

TEMPLATES STEP 1. MARKET SEGMENTATION

Market segmentation	A. The overall strategy	Which are your targeted buildings? Which building typology should be renovated first to get greatest effectiveness in the impacts through the renovation process? Which are your targeted subjects? Which user's profiles should be targeted to get the greatest effectiveness in the onboarding and engagement with the renovation process? Which are your targeted suppliers? Which segment of suppliers should be targeted to get the greatest effectiveness in the implementation quality and user satisfaction?		٢
Market segmen	B. The top-down approach	Which are your official/ statistical data sources? How can you combine and filter them in order to qualify, quantify and measure your targets?		۲
H	C. The bottom-up approach	Which are your participatory processes? What kind of information you got from them? How can you use these data to derive/ extrapolate market behaviour, needs or expectations?		
Ç.	D. The opportunity	What would move citizens into renovation? Why would move suppliers into the energy renovation?		

Figure 1. Test materials for step 1

This step (and its sub-steps) aims to map demand and supply side of your renovation market as a first step to design an OSS service in your context and implement your own Citizen Hub. Additional information is available in **D2.1. Demand & supply side mapping: Methodology & results from the 2** pilots and its corresponding spreadsheet.

A. Presentation

Before starting this journey, present yourself and your friends:

Organization	Activity	Geographical scope	Contact		

B. Objectives

Now, draft the main objectives pursued through the implementation of the OSS concept. This is important to orientate the search below.

- 1) My first objective is to _____
- 2) Also, I would like to ______
- And, if possible, I would also address ______





C. Study area

Do you already have a physical office in place?

YES \rightarrow define geographical area around it:

- meters from the office
- Districts: [names, codes]
- The whole city: [name, code]

 $NO \rightarrow$ define the wider geographical area under your scope (e.g., city):

- Districts: [name, code]
- The whole city: [name, code]
- The whole region: [name, code]

D. Mapping

D.1. Object (buildings)

The objective for mapping and segment buildings is to get the greatest effectiveness in the impacts achieved through the renovation process.

First collect information about your building stock context (regulations, history, grants schemes, bureaucracy, or other programs related to buildings):

Then select your characterization criteria:

- o component approach for step-by-step renovation replicability
- o morphology approach for integral renovation replicability

And list the attributes related to previous approach that you would need to analyse:

Attribute	availability	thresholds/ categories	source	format	granularity	date	comments

Now is time to mix, overlap, cluster: define your typologies, keeping in mind which context circumstances or potential impact related to your approach are interesting for you:





Typology	Attribute (interval)	Attribute (interval)	Attribute (interval)	Attribute (interval)	Attribute (interval)	Solution COMPLEXITY	comments

And finally, you need to quantify (& locate):

Typology	Area/ District/ City	Area/ District/ City	Area/ District/ City	City	Rate	IMPACT	comments
Number							
Rate							

According to previous data, select your target zones and typologies (quick wins for short term, targets for long-term):

- \Rightarrow Quick wins: _____
- \Rightarrow Typologies: _____
- \Rightarrow Zones: _____

D.2. Subject (citizens, owners, occupants...)

The objective for mapping and segment people is to get the greatest effectiveness in the onboarding, involving and engagement with the renovation process.

We follow here the same structure than for mapping buildings but related to the people living or owning those buildings (previously targeted).

First collect information about your demographic context (regulations, history, habits, traditions, problems...):

Then select your characterization criteria:

- Economic approach, for affordability
- Social approach, for motivation
- Organizational approach, for simplification

And list the attributes related to previous approach that you would need to analyse:





Attribute	availability	thresholds/ categories	source	format	granularity	date	comments

Now is time to mix, overlap, cluster: define your profiles, keeping in mind which context circumstances or potential drivers related to your approach are interesting for you:

Profile	Attribute (interval)	Attribute (interval)	Attribute (interval)	Attribute (interval)	Attribute (interval)	Solution COMPLEXITY	comments

And finally, you need to quantify (& locate):

Profile	Area/ District/ City	Area/ District/ City	Area/ District/ City	City	Rate	IMPACT	comments
Number							
Rate							

According to previous data, select your target profiles (quick wins for short term, targets for long-term):

 \Rightarrow Quick wins: ____

 \Rightarrow Target Profiles: _____

D. 3. Means (products, services, tools...)

The objective for mapping and segment suppliers is to get the greatest effectiveness in the implementation quality and user satisfaction through the renovation process.

Now you know which buildings you want to address (for replicability) and who you will need to approach (for engagement) in order to trigger an effective and efficient renovation path. So you just need to find out how feasible and reliable those renovations are.

We follow here the same structure than for mapping buildings and citizens but related to the people and companies providing services and solutions for them (previously targeted).





First collect information about your construction sector context (regulations, history, market, business, traditions, problems...):

Then select your characterization criteria:

- Process approach, for accompanying and providing customed solutions (based on the strategies to be defined from the buildings' typologies analysis). This approach is much related with the morphological approach for building characterization, intended for a full deep renovation.
- Solution approach, for providing specific products and/or services to be defined from the buildings' typologies analysis. This approach is much related with the components approach for building characterization, intended for a step-by-step renovation.

And list the attributes related to previous approach that you would need to analyse:

Attribute	availability	thresholds/ categories	source	format	granularity	date	comments

Now is time to mix, overlap, cluster: define your supplier's profiles, keeping in mind which context circumstances or benefits related to your approach are interesting for you:

Profile	Attribute (interval)	Attribute (interval)	Attribute (interval)	Attribute (interval)	Attribute (interval)	Solution COMPLEXITY	comments

And finally, you need to quantify (& locate):

Profile	Area/ District/ City	Area/ District/ City	Area/ District/ City	City	Rate	IMPACT	comments
Number							
Rate							





According to previous data, select your target profiles (quick wins for short term, targets for long-term):

 \Rightarrow Quick wins: _____

 \Rightarrow Suppliers' Profiles: _____

E. Summary

This last step consists of putting everything together to have a better overview:

Area/ District/ City	Area (Km2)	Dwellings (buildings)	Population (households)	Contractors	Building Typology (n)	Demand profile (n)	Supplier profile (n)
					To Solutions	To community	To network





TEMPLATES STEP 2. DEMAND SIDE FOCUS

ω	E. The communication strategy	How to drive demand side motivation into the market opportunity?		0
and side s	F. The motivation	Which are the motivations of homeowners? Which is the correct message to guide demand interests into OSS context opportunity? Which channels should be used to reach our targeted audience?		
2 Demand focus	G. The marketing materials	Which are the correct marketing materials and activities to resonate with the different targets motivations and clearly deliver the message?		۲
	H. The community	Which are your local well-known existing places and channels for distributing and exploiting the marketing materials? Which are your local stakeholders and potential allies to fine-tune campaigns and implement specific actions?		٢

Figure 1. Test materials for step 2

This step (and its sub-steps) aims to design a proper long-term communication strategy and build an involved and durable stakeholders' community. The document required to define your local context demand side needs, which involves the four sub-steps (from E to H), is available in <u>D2.2. Guideline for</u> long-term citizen engagement.

Introduction

The objective is to design a communication strategy for the demand side profiles, by detecting potential opportunities to on-board, appropriate messages and best fitting channels, to get them to the Citizen Hub and their most suitable renovation path. This is to be done without losing sight of the design of adapted marketing materials and training programs.

A. Needs, motivations & barriers

Before starting this journey, have your Mapping tables at hand.

A.1. Targeted Buildings

The objective of defining building typologies is to get the greatest effectiveness in the definition of targeted buildings intervention categories.

Think of the data sources available at your context level in order to know better your buildings weaknesses and potential solutions (such as mandatory reports or certificates which might be analysed in order to extract information):





Now, for each of your targeted building typologies, note the component (façade, roof, heating system...) on which you could more easily act to improve its energy performance, and the solution type you would propose (change into..., addition of...)

Building typology	Component	Solution type

Not forgetting a potential step by step approach for going from a single measure implementation to a deep retrofitting. Select the most suitable strategies in your context:

- o Low maintenance
- o Ecology
- \circ Economical
- o Passive house
- o Lifespan
- \circ Comfort
- Low energy consumption
- o Integral
- \circ All-electric
- Other:_____

A.2. Targeted population

The objective of defining personas is to get the greatest effectiveness in the definition of targeted population wishes and possibilities.

