in interesting scenarios. You learn which measures suit the home and the requirements of residents and municipalities.



Figure 18: Offer presented by ISSO

### Woon Wijzer Winkel

WoonWijzerWinkel is the regional energy counter . It is a one-stop-shop commissioned by the municipality of Rotterdam and more than 20 other municipalities in the region. They support home owners as an independent party from A-Z in making their home more sustainable: from orientation, choice of solution to quotation and implementation, on single sided matters. They play intermediary rol between home owners looking for support and a pool of contractors. They have a webshop and website, where every solution can be found, plays an important role in this:



Figure 19: WoonWijzerWinkel, location Rotterdam

- Largest range in the Netherlands, both online and in the showroom in Rotterdam, you will find all sustainable solutions for insulation, ventilation, solar panels, heat pumps, solar boilers, sustainable materials, financing, subsidies, etc. under one roof. The largest store for sustainable living in the Netherlands!
- Personal, expert, honest and personal advice that suits your home, situation and budget. They give the best solution, because the advisors know what they are talking about. Advice can be given by telephone, e-mail or a visit to the store or at your home, whichever suits people best.
- 100% independent and the official energy desk for 24 municipalities in the Rijnmond and Haaglanden regions and are tasked with providing the best possible independent advice. They are not tied to external parties. Companies cannot get a higher place at WoonWijzerWinkel by paying more.
- With the unique Quotation service at WoonWijzerWinkel, you not only benefit from strong offers and promotions, but also from our extensive quotation service. Through WoonWijzerWinkel you will always find a reliable specialist and you are assured of a good execution. That makes requesting quotations transparent and easy!



Figure 20: WoonWijzerWinkel Rotterdam, interior view

## 4.2.4 Module 4: Soft skills

The main difference between new built and renovation is that with a renovation there already are people involved. Each morning when you start working there is someone who opens up the door, and when the contractor leaves at night the occupant still lives there. Of course when the job gets too big, people will leave their home for a while, but even then the carpenter, the plumber or the plaster are working in someone's house. This asks for something else then just technical skills, it is also expected to have some 'people skills'.



Figure 21: Renovation demands 'people skills'

This goes for the execution of the work, but same goes for all activities throughout the customer journey. We as professionals in the building sector need to communicate with home owners in a language they understand, and can relate to.

Currently there are some social barriers in place. There is a lack of information about the solutions and people do not know what to look for. And financing is also a problem. Save the homes addresses these issues. However this deliverable goes more into detail on staff training.

The municipality of Rotterdam currently uses 'energiecoaches'. It is a low key way to introduce people with energy saving. When people want to do more, the 'wijkcoach' comes into place, a professional, but still recognisable as someone that works in the area itself. Therefore the message they deliver is much more appreciated than just some information sent by the municipality. This low key information should also be one of the advantages Alex Energie has. They have 'buurmannen m/v' (translates as neighbours) who go to people to talk about energy efficient living.

Another major barrier for a large-scale deep renovation in European cities is the absence of organized and coordinated synergy between social collective interest, private collective interest and individual interest. The one stop shop approach could potentially open up this market, but this is a field where developments are needed.

But also more digital ways to inform people can be used or combined.

- Online seminar: The webinar discusses how to make a smart plan together to make your home more sustainable, while you are guided through all facets of sustainability in an understandable language with time to answer any questions.



- Digital boosting campaign, supported by the Ikwoon application, residents can start making a plan for their own home and housing requirements, making an actual meeting easier and simpler to organize, at a time that suits people.
- Physical boosting campaign: With the Ikwoon app, home owners can see for their own home what the smartest, fastest and cheapest sustainability options are and this is spread by means of banners in various places in your municipality, or even public billboards.

### 4.2.5 Training program

The action plan will define the planned progress, responsibilities, and the necessary resources (financial and human). Training action plan will define the required training of the current staff of Citizen Hub facilitator, staff responsible for the services offered at the physical offices as also offers available on the platform. Rotterdam municipality and Alex Energy are discovering whether a collaboration can be in place in Rotterdam and how this can function. Alex Energie then could function as an example for the other four existing energy communities, and energy communities that still need to be founded.

#### **Objectives & Target**

The objective is that people operating the Citizen hub and auxiliary services delivers a complete and high-quality service, being able to accompany the customer from the beginning to the end of their whole renovation journey, by themselves, or assisted by the proper interlocutor on each stage.

The target group is therefore mainly the Citizen hub staff (also property administrators and retrofitting managers?) but also the municipality servants in charge of housing politics or responsibilities or staff in partner services related to the Citizen Hub.

#### **Requirements**

A background on renovation and housing, for both legal and technical issues. These requirements can belong to one person or be distributed into the Citizen Hub staff team. In this case, completion of courses can also be distributed according to each person specialty.

At the moment of contracting or assigning Citizen Hub competencies for the services providing, these requirements are taken into account.

At this moment the actual need for training the staff is not clear, and will be updated later during the project.



