

# **TEMPLATES STEP 5. THE FOLLOW-UP | MONITORING**

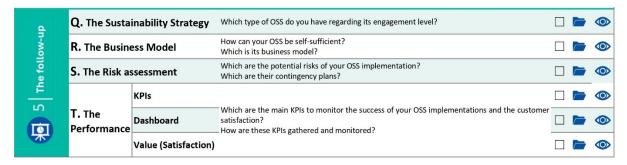


Table 1. Test materials for step 5

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 **D3.3. Citizen Hub Business model for the two pilots.**
- 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.
  - O 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

_	Now place indicate the combination of letters for	Nour Occ.
7	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			3. High-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*.

#### The Business Model Canvas

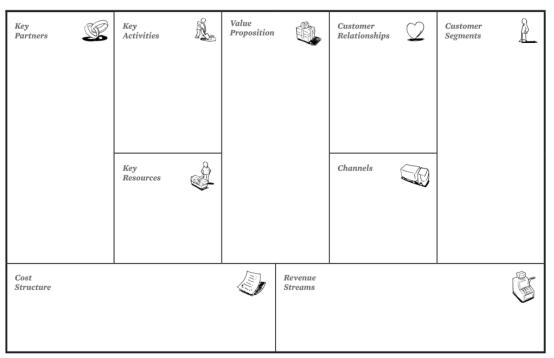


Figure 1. The Business Model Canvas

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.





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			_



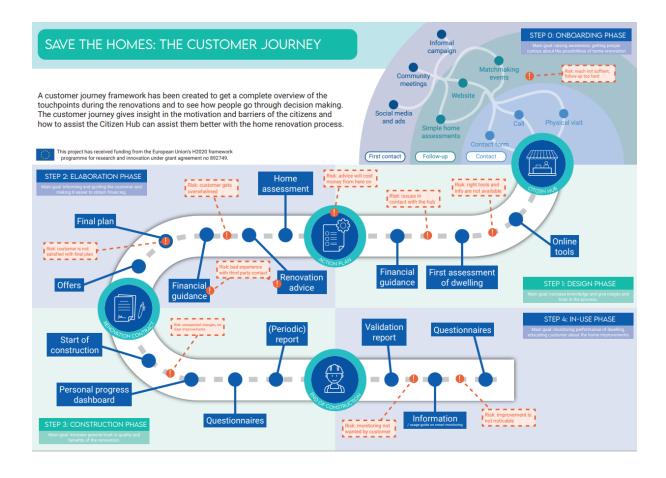


### Risk assessment

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	
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	
sustainability	Number of public loans or subsidies mobilised	Monthly	Budget	
	Other:			
	Number of first approaches by calls from potential contacts	Monthly	CRM	
	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	
Pipeline,	Monthly conversion rate by walks ins	Monthly	CRM	
support and	Number of new contacts by emails	Monthly	CRM	
execution of	Monthly conversion rate by emails	Monthly	CRM	
project	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	





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	





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

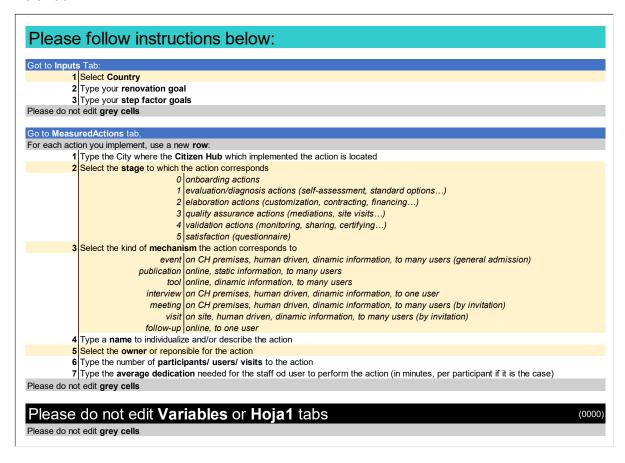
The document is divided in two parts:

- 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

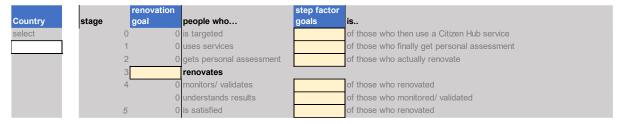
#### Intro Tab:



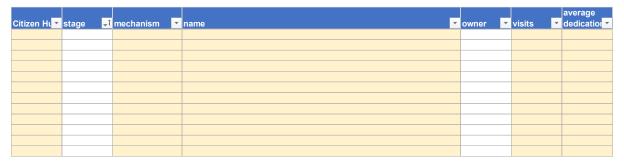




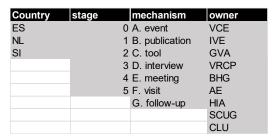
#### Inputs Tab



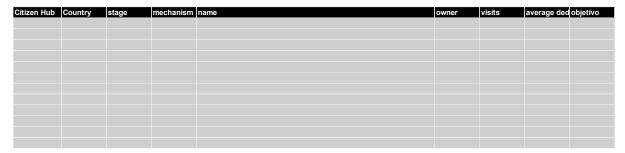
#### Measured Actions Tab:



#### Variables Tab (protected):



#### Hoja1 Tab (protected): automatically filled







# 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	ant during the registration in the monitoring campaign
	Type of monitoring	
	Typology	
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	
	1	





### **Dwelling data**

1. General info	Orientation	
	Number of floors	
	Number of rooms	
	Number of baths	
2. Occupant	Tenant/Owner	
profile	Home occupancy range	
	Number of occupants < 18	
	Number of occupants 18-65	
	Number of occupants > 65	
3. Facilities	Lighting	
	Туре	
	Control system and sensors	
	DHW	
	Туре	
	Year	
	Heating system	
	Туре	
	Year	
	Control system and sensors	
	Setpoint temperature	
	Months of use	
	Cooling system	
	Туре	
	Year	
	Control system and sensors	
	Setpoint temperature	
	Months of use	
	Ventilation	
	Туре	
	Control system and sensors	
	Year	
	Photovoltaic panels	
	kWp	
	Year	
	Appliances	
	Fridge	
	Washing machine	
	Dryer	
	Dishwasher	
	Oven	
	Type of cooker	
	Control system and sensors	
4. Envelope	Windows	





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						
STS	Draught						
1. Indoor parameters	Indoor temperature too high						
or par	Indoor temperature too low						
oop	Light that is dim						
<del>-</del>	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						
y v	Itching, burning or irritation of the eyes						
tom	Visual disturbances						
2. Symptoms	Irritated, stuffy or runny nose						
2.	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. Cc	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	In summer, in your house you usually do							
D C	Clothing	Nothing	Light clothing	2 layers	Coat or more than 2 layers			
Clothing	In winter, you usually wear							
5. 0	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?	<u>-</u>
	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 measures	Are you going to implement renovation measures?	
illeasures	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	Post	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	<b>Answer format</b>	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.
- 150 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