Think of the data sources available at your context level in order to know better your citizen motivations and opportunities to on-board on the renovation process (such as administration surveys or scientific studies):

Now, for each of your targeted demand profiles, note the motivations (necessity, pleasure, step-up...), opportunities (existing problems, grants...), objectives (renovation, replication, dissemination...), drivers (status, access, power, stuff) and opportunities of success (very low to very high):





Demand profile	Motivation	Opportunities	Objective	Driver	Success?

B. Campaign strategy design

B.1. Targeted Buildings

The objective of defining a building typology itinerary is to get the greatest impact from the communication strategy messages and channels.

According to the itineraries' strategy adopted for this step, we start defining the communication strategy structure related to each building stock categories. For each of your building typologies, define the opportunity to renovate (an attribute that clearly leads to a potential intervention), the message or approach and the channel (things or allies delivering the message). Be aware that they can be more than one:

Building typology	Opportunity	Message	Channel

B.2. Targeted Population

The objective of defining a demand profile itinerary is to get the greatest effectiveness in the definition of the communication strategy messages and channels.

According to the itineraries' strategy adopted for this step, we start defining the communication strategy structure related to the demand side profiles. For each of your demand profiles, define the opportunity to renovate (a moment or action that clearly leads to a potential intervention), the message or approach and the channel (things or allies delivering the message). Be aware that they can be more than one:





Demand profile	Opportunity	Message	Channel

C. Community Building

According to the itineraries' strategy adopted for this step, we need to get to the previously detected stakeholders and potential allies, that would be contacted in order to fine-tune campaigns and implement specific actions.

C.1. Targeted stakeholders

The objective of building a Demand side –Advisory Board is to get the greatest closeness to the local context from the personas/ profiles' descriptions (fine-tunning) and implement better communication campaigns.

First part of this section is to involve local organizations in touch with targeted population, which have expertise in dealing and communicating with them. On the other hand, community leaders, public figures as well as local "grass roots" organizations that are motivated to support energy efficiency for its public benefits, including economic well-being of community members, and community carbon mitigation goals are included to promote the renovation initiatives. Therefore, the Sav€ the Homes **Advisory Boards** (StHAB) have a pivotal role in establishing sustainable networks to support the local eco-systems.

Think of your natural allies already detected in the Mapping activity and those who have arisen while thinking on potential channels to deliver your messages. Define their adscription (public or private), their team (grouping entities performing the same king of activities, such as condominium, consumers' association...), and objective for contacting them (refine communication strategy, disseminate...):

Entity	Public/ Private	Team	Objective





Summary

As a conclusion, all the detected messages and channels, are to be translated into allies, resources, products and services, and put together so to understand the next activities needed to perform, the contacts to be made, and the channels and relations to get, in the pilot field activities:

	Messages &	channels	
Offered by t	Offered by the Citizen Hub		ub orbit
Content	Strategy	External Resources	Allies
To customer journey & business model		To Solutions	To Contacts (AB) and campaigns





TEMPLATES STEP 3. SUPPLY SIDE FOCUS

	I. The collaboration strategy	How to drive supply side motivation into the market opportunity?		۲
Supply side focus	J. The motivation	Which are the motivations of the supply side profiles for engaging in the OSS renovation services network? Which is the message to orient supply capacities within the OSS context opportunity? Which are the correct channels to ensure their participation?		۲
3 8	K. The network	Which measures can avoid the current fragmented market and lack of coordination? How can a services network be built?		۲
	L. The packs	Which packs of solutions are applicable in your context to ease the decision making and allow for a fair and reliable comparison?		۲

Figure 1. Test materials for step 3

This step (and its sub-steps) aims to define your local context supply side offer in order to design a proper long-term collaboration strategy and build an involved, durable stakeholders' network.

- For sub-steps I to K, additional information is available in <u>D2.3.- Citizen Hub protocol for</u> <u>supply side community building and network creation</u>. These steps are included in the section 3.1. Supply side involvement.
- For sub-step L. The packs, additional information is available in <u>D2.5. Suitable renovation</u> packages and supporting services for the two pilots. This step is included in the section Step 3.2. Offer design.

STEP 3.1.- SUPPLY SIDE INVOLVEMENT

Introduction

The objective is to design a collaboration strategy for the supply side profiles, by detecting potential opportunities to on-board, appropriate messages and best fitting channels, to get them to the Citizen Hub and find their most profitable renovation offer presentation. This is to be done without losing sight of the design of appropriate validation mechanisms and training programs.

A. Activities, size & roles

Before starting this journey, have your Mapping tables at hand.

The objective of defining supply side profiles is to design optimal and reliable offers improving trust and awareness of homeowners, reducing renovation decision making processes' costs and time, and mainstreaming innovative technical solutions adapted to the local context.

First of all, think of the purpose of your profiling:

- □ Is it for better offer the selected technical solutions?
- □ Is it for better design affordable collaboration agreements between them and the Citizen Hub?
- □ Is it for better design the citizen Hub customer journey?





Now, think of the data sources available at your context level in order to know better your supply side 'business as usual' and expertise, and strengths, weaknesses, motivations or expectations (such as public accountability, construction sector reports data, massive surveys or scientific papers which might be analysed in order to extract information or statistical sources aggregating construction sector metrics):

A.1. Targeted suppliers' solutions

From your supply side mapping (based on the object of the service or product provided), note the sector or subsector of expertise (insulation, RES, heating system...) which you would attract into the citizen hub, to improve residential buildings energy performance, the solution type you would prefer to implement (change into..., addition of...) on which part of the building (roof, façade...), and the profile characterizing the specific sector/ sub-sector:

Sector/ sub-sector	Component	Solution type	Profile
	To Capacities		

A.2. Targeted suppliers' capacities

Now, for each of your targeted supply side profiles, note the motivations (secure work, better work, more work...), opportunities (attending a training; asking about a specific solution; uploading documents...), objectives (activation, renovation, replication...), drivers (status, access, power, things) and opportunities of success (very low to very high):

Profile	Motivation	Opportunities	Objective	Driver	Success?
	To Campaign strategy design				





A.3. Targeted suppliers' roles

Finally, from the supply side mapping according to the role played on the renovation process (reseller, facilitator, installer, all-in...), note their strength or weakness (e.g., 5 to 1) on the different stages of the whole business experience (you can mention the specific functionality you refer to, in brackets), where they can help the citizen Hub (4-5), or the Citizen Hub can help them (1-2):

Role	On-boarding	Evaluation	Design	Construction	Follow-up
	To customer journey				

B. Campaign strategy design

B.1. Targeted Suppliers

The objective of defining a supplier profile itinerary is to get the greatest impact from the collaboration strategy messages and channels.

From this very objective, focus of the itinerary strategy depicted below is based on the supply side of the renovation process as subjects with different capacities, motivations and drivers, to whom our messages have to penetrate, and the selected channels have to reach.

Therefore, we start defining the collaboration strategy structure related to each target profile by defining the driver to involve them into the Citizen Hub activities and services' offer (the reward), the message or approach and the channel (things or allies delivering the message). Be aware that they can be more than one:

Profile	Driver	Message	Channel
L	1	1	To Notwork

To Network





C. Services network

According to the itineraries' strategy adopted for this step, we need to get to the previously detected stakeholders and potential allies, that would be contacted in order to fine-tune campaigns and implement specific actions.

C.1. Targeted stakeholders

The objective of building a Supply side –Advisory Board is to get the greatest closeness to the local context from the providers' profiles' descriptions (fine-tunning) and implement better collaboration campaigns.

First part of this section is to involve local organizations and associations in touch with targeted providers, which have expertise in organizing and communicating with them, to understand how they decide, plan and think, so to learn how this could affect their choices related to NZEB-renovation business, to help defining the right approach techniques. Therefore, the Sav€ the Homes **Advisory Boards** (StHAB) have a pivotal role in establishing sustainable networks to support the local ecosystems.