## 5 Follower cities

According to Objective 4 (To deliver real benefits to citizens and other stakeholders in two cities as a result of the Citizen Hubs operating locally), the objective is not only to provide the integrated renovation services to the specific homeowners groups identified in the two pilot cities (Rotterdam and Valencia) but also to demonstrate the potential of the Citizen Hub concept to all relevant stakeholders in other municipalities, to regain trust and interest in building renovations and to further expand the Citizen Hub business model.

So, in order to roll out the Citizen Hub concept on a wider scale (regional, national and European), the Citizen Hub models developed for Valencia (ES) and Rotterdam (NL) will be one-on-one replicated for the two follower cities, Sant Cugat (ES) and Ljubljana (SI).

### **Sant Cugat – ES**

*(Fittingness in same country context)*

The objective is to test the replication in the same country for Spanish pilot in Valencia and follower city Sant Cugat. The aim is to analyse all the benefits of having the structure and services developed in national language and based on national circumstances, legislation, culture and habits.

Sant Cugat Municipality is assessing the methodology and feedback will be reported during WP4 and WP5 activities for pilot experiences and replication and exploitation activities.

### **Ljubljana – SI**

*(Fittingness in different country context)*

The objective is to test the replication between EU countries where the Citizen Hub mapping methodology and results for the Dutch city of Rotterdam will be replicated for the City of Ljubljana in Slovenia. The aim is to validate the effectiveness of the replication process between the different EU countries.

The city of Ljubljana is assessing the methodology and feedback will be reported during WP4 and WP5 activities for pilot experiences and replication and exploitation activities.



## 6 Conclusions

T3.5 consists in the first place of designing the training programme needed to realize the designed Citizen Hub model within the two pilot cities. In this context, and in connection to discoveries from T2.2 about demand side characterization and potential awareness needs, and T3.2 about customer journey implementation for each pilot, and action plan has been drafted, defining:

- Functionalities provided by the two pilots and needs for staff training
- Definition of skills, distributed in learning modules, which can be addressed to the whole Citizen Hub as a service provider team or to specific profiles within the team
- Offers available and needs for customized contents
- Program proposal, including timelines and profiles

Second part of this Task is the implementation of the Action Plan on the field, which takes place within the demonstration activities in WP4 and whose assessment will take place within the replication activities in WP5.



## **Annex 1 – StH D7: Staff training design methodology**

This document will help your Municipality or Region map and design the skills need for your staff, the existing training resources and the training program proposal in your context and implement your own Citizen Hub. It is structured as a series of tables to be filled in a step-by-step process that will lead to the definition of your own objectives, requirements and modalities for your training program. This document is completed with the corresponding spreadsheet and is available on the project web site.



## StH – Staff training program – checklist

The objective of this guide is to design a proper training program for your Citizen Hub staff. To do so, think of the services menu designed in D3.2 (have at hand your results from StH Document 6), and follow next steps.

### A. Skills

Staff skills needed to deliver the best service to citizens includes assistance in the whole customer journey, this is, the 5 steps, and most of their sub-steps, according to the objectives and functionalities designed according to D3.2 (have at hand your results from StH Document 6).

**Stop 0 – onboarding** objectives for my citizen hub are to \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Therefore, staff needs to know, for each sub-step, how to:

Stop 0 - ON-BOARDING	
AWARENESS	INTERACTION
profile <input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other	<input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other





**Stop 1 – evaluation** objectives for my citizen hub are to \_\_\_\_\_

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Therefore, staff needs to know, for each sub-step, how to:

Stop 1 - EVALUATION	
SELF EVALUATION	ASSISTED EVALUATION
profile <input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other	<input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other

**Stop 2 – elaboration** objectives for my citizen hub are to \_\_\_\_\_

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Therefore, staff needs to know, for each sub-step, how to:

Stop 2 - DESIGN & FORMALIZATION		
DESIGN	SELECTION	FORMALIZATION
profile <input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other	<input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other	<input type="checkbox"/> Customer service <input type="checkbox"/> Legal <input type="checkbox"/> Technician <input type="checkbox"/> Other



**Stop 3 – realization** objectives for my citizen hub are to \_\_\_\_\_

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Therefore, staff needs to know, for each sub-step, how to:

Stop 3 – REALIZATION				
	TRAINING	ASSESSMENT	MEDIATION	QUALITY ASSURANCE
profile	<input type="checkbox"/> Customer service	<input type="checkbox"/> Customer service	<input type="checkbox"/> Customer service	<input type="checkbox"/> Customer service
	<input type="checkbox"/> Legal	<input type="checkbox"/> Legal	<input type="checkbox"/> Legal	<input type="checkbox"/> Legal
	<input type="checkbox"/> Technician	<input type="checkbox"/> Technician	<input type="checkbox"/> Technician	<input type="checkbox"/> Technician
	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other

**Stop 4 – validation** objectives for my citizen hub are to \_\_\_\_\_

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Therefore, staff needs to know, for each sub-step, how to:

Stop 4 - VALIDATION				
	FEEDBACK	COMPARISON	MONITORING	CERTIFICATION
profile	<input type="checkbox"/> Customer service	<input type="checkbox"/> Customer service	<input type="checkbox"/> Customer service	<input type="checkbox"/> Customer service
	<input type="checkbox"/> Legal	<input type="checkbox"/> Legal	<input type="checkbox"/> Legal	<input type="checkbox"/> Legal
	<input type="checkbox"/> Technician	<input type="checkbox"/> Technician	<input type="checkbox"/> Technician	<input type="checkbox"/> Technician
	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other

Remember that skills are not distributed as ‘watertight compartments’, and they all might permeate the services provided on each stop (meaning that some skills are needed in different stops and steps).

## B. Contents

The project has distributed all the detected skills needs in 4 learning modules, which can be addressed to the whole Citizen Hub as a service provider team or to specific profiles within the team. Please fit your previous section needs for skills on each of the modules, and colour them according to their best fit modalities as defined in the last row:

step	M1: Context & framework: local legislation, subsidies and grants, competences, etc...	M2: Customer journey: services' menu, touchpoints, dependencies, etc...	M3: Tools & services: Specific materials for supporting tools used within the customer journey stops	M4: Soft skills: Communication skills and basic customer service skills
AWARENESS				
INTERACTION				
SELF EVALUATION				
ASSISTED EVALUATION				
DESIGN				
SELECTION				
FORMALIZATION				
TRAINING				
ASSESSMENT				
MEDIATION				
QUALITY ASSURANCE				
FEEDBACK				
COMPARISON				
MONITORING				
CERTIFICATION				
Modality	Tailor made training (half) day	Working group	Course	

Remember, the planned teaching formats are:

- **Tailor-made training days.** Through this modality, technicians will be trained in specific contents adapted to their needs to fill the current gaps identified. These training sessions will be organized **around thematic modules** (such as a module on financing, including updated information on subsidies). The training days will be offered in both **face-to-face and on-line formats**.
- **Working groups.** With the main goal of boosting retrofitting through the contagion effect and based on the knowledge/experience of other stakeholders involved in the different stages of the retrofitting process, **face-to-face meetings** for sharing information will be organized. These workshops will be organized **around the specific stages of the customer journey**.
- **Training courses.** These courses will be in **on-line format** and will **focus on technical content**. The contents will cover the initial design phases through to the completion of the works and subsequent use and maintenance.

**C. Resources**

Now think of the offers available in your context for covering each content needed, and detect (mark in red) needs for customized contents:

Content (From section B)	Training resource (Name )	Provider (Entity name)	Format (Present/ online)	Duration (hours)	Cost (€)
	Gap!				



## D. Program

Finally, recap all information and design **your training proposal** (copy & paste as many tables as you need):

Number	Modality	Profiles	Evaluation	Certificate
--	<input type="checkbox"/> Tailor <input type="checkbox"/> Group <input type="checkbox"/> Course	<input type="checkbox"/> Customer <input type="checkbox"/> Legal <input type="checkbox"/> technician	<input type="checkbox"/> Observation <input type="checkbox"/> test	<input type="checkbox"/> Team <input type="checkbox"/> individual
Stops/ steps	Provider	Format	Duration	Cost
(From customer journey)	(Entity name)	<input type="checkbox"/> Present <input type="checkbox"/> Online	(hours)	(€)
<b>NAME</b>				
Description...				
			<b>Participants</b>	<b>Total cost</b>
			(number)	(€)

Number	Modality	Profiles	Evaluation	Certificate
--	<input type="checkbox"/> Tailor <input type="checkbox"/> Group <input type="checkbox"/> Course	<input type="checkbox"/> Customer <input type="checkbox"/> Legal <input type="checkbox"/> technician	<input type="checkbox"/> Observation <input type="checkbox"/> test	<input type="checkbox"/> Team <input type="checkbox"/> individual
Stops/ steps	Provider	Format	Duration	Cost
(From customer journey)	(Entity name)	<input type="checkbox"/> Present <input type="checkbox"/> Online	(hours)	(€)
<b>NAME</b>				
Description...				
			<b>Participants</b>	<b>Total cost</b>
			(number)	(€)

Number	Modality	Profiles	Evaluation	Certificate
--	<input type="checkbox"/> Tailor <input type="checkbox"/> Group <input type="checkbox"/> Course	<input type="checkbox"/> Customer <input type="checkbox"/> Legal <input type="checkbox"/> technician	<input type="checkbox"/> Observation <input type="checkbox"/> test	<input type="checkbox"/> Team <input type="checkbox"/> individual
Stops/ steps	Provider	Format	Duration	Cost
(From customer journey)	(Entity name)	<input type="checkbox"/> Present <input type="checkbox"/> Online	(hours)	(€)
<b>NAME</b>				
Description...				
			<b>Participants</b>	<b>Total cost</b>
			(number)	(€)