Think of your natural allies already detected in the Mapping activity and those who have arisen while thinking on potential channels to deliver your messages. Define their adscription (public or private), their team (grouping entities performing the same kind of activities, such as professionals – facilitators, installers...-, sectorial business associations...), and objective for contacting them (refine collaboration strategy, disseminate, join efforts...) and why (channelling assets):

Entity	Public/ Private	Team	Objective (channel)

D. Summary

As a conclusion, all the detected messages and channels, are to be translated into allies, resources, products and services, and put together so to understand the next activities needed to perform, the contacts to be made, and the channels and relations to get, in the pilot field activities:

	Messages & channels					
Offered by t	he Citizen Hub	Citizen Hub orbit				
Content (What?)	Content (What?) Strategy (How?)		Allies (Through whom?)			
To Customer Journey & Business Model		To Training, Materials & Tools	To Contacts (ABs) & Campaigns			





STEP 3.2- OFFER DESIGN

Introduction

This task will help you design your solutions offer by a three-step approach:

- 1) Verification of the mapping: The outcomes of T2.1, 2.2 and 2.3 are capital, so have them at hand.
- Renovation packages: most energy efficient measures will be chosen that answer the needs of the building segments in the pilot cities (outcomes of T2.1) as also identified buyer personas (answering the motivational drivers)
- 3) Creation of the Citizen Hub offer considering the supply networks and financial options

For each targeted sector we will focus on the characteristics (opportunities) and drivers (messages) to lead to an energy renovation solution (strategy), and how the citizen hub will use these solutions characteristics to promote them (channels, info, tools...)

A. Verification of the mapping outcomes

A.1. Targeted Buildings

The objective of targeting building typologies is to get the greatest impact with the promotion of energy renovation solutions

Remember how your targeted buildings are: _____

What are their opportunities for intervention and how can you translate those into an specific **action** (class) in to a building **component** (category). How would you describe the **solutions** (Measure)?

Building characteristic From D2.2 & 2.2	component (category)	Action (Class)	Solution (Measure)?

This is the base for the definition of tips, recommendations and **solutions**.





A.2. Targeted population

The objective of targeting personas is to get the greatest effectiveness in the adoption of the promoted solutions

Remember how your targeted population is: ______

What are their interests for intervention and how can you translate those into drivers and triggers you could pull according to their buildings' needs (this is, the potential measures drafted in previous step)

Personas From D2.1 & 2.2	Interest	driver	Solution (Measure)? From A. Targeted buildings

This is the base for the definition of **strategies** to promote solution packs.

A.3. Targeted Providers

The objective of targeting supply side profiles is to ensure that proposed solutions are available on the local market.

Remember how your targeted suppliers are: ______

What are their capacities for offering products and services and how can you translate those into more or less complete packages (i.e., does it include the project, the permits, the maintenance...?) covering the whole requirements for implementing the measures drafted in previous steps

Sectors From D2.1 & 2.3	Capacities	Service offered	Solution (Measure)? From A. Targeted buildings

This is the base for the assessment of the **availability** of the selected solution packages.





B. Renovation packages

Based on previous section, we will shape the kind of solutions to be promoted from the Citizen hub, in terms of a structured description allowing later on the set of a comparable Citizen Hub offer, including specific providers, commercial brands, financing options, etc...

B.1. Measures

In this section we will define the characterization of the types of measures to promote, in terms of qualitative attributes and quantitative variables.

From the analysis of targeted buildings, it is clear the interest of stablishing the component on which the measure applies (category) and the action that the measure implies (class), both of **the qualitative attributes.**

Category (Component)						
Name From A) Targeted buildings	Description	Driver From B) Targeted population				

Class (Action)						
Name From A) Targeted buildings	Description	Driver From B) Targeted population				

In order to sort or compare, it is also important to **quantify some variables**, which will be better defined according to the targeted population drivers.

	Variables					
Driver From B) Targeted population	Name	Description				





As a summary, take the Solutions, name them, and characterize them according to the previously defined Classes and Categories (attributes), and their impact in the previously defined Variables:

	Attributes			Variables			
Solution (Measure)	Name	Class (Action)	Category (Component)	Var 1	Var 1	Var 3	
				Improvement: Low/ Medium/ Hig			/ Medium/ High

B.2. Scenarios

Now take into account that individual measures might not be enough to achieve some targets in terms of one or more variables (i.e., not saving enough to get a grant).

In this case, we might be in need to **combine** previous measures into different solution packs, defined as per the **promoted strategy** used to empower them:

		Attributes		Varia	ables	
Pack	Measures	Strategy	Var 1	Var 1	Var 3	
00		Do nothing (baseline, according to building type)			(Target!)	

C. The Citizen Hub offer

Now you should design the integrated solutions for home renovations in cooperation with the supply network and the negotiations reached there.

C.1. Network

As presented in other deliverables (D2.1 & D2.3), creating supply side networks is capital to root the collaboration strategies on the local context, and get to offer solutions available by trusted suppliers. Summarize below your best friend related to the solutions you are trying to promote. Be aware that access to some of these services might come with a target in some variables defined in E (e.g., minimum budget)





Actor From D2.1 & 2.3	Service offered From C) Targeted suppliers	Description	Variable (and target)?

C.2. Financial solutions

Finally, think of D2.6 and try to fit best financing options to your selected solutions. Take into account that some of these options can define targets needed in section E (e.g., minimum investment or savings achieved)

Financing option From D2.6	Service offered (loan/ grant)	Description	Variable (and target)?

C.3. Solution packs

Together with the work in demonstration buildings in WP4, solution packs will be defined as a combination of the whole itinerary:

- A. Targeted buildings
- B. Targeted personas
- C. Targeted providers
- D. Examples of measures
- E. scenarios
- F. Network
- G. Financial solutions





TEMPLATES STEP 4. THE STH CUSTOMER JOURNEY

journey	M. The assistance strategy	Which is your customer journey framework? Which functionalities do you intend to provide?		۲
The StH customer j	N. The Services	Which are the existing local needs that will define the touchpoints and the sub-stops? Which are the existing resources (services, tools or activities) solving these touchpoints? Which are the gaps that will be developed to complete the assistance?		۲
4	O. The tools	Which tools are required to solve each service?		0
00	P. The Staff	Which are the objectives and target groups for the training programme of your OSS?		۲

Table 1. Test materials for step 4

This step (and its sub-steps) aims to define your local context implementation strategy in order to design a proper long-term smooth experience customer journey harmonized with the StH validated framework.

- For sub-steps **M. The assistance strategy** and **O. The tools,** additional information is available in **D3.2 Strategy & structure to implement the Citizen Hub concept for the two pilots.**
- For sub-step **N. The services,** the DIY document is available in <u>D2.4.- Mapped suitable</u> protocols and methods for quality control of the renovation works (including skills definition) and for buildings performance monitoring.
- For sub-step **P. The staff**, the DIY document is available in **D3.6. Training program for the** <u>Citizen hub staff in the two pilots</u>.

STEP 4.1. – IMPLEMENTATION STRATEGY

Introduction

First of all, keep in mind that this methodology aims to draft a structure and strategy for implementing the Citizen Hub concept in your context. This means you need to scout your **adaptation to the StH customer journey**, fill the gaps, **and design your services menu**.

For doing so, have at hand <u>Deliverable 3.2</u>, where you will find, for each stage:

- Objectives and goals
- Risks
- Touchpoints

This checklist deals therefore with the mapping of suitable tools and mechanisms that can assist you with the implementation of each step of the customer journey model and help follow the decision-making process of the customer.





A. The customer journey framework

Please check table below and just **mark the steps** you think you need to implement for delivering a complete service to your customers and split your answer **according to the profile to whom the service is addressed**.

You can add comments that help you define the functionalities or tools that you are looking for on each of them.

	Stop 0 - Ol	N-BOARDING		
	AWARENESS	INTERACTION		
demand				
supply				
staff				
	Stop 1 - E	VALUATION		
	SELF EVALUATION	ASSISTED EVALUATION		
demand				
supply				
staff				
	Ste	op 2 - DESIGN & FORMALIZATI	ON	
	DESIGN	SELECTION	FORMALIZATION	
demand				
supply				
staff				
		Stop 3 - RE	ALIZATION	
	TRAINING	ASSESSMENT	MEDIATION	QUALITY ASSURANCE
demand				
supply				
staff				
		Stop 4 - VA	LIDATION	
	FEEDBACK	COMPARISON	MONITORING	CERTIFICATION
demand				
supply				
staff				





B. Your customer Journey

Now we go stop by stop, taking into account each stop objectives and goals and risks to avoid (see **iError! No se encuentra el origen de la referencia..2.**), and trying to understand the definition of each functionality needed for each step as a touchpoint, since the transition from one step to the next is crucial. The points of **interaction** between the customer and the Citizen Hub are the so-called 'touchpoints. The touchpoints link directly to the experience of the customer in each step of the journey. Each step has its own drivers and barriers which show the reasons for the potential customer to continue or to quit the process.

On each the next tables, fill the **functionalities** you intend to provide on each step, and, if any, describe the **existing tool or mechanism** that you can use to deliver that functionality (in blue fonts), or describe the way you would like to provide the service, when you do not have an existing tool (in red fonts). Red functionalities are your service menu **gaps**, and you will need to further work on finding out a way to deliver that service, so to prevent customers to dropout the process.

Γ	Stop 0 - ON-BOARDING				
	AWAR	ENESS	INTERA	ACTION	
demand					
supply					
staff					
	Functionalities	Tools	Functionalities	Tools	
	To T3.6 & T4.7 Platform functionalities definition & implementation				

For the onboarding phase you will count on the tools ______

_____ to help users go to the next step.

(To T4.7 Platform functionalities implementation)

At the other end, you need to find out how to overcome the lack of resources for ______

and avoid users to dropout the process.

(To T3.6 Platform functionalities definition)





Now for the next stop, remember, fill the **functionalities** you intend to provide on each step, and, if any, describe the **existing tool or mechanism** that you can use to deliver that functionality (in blue fonts), or describe the way you would like to provide the service, when you do not have an existing tool (in red fonts). Red functionalities are your service menu **gaps**, and you will need to further work on finding out a way to deliver that service, so to prevent customers to dropout the process.

		Stop 1 - EV	ALUATION			
	AUTOEVA	LUATION	ASSISTED E	ASSISTED EVALUATION		
demand						
supply						
staff						
	Functionalities	Tools	Functionalities	Tools		
	To T3.6 8	& T4.7 Platform functiona	lities definition & implen	nentation		

For the evaluation phase you will count on the tools ______

to help users go to the next step.

(To T4.7 Platform functionalities implementation)

At the other end, you need to find out how to overcome the lack of resources for ______

and avoid users to dropout the process.

(To T3.6 Platform functionalities definition)





Same for the next step:

		Stop 2 - DESIGN & FORMALIZATION							
	DES	IGN	SELEC	TION	FORMAL	IZATION			
demand									
supply									
staff									
	Functionalities	Tools	Functionalities	Tools	Functionalities	Tools			
		To T3.6 & T4.7 Platform functionalities definition & implementation							

For the design and formalization phase you will count on the tools ______

to help users go to the next step.

(To T4.7 Platform functionalities implementation)

At the other end, you need to find out how to overcome the lack of resources for ______

and avoid users to dropout the process.

Same for the next step:

Stop 3 - REALIZATION





	TRAII	NING	ASSESS	SMENT	MEDI	ATION	QUALITY A	SSURANCE
demand								
supply								
staff								
	Functionalities	Tools	Functionalities	Tools	Functionalities	Tools	Functionalities	Tools
			To T3.6 & T4.7	Platform functiona	lities definition & i	mplementation		

For the realization phase you will count on the tools ______

to help users go to the next step.

(To T4.7 Platform functionalities implementation)

At the other end, you need to find out how to overcome the lack of resources for ______

_____ and avoid users to dropout the process.

(To T3.6 Platform functionalities definition)



Template step 4. The StH customer journey



And for the final step:

		Stop 4 - VALIDATION						
	FEED	ВАСК	COMPARISON		MONITORING		CERTIFICATION	
demand								
supply								
staff								
	Functionalities	Tools	Functionalities	Tools	Functionalities	Tools	Functionalities	Tools
			To T3.6 & T4.7	Platform functiona	alities definition & in	mplementation		

For the validation phase you will count on the tools

to help users go to the next step.

(To T4.7 Platform functionalities implementation)

At the other end, you need to find out how to overcome the lack of resources for ______

_____ and avoid users to dropout the process.

(To T3.6 Platform functionalities definition)





STEP 4.2 - SUPPORTING SERVICES MAP

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

First, keep in mind that this methodology aims to draft a set supporting services for ensuring quality of works suited for all the itineraries designed according to previous tasks selected targets and solutions, at the moment of its implementation and for a potential roll-out.

This checklist deals therefore with the mapping of suitable protocols and methods for quality control of the renovation works (including skills definition) and for buildings performance monitoring, this is, the already available methods, tools and services suitable for the renovation process, beyond the holistic home renovation personal assistance offered by the Citizen Hub, such as:

- quality control of the renovation works
- definition of skills
- energy, comfort and IEQ performance monitoring (and data processing and display in an attractive and understandable way)

Furthermore, it is investigated what other local activities and organizations are applicable for efficient Citizen Hub roll-out (e.g., existing energy or housing offices).

A. The existing resources in place

Before starting this journey, have Deliverable 2.4 Section 3 at hand.

This section is twofold, for each category of supporting services: in one hand, the existing initiatives at EU level that can be used in the ecosystem will be listed (see Section 3 of the Deliverable 2.4), and on the other hand, the existing local initiatives or in-house know-how are put together.

A. 1. Training

The objective of mapping the existing and applicable training resources is to enhance the

First of all, think of the **purpose** of your mapping training resources:

- □ Is it for ensuring the understandability of the proposed quality solutions?
- Is it for ensuring the quality of the designed solutions?
- Is it for ensuring the quality of the implemented solutions?

First option focuses on demand side and onboarding, evaluating stages; second and third focus on supply side for both design and construction stages, and affect the elaboration stage services provided by the Citizen Hub.

Purpose	Focus	Stages			
a)	Demand				
b)	Supply				
c)	Supply				
Other?					
	To Service Model				

Now, think of the training **sources** available at your context level in order to know better your demand and/or supply side sources of (in)formation when intending to find out or perform the best





interventions in the residential building sector (such as YouTube videos, secondary school specialization, professionals' associations training, private academies...):

Now, look at next table, which intends to summarize the existing supporting services related to training, listed above, and classify them keeping in mind why will you be able to **capitalize** them in your service menu definition, this is, because:

- they come from EU projects applicable in your context,
- they belong to you or your partners, or
- they are already working in your area and can find complementarities for both entities.

This is important because the agreements for using them will be different in the different options.

Remember: these are resources in place, regarding training and capacitation, for ensuring quality of the renovation works facilitated by the Citizen Hub through e.g., the professionals, installers and/or contractors registries.

EU (From D2.4 section 3 or others)	In-house (Partners resources)	local (Geographically available initiatives)
Т	o Service Menu	То рор-ир

A.2. Certification

The objective of mapping the existing and applicable certification schemes in place is to **proof** the quality of the solutions proposed and renovation design, works and results facilitated through the OSS services through an independent body (impartial third person).

First of all, think of the **purpose** of your mapping certification resources:

- a) Is it for proofing the quality of the proposed solutions?
- □ b) Is it for proofing the quality of the designed solutions?
- □ c) Is it for proofing the quality of the implemented solutions?

First option focuses on demand side and onboarding, evaluating stages; second and third focus on supply side for both design and evaluation stages, and affect the elaboration stage services provided by the Citizen Hub.

Purpose	Focus	Stages				
a)	Demand					





b)	Supply					
c)	Supply					
Other?						
	To Service Model					

Now, think of the certification **sources** available at your context level in order to know better your demand and/or supply options to get or provide trusted services (such as mandatory schemes or regulations, voluntary labels or certifications, self-assessment tools, questionnaires or tests...):

Now, look at next table, which intends to summarize the existing supporting services related to certification, listed above, and classify them keeping in mind why will you be able to **capitalize** them in your service menu definition, this is, because:

- they come from EU projects applicable in your context,
- they belong to you or your partners, or
- they are already working in your area and can find complementarities for both entities.

This is important because the agreements for using them will be different in the different options.

Remember: these are resources in place regarding certification of the quality of the renovation works facilitated by the Citizen Hub through e.g., the solution packs, including products and materials, the energy assessment or the results evaluation.

EU (From D2.4 section 3 or others)	In-house (Partners resources)	local (Geographically available initiatives)	
	To Service Menu		To pop-up

A.3. Monitoring

The objective of mapping the existing and applicable monitoring protocols available in place is to **demonstrate** the quality of the renovation works facilitated through the OSS services by the 'seeing is believing' mechanism.

In this case, your **purpose** focuses on the demand side and tackles their (in)ability to read complex data, indicators or results from certifications documents or regulations and the (lack of) time to train. This mechanism is based on the simple before-after comparison of the real performance of the homes.

	Purpose	Focus	Stages							
	unique	Demand								
	Other?									
-		To Service Model								

Now, think of the monitoring **sources** available at your context level in order to know better your demand side options to get friendly, understandable, relatable information about their homes'





performance (such as stand-alone devices, services related to energy supply contracts or specialized companies...):

Now, look at next table, which intends to summarize the existing supporting services related to monitoring, listed above, and classify them keeping in mind why will you be able to **capitalize** them in your service menu definition, this is, because:

- they come from EU projects applicable in your context,
- they belong to you or your partners, or
- they are already working in your area and can find complementarities for both entities.

This is important because the agreements for using them will be different in the different options.

Remember: these are resources in place regarding monitoring of the improvements provided by the renovation works facilitated by the Citizen Hub through the comparison before-after renovation, this is, from the beginning to the end of the process through e.g., the (pre)evaluation and (post)validation services.

EU (From D2.4 section 3 or others)	In-house (Partners resources)	loc (Geographically av			
	То рор-ир				

B. The Citizen Hub supporting services proposal

The main objective in this step is to list and allocate the analysed existing supporting tools and protocols in the corresponding stage of the OSS customer journey service offer.

B.1. Services Model

The objective of defining a supporting services model is to get a clear view of the **targets** and purposes of the offered services that guarantee the quality of the works facilitated through the OSS services and on which **stages** of the process

Now, remember your **purpose** for collecting supporting services on each domain: training, certifying, monitoring; and define your quality check model, by just **colouring** the cells according to your needs:

Stage:			Training	Certification	Monitoring
0 - onboar	ding				
1 – evalua	tion/ design				
2 – elabor	ation/ formali	zation			
3 - constru	ction				
4 - validation					
Focus: Demand Supply				To Service Menu	





B.2. Services Menu

The objective of defining a supporting services proposal is to get a clear view of the available and applicable existing **resources** helping ensure the quality of the works facilitated through the OSS services according to your model – and identify the **gaps**!

Now, use the previously coloured table and fill the coloured cells with the **best fitting resources** that you can capitalize in any way and therefore offer through your citizen hub implementation. It is considered that you will use the most aligned/appropriate existing resources in the different stages of the Customer Journey according to the previous steps.

Stage:			Training	Certification	Monitoring	
0 - onboard	ling					
1 – evaluat	on/ design					
2 – elabora	tion/ formali	zation				
3 - construc	ction					
4 - validation						
Focus:	Demand	Supply	To Implementation strategy (& platform functionalities) - gaps to pop-up			

This table will help design the implementation strategy and local platform functionalities of your local Citizen Hub according to the customer journey and identify functionalities or services gaps for which alternatives need to be provided.

C. The Citizen Hub roll-out proposal

Finally, the objective of this step is to not only reviewing the existing supporting services available and applicable to offer and/or use within the OSS services menu, but also scouting the existing local sister initiatives that could host temporarily or eventually part or the whole OSS services in areas out of the Citizen Hub territorial or functional competences, in order to expand its reach.

C.1. Decentralization strategy (pop-up)

The objective of decentralization based on existing sister initiatives is to **extend reach** of the OSS services and facilitate access, to maximize project impact

First of all, be aware that some initiatives or services have been listed in previous steps, since they provide specific services related to training, certifying or monitoring, but there might be others not so specific but **rooted**, **popular or trusted** sources of information regarding dwelling or energy issues (e.g. energy cooperatives, neighbours associations...)

Starting from previous steps local (geographically available) initiatives, try to fill the table below to find out which are your potential allies depending on:

- the services they can provide according to their usual activities and actual spaces (remember gaps from previous step!),
- the targeted reach they enable,
- the proposed schedule for public attention, and
- the mutual benefits enabling the collaboration.





Ask your partners and do not limit to initiatives listed above: there might be others, complementary to your designed Citizen Hub concept!

initiative	Stage/ What (Services to be provided)	Territory/ Where (Geographical scope)	Periodicity/ When (Temporal scope)	Benefits/ Why (Collaboration framework)					
1	To Implementation strategy (and platform functionalities)								

This table will help design the implementation strategy and local platform functionalities of your local Citizen Hub according to the customer journey and the identified functionalities or services gaps.





STEP 4.3. - 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.

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 <u>D3.2. Strategy and structure to implement the Citizen Hub</u> concept for the two pilots 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 stops, 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 _____

	Stop 0 - ON-BOARDING					
		AWARENESS	INTERACTION			
		Customer service		Customer service		
profile		Legal		Legal		
prc		Technician		Technician		
		Other		Other		

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





Stop 1 – evaluation objectives for my citizen hub are to ______

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

	Stop 1 - EVALUATION						
		SELF EVALUATION		ASSISTED EVALUATION			
		Customer service		Customer service			
profile		Legal		Legal			
prc		Technician		Technician			
		Other		Other			

Stop 2 – elaboration objectives for my citizen hub are to _____

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

	Stop 2 - DESIGN & FORMALIZATION							
	DESIGN			SELECTION	FORMALIZATION			
0		Customer service		Customer service		Customer service		
ofile		Legal		Legal		Legal		
profile		Technician		Technician		Technician		
		Other		Other		Other		





Stop 3 – realization objectives for my citizen hub are to _____

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

	Stop 3 – REALIZATION									
		TRAINING	ASSESSMENT			MEDIATION		QUALITY ASSURANCE		
		Customer service		Customer service		Customer service		Customer service		
profile		Legal		Legal		Legal		Legal		
pro		Technician		Technician		Technician		Technician		
		Other		Other		Other		Other		

Stop 4 – validation objectives for my citizen hub are to ______

.....

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

	Stop 4 - VALIDATION							
	FEEDBACK			COMPARISON		MONITORING		CERTIFICATION
		Customer service		Customer service		Customer service		Customer service
profile		Legal		Legal		Legal		Legal
pro		Technician		Technician		Technician		Technician
		Other		Other		Other		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:

	M1: Context & framework: local legislation, subsidies and grants,	M2: Customer journey: services' menu, touchpoints,	M3: Tools & serve Specific material supporting tools within the custo	ls for Communication skills used and basic customer mer service skills
step	competences, etc	dependencies, etc	journey stop	S
AWARENESS				
INTERACTION				
SELF EVALUATION				
ASSISTED EVALUATION				
DESIGN				
SELECTION				
FORMALIZATION				
TRAINING				
ASSESSMENT				
MEDIATION				
QUALITY ASSURANCE				
FEEDBACK				
COMPARISON				
MONITORING				
CERTIFICATION				
Modality	Tailor made trainir (half) day	ng Workin	ig 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	
	Tailor	Customer	Observation	🗆 Team	
	🗆 Group	Legal	🗆 test	individual	
	Course	technician			
Stops/ steps	Provider	Format	Duration	Cost	
(From customer	(Fatity a second)	Present	(1	(6)	
journey)	(Entity name)	Online	(hours)	(€)	
NAME					
Description					
			Participants	Total cost	

Number	Modality	Profiles	Evaluation	Certificate
	🗆 Tailor	Customer	Observation	🗆 Team
	🗆 Group	Legal	□ test	individual
	Course	technician		
Stops/ steps	Provider	Format	Duration	Cost
(From customer	(Entity name)	Present	(hours)	(£)
journey)	(Entity name)	Online	(hours)	(€)
NAME				
Description				
			Participants	Total cost
			(number)	(€)





E. Budget

Now summarize your cost for the **setting up** of the citizen Hub:

Number	Stops/ steps	Name	Participants	Cost
	(From customer journey)	(name)	(number)	(€)
			€ for	set up

And reserve some budget for regular training **each year**:

Number	Stops/ steps	Name	Participants	Cost
	(From customer journey)	(name)	(number)	(€)
			€ea	ch year

And plan your needed **timeline** (hollow the corresponding cell and write the staff profile attending the training). For service continuation, calculate 4 hours per day:

Number	W1	W2	W3	W4	W5	W6	W7	W8





TEMPLATES STEP 5. THE FOLLOW-UP | MONITORING

4	Q. The Sustainability Strategy		Which type of OSS do you have regarding its engagement level?		۲
	R. The Business Model		How can your OSS be self-sufficient? Which is its business model?		0
	S. The Risk assessment		Which are the potential risks of your OSS implementation? Which are their contingency plans?		۲
		KPIs	Which are the main KPIs to monitor the success of your OSS implementations and the custor satisfaction? – How are these KPIs gathered and monitored?		
	T. The Performance	Dashboard			۲
		Value (Satisfaction)			

Table 1. Test materials for step 5

This step (and its sub-steps) aims to define the way of ensuring the continuation on the mid-long term, measuring success and implementing improvements where needed.

- For sub-step **Q**. The Sustainability strategy the DIY document is available in <u>D3.3. Citizen Hub</u> <u>Business model for the two pilots</u>.
- For sub-step **R. The Business Model**, the DIY document is available in **D3.3. Citizen Hub** Business model for the two pilots.
- For sub-step **S. The Risk assessment**, the DIY document is available in **D4.5. Action plan, risk** assessment and quality assurance of the renovation activities.
- Finally, for sub-step **T. The Performance**, three documents are used:
 - o D4.2 Citizen Hub model agreement Citizen Hub model agreement.
 - D3.8. Monitoring data Plan for the two pilots.





Definition of OSS type

Please, fill the following table to define your OSS type regarding the engagement level. Indicate if the OSS includes the presence of technical assistance, contractor training and relations, subsidy offers or links and links to or offers of financing solutions. Based on this data, the OSS can be rated as low, medium, or high touch to pinpoint their engagement level. More information about the definition of the OSS type is available in **D3.3. Citizen Hub Business model for the two pilots**.

Туре	Target	(A)	(C)	(S)	(F)
Public/Private/ Non-profit/ PPP/PPCP	Single housing/ multifamily housing/ public buildings/ residential buildings/ social housing	Technical assistance Yes: ✓	Contractor relations Yes: ✓	Subsidies offers Yes: ✓	Financing solutions Yes: ✓

PPP = Public-Private Partnership

PPCP = Public-Private-Citizen Partnership

 \rightarrow Now, please indicate the combination of letters for your OSS: ____

And now, indicate the corresponding letter combination in the table below to know your type of OSS regarding its engagement level.

1. Low-	touch		2. Medium-touch				
F	A+S	A+C+S	A + C	A+F	A+C+F+(S)		

- Rating of 1. Low-touch A program only provides financing, or if it only offers technical advice in combination with subsidy info (and no contracting or financing). These only offer a single or a couple of services to homeowners, which may help to initiate the renovation process but does not facilitate it entirely.
- Rating of 2. Medium-touch Advice, contracting, and subsidies are provided (with no mention of financing); if advice and contracting are offered (no subsidies or financing); or if the OSS provides advice and financing (no contractor relations and/or subsidies). This type of OSS is a medium touch or medium intensity program as it provides homeowners with several resources that may be needed when renovating but lacks some elements to fully support renovation works.
- Rating of 3. High-touch Advice, contracting, and financing is provided (which may or may not include subsidies). This type of OSS is an all-encompassing integrated home renovation platform that offers all of the services potentially needed by homeowners when renovating their properties.





Business model canvas

In order to determine how the One-Stop-Shop (OSS) can be self-sufficient, a specific business model is necessary. One way to build up a business model in an efficient way is by using the Business Model Canvas (BMC) framework. In concrete, the BMC framework address the following points:

- Value creation which describes how value is created and the sources for this.
- Value delivery which describes how this created value is delivered to the customers.
- Capture of value which describes how the organization generates revenue and profit.

These three categories of value are analysed and designed by organizations using the BMC, shown in Figure below. Moreover, these three categories are acknowledged in academic literature to stress the central role of value in doing business (Richardson, 2008). This is also stressed as the central building block of the BMC, which is the *Value Proposition*.

Key Partners	P	Key Activities	Â	Value Proposition		Customer Relationships	\mathcal{Q}	Customer Segments	ß
		Key Resources	Ś			Channels			
Cost Structure				in in	Revenue Streams				G

The Business Model Canvas

Figure 1. The Business Model Canvas

Please, fill the following business model canvas (BMC). You can find the explanation of each one of the BMC blocks in **Section 3. Methodology** from **D3.3. Citizen Hub Business model for the two pilots.** The next table shows the example of Valencia city pilot BMC.





		1			
11 - Societal Costs		2 - Value Propositions		10 - Societal Revenu	e
8 - Key Partners	7 - Key Activities		4 - Customer Relations		1 - Customer Segments
6 - Key Resources			3 - Channels		
9 - Cost structure			5 - Revenue Streams		



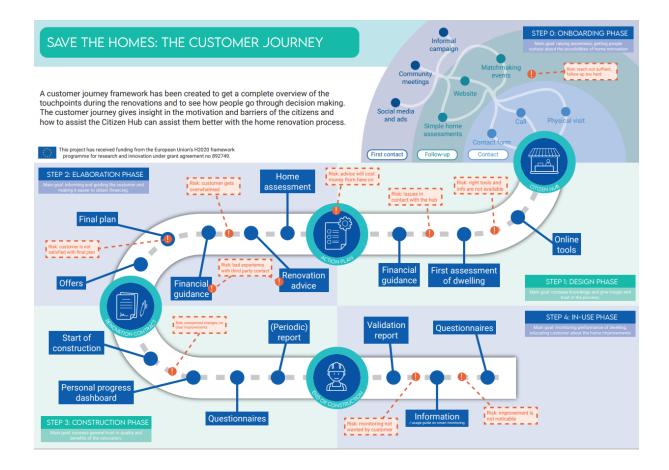


Risk assessment

The aim of this document is to review step-by-step the possible risks that could occur, and how to solve them or how to avoid them. Follower cities can choose to put steps together if local circumstances influence the outcome.

So, for each stop and sub-stop, it is needed to define:

- The main activity deployed, or service offered.
- The roles and actors implementing them.
- The delivered quality sought.
- The risks related.
- The potential solutions/ correction measures.







Please, fill the following tables with this information for each sub-step (from A to T).

STEP 0: ONBOARDING PHASE

Step	0: Onboarding
Sub-step	A: First contact
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	0: Onboarding
Sub-step	B: Follow-up
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	0: Onboarding
Sub-step	C: Contact
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	





STEP 1: DESIGN PHASE

Step	1: Design
Sub-step	D: First assessment of the dwelling
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	1: Design
Sub-step	E: Financial Guidance
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	1: Desing
Sub-step	F: Action plan
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	





STEP 2: ELABORATION PHASE

Step	2: Elaboration
Sub-step	G: Home assessment
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	2: Elaboration
Sub-step	H: Renovation advice
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	2: Elaboration
Sub-step	I: Financial guidance
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	2: Elaboration
Sub-step	J: Final plan
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	2: Elaboration
Sub-step	K: Offers
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	





STEP 3: CONSTRUCTION PHASE

Step	3: Construction
Sub-step	L: Renovation contract
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	3: Construction
Sub-step	M: Start of construction
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	3: Construction
Sub-step	N: Personal progress dashboard
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	3: Construction
Sub-step	O: Questionnaires
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	3: Construction
Sub-step	P: Periodic report
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	3: Construction
Sub-step	Q: End of construction
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	





STEP 4: IN-USE PHASE

Step	4: In-use
Sub-step	R: Validation
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	4: In-use
Sub-step S: Information/Usage guide on smart monitoring Main activity/service Roles and actors Polivered quality Risks related	
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	

Step	4: In-use
Sub-step	T: Questionnaires
Main activity/service	
Roles and actors	
Delivered quality	
Risks related	
Chance/Solution	





Monitoring: KPIs definition

The following table shows the KPIs proposed to quantify the level of achievement of distinct goals. The table shows the operational KPI divided in 6 different sections, the monitoring rate, and the gathering method. Please, fill de column "Availability" to reflect if your OSS can provide these KPIs. An extra row is proposed in each section in case you need to add new KPIs. Add more rows if needed. The explanation of the KPIs methodology definition is available in **D4.2** - **Citizen Hub model agreement including quality control system for the business model elements and monitoring protocols for evaluation of partners' activities.**





	Operational KPI	Monitoring rate	Data gathering method	Availability
	Costs	Monthly	Budget	
Citizen hub	Revenue to OPEX ratio	Monthly	Budget	
Citizen hub sustainability	Number of public loans or subsidies mobilised	Monthly	Budget	
	Other:			
	Number of first approaches by calls from potential contacts	Monthly	CRM	
Citizen hub sustainability	Number of first approaches by walk-ins of potential contacts	Monthly	CRM	
	Number of first approaches by emails from potential contacts	Monthly	CRM	
	Number of web visits by single-users	Monthly	CRM	
	Total number of first approaches of potential contacts	Monthly	CRM	
	Number of new contacts by calls	Monthly	CRM	
	Monthly conversion rate by calls	Monthly	CRM	
	Number of new contacts by walk ins	Monthly	CRM	
	Monthly conversion rate by walks ins	Monthly	CRM	
	Number of new contacts by emails	Monthly	CRM	
	Monthly conversion rate by emails	Monthly	CRM	
	Number of new contacts by web visits	Monthly	CRM	
	Monthly conversion rate by web visits	Monthly	CRM	
	Total number of new contacts of single-family dwellings	Monthly	CRM	
	Total number of new contacts of multi-family buildings	Monthly	CRM	
	Total number of new contacts	Monthly	CRM	
	Monthly conversion rate by total contacts	Monthly	CRM	
	Number of dwellings included in the new single-family contacts	Monthly	CRM	
	Number of dwellings included in the new multi-family building contacts	Monthly	CRM	
	Number of multi-family buildings included in the new multi-family building contacts	Monthly	CRM	



- 12 -



		1	
Total number of dwellings included in the total number of new contacts	Monthly	CRM	
Number of workshops/sessions	Monthly	CRM	
Monthly workshops/sessions conversion rate	Monthly	CRM	
Number of dwellings included in the workshops/sessions (for single-family)	Monthly	CRM	
Number of dwellings included in the workshops/sessions (for multi-family buildings)	Monthly	CRM	
Number of multi-family buildings included in the workshops/sessions	Monthly	CRM	
Total number of dwellings included in the workshops/sessions	Monthly	CRM	
Number of technical advice meetings	Monthly	CRM	
Monthly technical advice conversion rate	Monthly	CRM	
Number of dwellings included in the technical advice meetings (for single-family)	Monthly	CRM	
Number of dwellings included in the technical advice meetings (for multi-family buildings)	Monthly	CRM	
Number of multi-family buildings included in the technical advice meetings	Monthly	CRM	
Total number of dwellings included in the technical advice meetings	Monthly	CRM	
Number of financial advice meetings	Monthly	CRM	
Monthly financial advice conversion rate	Monthly	CRM	
Number of dwellings included in the financial advice meetings (for single-family)	Monthly	CRM	
Number of dwellings included in the financial advice meetings (for multi-family buildings)	Monthly	CRM	
Number of multi-family buildings included in the financial advice meetings	Monthly	CRM	
Total number of dwellings included in the financial advice meetings	Monthly	CRM	
Number of dwellings included in rehabilitation works	Monthly	CRM	
Monthly rehabilitation works conversion rate	Monthly	CRM	
Number of dwellings included in the rehabilitation works (for single-family)	Monthly	CRM	
Number of dwellings included in the rehabilitation works (for multi-family buildings)	Monthly	CRM	
Number of multi-family buildings included in the rehabilitation works	Monthly	CRM	
Average time/user by phase of the customer journey	Monthly	CRM	
Type of interventions hired in the the construction phase	Monthly	Exit survey	



- 13 -



	Positive reviews score	Monthly	Exit survey	
	Other:			
	Investment triggered	Monthly	Proposal and Exit survey	
Economic	Jobs created	Monthly	Proposal and Exit survey	
Impact	Amount of public loans or subsidies mobilised	Monthly	Proposal and Exit survey	
	Other:			
	Monthly gwh/y saved	Monthly	Proposal and Exit survey	
Environmental Impact	Monthly tCO2eq/y saved	Monthly	Proposal and Exit survey	
	Other:			
	Health and air quality benefits reviews	Monthly	Exit survey	
Social Impact	Satisfaction survey at the end of each phase	Monthly	Exit survey	
	Other:			
	Number of new partnerships	Monthly	CRM	
Partnerships	Number of works done by recommended partner	Monthly	Survey + CRM	
	Value of works done by recommended partner	Monthly	Survey + CRM	
	Review score for each partner	Monthly	Survey + CRM	
	Contractor availability	Monthly	Survey + CRM	
	Other:			

Table 2.Business model KPIs for the Valencia city pilot





STEP 5.1. - MONITORING DATA TEMPLATES

This document will help your Municipality or Region to collect the monitoring data using a common evaluation template. This template will be connected with a data **dashboard** for monitoring and reporting KPIs and impacts. This document is published in **D3.8. Monitoring data Plan for the two pilots**, where more information about the monitoring data procedure can be found, and the corresponding excel spreadsheet is also available.

The document is divided in two parts:

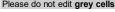
- A. **Customer Journey Evaluation template**: it concerns the realization and reporting of the Sav€ the Homes customers satisfaction within the whole customer journey. This section deals with both Monitored data (quantitative) and User perception data (qualitative)
- B. The monitoring of the renovation benefits: The relevant data related to building's energy performance and IEQ (well-being of occupants) will be stored, analysed and translated into information relevant for homeowners and local governments and municipalities. Therefore, this section deals with both Monitored data (quantitative) and building descriptions data (qualitative).

A. Customer Journey Evaluation template

This approach concerns the realization and reporting of the Sav€ the Homes customers satisfaction within the whole customer journey

Intro Tab:

Please follow instructions below:	
at the Demonter Table	
ot to Inputs Tab: 1 Select Country	-
2 Type your renovation goal	
3 Type your step factor goals	
ease do not edit grey cells	
o to MeasuredActions tab,	
or each action you implement, use a new row :	
1 Type the City where the Citizen Hub which implemented the action is located	
2 Select the stage to which the action corresponds	
0 onboarding actions	
1 evaluation/diagnosis actions (self-assessment, standard options)	
2 elaboration actions (customization, contracting, financing)	
3 quality assurance actions (mediations, site visits)	
4 validation actions (monitoring, sharing, certifying)	
5 satisfaction (questionnaire)	
3 Select the kind of mechanism the action corresponds to	
event on CH premises, human driven, dinamic information, to many users (general admission)	
publication online, static information, to many users	
tool online, dinamic information, to many users	
interview on CH premises, human driven, dinamic information, to one user	
meeting on CH premises, human driven, dinamic information, to many users (by invitation)	
visit on site, human driven, dinamic information, to many users (by invitation)	
follow-up online, to one user	
 4 Type a name to individualize and/or describe the action 5 Select the owner or reponsible for the action 	
6 Type the number of participants/ users/ visits to the action	
7 Type the average dedication needed for the staff od user to perform the action (in minutes, per participant if it is the case)	
ease do not edit grey cells	
sase do increair gray cens	
Please do not edit Variables or Hoja1 tabs	00







Inputs Tab

		renovation		step factor	
Country	stage	goal	people who	goals	is
select		0 0	is targeted		of those who then use a Citizen Hub service
		1 0	uses services		of those who finally get personal assessment
		2 0	gets personal assessment		of those who actually renovate
		3	renovates		
		4 0	monitors/ validates		of those who renovated
		0	understands results		of those who monitored/ validated
		5 0	is satisfied		of those who renovated

Measured Actions Tab:

						average
Citizen Ht 💌	stage 🚽	mechanism 🛛 💌	name 🗾	owner 🛛 💌	visits 🛛 💌	dedicatioi 💌

Variables Tab (protected):

Country	stage	mechanism	owner
ES	0	A. event	VCE
NL	1	B. publication	IVE
SI	2	C. tool	GVA
	3	D. interview	VRCP
	4	E. meeting	BHG
	5	F. visit	AE
		G. follow-up	HIA
			SCUG
			CLU

Hoja1 Tab (protected): automatically filled

Citizen Hub	Country	stage	mechanism	name	owner	visits	average ded ob	ojetivo





B. Benefits Monitoring templates.

B.1. Building description:

Initial Data

*Data from cadastral and provided by the occupant during the registration in the monitoring campaign

1. General data	# Number of monitoring case	<u> </u>
	Type of monitoring	
	Туроюду	
2. Personal data	Name	
	Address	
	City	
	Climate zone	
	Email	
	Telephone number	
3. Dwelling data	Constructed surface (Cadastral)	
	Year of construction	
	Current regulation	
	Cadastral reference	
	Listed building	
	Typer of building	
	Number of floors (building)	
	Dwelling location in building	
4. Facilities data	DHW	
	Heating	
	Cooling	
	Other	
5. Other data	Layouts	
	Energy performance certificate	
	Registered data	
	Gas bills	
6. Renovation	Windows	
measures after 2020?	Insulation (façade or roof)	
	DHW	
	Heating/Cooling	
	PV	
	Other	
	Date of measures	
7. Upcoming	Windows	
renovation measures?	Insulation (façade or roof)	
	DHW	
	Heating/Cooling	
	PV	
	Other	
	Expected date of measures	





Dwelling data

Number of floors Number of rooms Number of baths 2. Occupant Tenant/Owner Home occupants 18 Number of occupants 18 Number of occupants 18-65 Number of occupants 5-65 3. Facilities Lighting Type Control system and sensors DHW Type Year Heating system Type Year Heating system Type Year Control system and sensors Setpoint temperature Months of use Cooling system Type Year Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Ventilation Type Year Photovoltaic panels W/p Year Photovoltaic panels	1. General info	Orientation	
Number of baths 2. Occupant profile Tenant/Owner Home occupantcy range Number of occupants < 18 Number of occupants > 85 Number of occupants > 85 3. Facilities Lighting Type Control system and sensors DHW Type Control system and sensors DHW Yype Year Heating system Type Year Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Veral Control system and sensors Setpoint temperature Months of use Veral Months of use Veral Months of use Veral Months of use Veral Months of use		Number of floors	
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Number of occupants < 18 Number of occupants > 65 3. Facilities Lighting Type Control system and sensors DHW Type Year Heating system Type Year Gontrol system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Control system and sensors Setpoint temperature Months of use Ventilation Type Year Control system and sensors Setpoint temperature Months of use Ventilation Type Year Photovottaic panels KWp Year Appliances	profile	Home occupancy range	
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Setpoint temperature Months of use Ventilation Type Control system and sensors Year Photovoltaic panels kWp Year Appliances Fridge Washing machine Dryer Oven		Control system and sensors	
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TypeControl system and sensorsYearPhotovoltaic panelskWpYearYearAppliancesFridgeWashing machineDryerDishwasherOven		Months of use	
Control system and sensorsYearPhotovoltaic panelskWpYearAppliancesFridgeWashing machineDryerDishwasherOven		Ventilation	
Control system and sensorsYearPhotovoltaic panelskWpYearAppliancesFridgeWashing machineDryerDishwasherOven		Туре	
YearPhotovoltaic panelskWpYearYearAppliancesFridgeWashing machineDryerDishwasherOven			
kWp Year Appliances Fridge Washing machine Dryer Dishwasher Oven			
kWp Year Appliances Fridge Washing machine Dryer Dishwasher Oven		Photovoltaic panels	
Year Appliances Fridge Washing machine Dryer Dishwasher Oven			
Fridge Washing machine Dryer Dishwasher Oven		Year	
Fridge Washing machine Dryer Dishwasher Oven		Appliances	
Dryer Dishwasher Oven			
Dryer Dishwasher Oven		Washing machine	
Dishwasher Oven			
Type of cooker		Type of cooker	
Control system and sensors			
4. Envelope Windows	4. Envelope		





Type of glass
Type of frame
Type of opening
Air tightness
Blinds
Curtains
Solar protection
Façade
Width
Туре
Roof
Sloping/flat
Туре
Floor
Туре

Subjective wellbeing data

	How often do you experience discomfort due to…?	Never	Hardly ever	Sometimes	Frequently	Quite often	
	Dry air						
	Humid air						
	Stuffy "bad" air						
	Unpleasant odour						
	Dust and dirty						
	Noise						
ers	Draught						
1. Indoor parameters	Indoor temperature too high						
or pai	Indoor temperature too low						
opu	Light that is dim						
÷.	Light that causes glare and/or reflections						
	How often do you experience the following complaints?	Never	Hardly ever	Sometimes	Frequently	Quite often	
	Fatigue						
	Feeling heavy-headed						
	Headache						
	Dizziness						
	Difficulties concentrating						
s	Itching, burning or irritation of the eyes						
tom	Visual disturbances						
2. Symptoms	Irritated, stuffy or runny nose						
તં	Hoarse, dry throat						





	Respiratory problems							
	Sneezing, stuffy nose							
	Other							
hot	Do you feel the floor or wall cold/hot?	Never	Hardly ever	Sometimes	Frequently	Quite often		
3. Cold / hot wall	cold wall/window in winter							
3. C wal	hot wall/window in summer							
_	Indoor thermal feeling	Hot	Warm	Slightly warm	Neutral	Slightly cool	Cool	Cold
4. Thermal feeling	In winter, in your house it usually does							
4. Th feeli	In summer, in your house you usually do							
Б и	Clothing	Nothing	Light clothing	2 layers	Coat or more than 2 layers			
Clothing	In winter, you usually wear							
5. C	In summer, you usually wear							

Dwellings with energy measures

1. Measures	Implemented measures	
after 2020	Windows	
	Insulation (façade and/or roof)	
	DHW	
	Heating/Cooling	
	PV	
	Other	
	Date of the renovation measures	
	Reasons for the renovation	
	Too cold in winter	
	Too hot in summer	
	Too noisy	
	High humidity and/or mold	
	High energy consumption/cost	
	Other problems	
	It didn't have problems	
	Pictures previous state	
2. Feedback	Global appreciation of the works	
	Global appreciation of the measures	
	What has been the most difficult part of the process?	
	Have pre-existing problems improved?	
	Have you reduced your energy bills?	
3. Cost	Cost of the measures	
	Have you applied for Next Generation grants?	
	Has it been easy for you to process the grants?	





4. Tools	Have you used the renovEU tool?	_
	Has the renovEU tool been useful to you?	
	Have you gone to the Energy Office/Xaloc?	
	Has the OE/Xaloc been useful to you?	
5. Upcoming	Are you going to implement more measures?	
measures	Windows	
	Insulation (façade and/or roof)	
	DHW	
	Heating/Cooling	
	PV	
	Other	
	Reasons for further improvements	
	Are you going to apply for Next Generation grants?	

Dwellings without energy measures

1. Upcoming	Are you going to implement renovation measures?	
measures	Windows	
	Insulation (façade and/or roof)	
	DHW	
	Heating/Cooling	
	PV	
	Other	
	Planned date	
2. Reasons for renovation	Razones para llevar a cabo mejoras	
renovation	Too cold in winter	
	Too hot in summer	
	Too noisy	
	High humidity and/or mold	
	High energy consumption/cost	
	Other problems	
	It didn't have problems	
3. Budget	Estimated budget	
4. Grants	Are you going to apply for Next Generation grants?	
	Are you going to use renovEU tool?	-
	Are you going to visit the energy office/Xaloc?	
5. Problems	Biggest obstacles in the process so far	





B.2. Monitoring data description

Hoja1 Tab (themes and variables):

reg	country	building	unit	season	phase	family	variable	timestamp	value
from alldes	from alldes	from alldes	from alldes	Winter	Ante	Energy	Home energy consumption		
				Summer		IndoorEQ	CO2		
						Wellbeing	Air Temperature		
							Relative humididty		
						Illuminance level			
						TVOC			
				Formaldehydes					
			PM2.5						
							PM10		
							Activity		
							Clothing		
							Stressors-		
							Symptoms-		
							Thermal comfort		

Measurements Tab (description):

unit	measurement	season	phase	family	variable
from Dwelling	int	select	select	select	select

Values Tab (data collection):

measurement	timestamp	value
int	timestamp	double/string

Variables Tab:

season	phase	family	variable		
Winter	Ante	Energy	Home energy consumption		
Summer	Post	IndoorEQ	CO2		
	Wellbeing		Air Temperature		
			Relative humididty		
			Illuminance level		
			TVOC		
			Formaldehydes		
			PM2.5		
			PM10		
			Activity		
			Clothing		
			Stressors-		
			Symptoms-		
			Thermal comfort		





Monitoring: Value (satisfaction)

The objective of this document is the realization and reporting (satisfaction evaluation) of the Sav€ the Homes customers satisfaction after work is done (Stop 4 - In-Use phase). The following table shows the KPIs proposed to quantify the customer's satisfaction after using the customer journey. This KPIS are now included in the Pipeline KPIs and are explained in **D4.2** - **Citizen Hub model agreement including quality control system for the business model elements and monitoring protocols for evaluation of partners' activities.** Once the satisfaction evaluation questionnaire is fully completed, it will be available in **D4.8**. Evaluation of the Citizen Hub holistic renovation services and the customer journeys.

Please, fill the column "Follower" if your OSS can gather this satisfaction feedback from the customers:

KPI ID	KPI name	Answer by	Answer each	Answer format	Follower
P22	satisfaction professional	office staff	customer	select	
P33	satisfaction professional	office staff	customer + 6M	select	
P40	satisfaction	office staff	customer + 9M	1/0	
P43	satisfaction result	office staff	customer + 9M	select	
150	satisfaction process	office staff	customer + 9M	select	
R10	satisfaction	AUTO	6M	double	

- P22 addresses the satisfaction level with the contracted professional.
- P33 addresses the satisfaction level with the contacted contractor.
- P40 addresses the finishing of renovation works through the offer to answer an exit survey and marks the start of stage.
- P43 addresses the satisfaction level with the result of renovation works.
- I50 addresses the satisfaction level with the Citizen Hub service.
- R10 addresses the level of satisfaction with the professionals and contractors contacted from the registry and is related to P22 and P33

