



**TURNKEY
RETROFIT**



D3.2. Guidelines for implementation in different European countries



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FOREWORD

The work presented is part of the ongoing European Horizon 2020 project TURNKEY RETROFIT. The project seeks to create a burden-free renovation experience for the homeowner by providing a digital platform where the user is offered tailor-made solutions based on their specific needs and preferences.

This report is the deliverable D3.2 of Task 3.4 corresponding to WP3 ‘Local implementation’ of the TURNKEY RETROFIT project. The aim of this WP3 is to analyse the local needs and actors in place to implement the integrated TURNKEY RETROFIT service adapted to the local context where will be further operated. First of all, the digital platform will be tested and operated in France, with the service adapted to the local contexts of Spain and Ireland.

Taking into account the experience of developing and adapting the service to three countries, this report provides guidelines for the implementation of the integrated renovation service TURNKEY RETROFIT in other European countries.

The aim of this document is to serve as a guide during the design phase of the service for future adaptations of the TURNKEY RETROFIT service and contains the steps necessary to ensure the implementation of the retrofit service. Before implementing the service in other countries, it is necessary to consider and analyse a series of factors including:

- Analysis of the context and conditions of each country
- Design a business model that fits the activities that the service will offer
 - o Selection the participating agents, service providers,
 - o Identification of the customer journey
 - o Identification of barriers
- Definition of the contractual relations between the service providers
- Design and development of the turnkey retrofit platform
- Design of a marketing plan

INTRODUCTION

The TURNKEY RETROFIT service is to be adapted to the local context of Spain and Ireland. To adapt the service requires the collaboration of local actors to ensure the service caters to local needs. In addition, the adapted service must resolve and overcome barriers that exist in defining and developing a One-Stop Shop model that fits the needs of local actors.

With the experience of the previous findings gathered in deliverable *D3.1 Identification of local needs and actors in place*, for the countries of France, Ireland and Spain, this document provides the necessary guidelines to implement the TURNKEY RETROFIT integrated renovation service in different European countries.

The aim is to have this document as a basis to implement the TURNKEY RETROFIT service in interested countries. This report has informed and described actions to take, an order to follow and the possibility to identify beforehand the main obstacles and barriers encountered based on the experiences in France, Spain and Ireland.

1. THE TURNKEY RETROFIT SERVICE

The TURNKEY RETROFIT project aims to develop an integrated home renovation service, firstly operated in France, Ireland and Spain, which is accessible through a user-friendly digital platform www.solutions4renovation.eu. The service is developed as a homeowner-oriented renovation journey, aiming to transform the complex and fragmented renovation process into a simple, straightforward and attractive process for the homeowner. For homeowners and building managers, the renovation process can seem complicated, shaped by the ambiguity of the interventions to implement, a lack of knowledge on the existing solutions as well as a lack of services to coordinate all required market actors involved in the renovation process. This service aims to become an One-Stop-Shop, answering several problematics of renovation and helping the customer (homeowner or board of co-owners) at the different stages of the renovation journey.

1.1 Objectives of the service

Turnkey Retrofit is a burden-free experience for the customer (homeowners or board of co-owners). This holistic service allows customers to manage and upgrade their homes in a simpler and more cost-effective way, with a turnkey solution that aims to cover all steps of the renovation process including the initial technical and behavioural diagnosis, the contacts with providers and installers, the structuring and provision of financial incentives, onsite coordination of works and quality assurance, and the post-assessment of the works. All TURNKEY RETROFIT services are carried out through the user-friendly digital platform Solutions4Renovation.

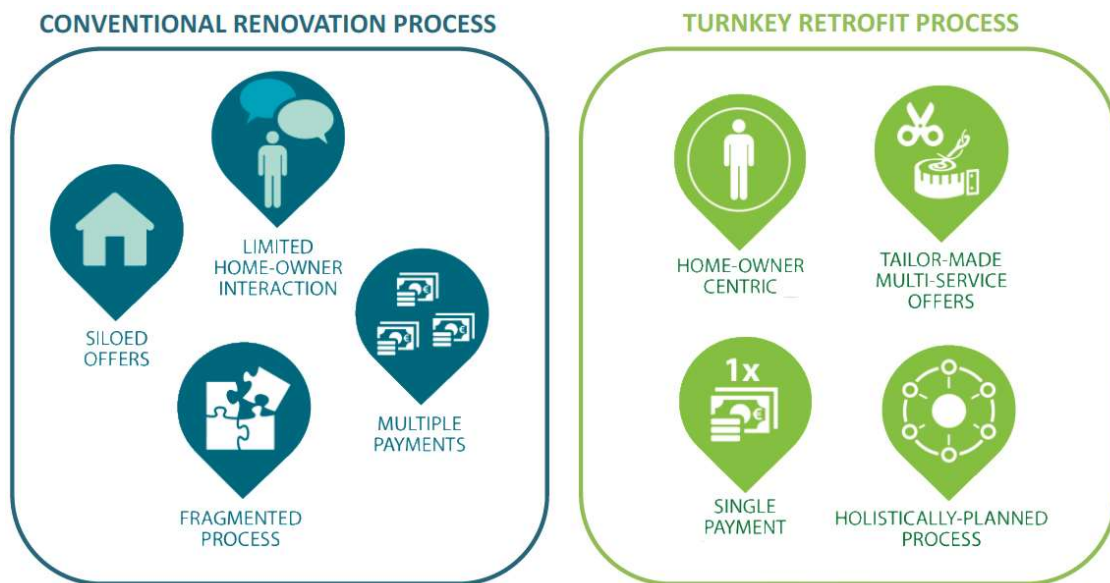


Figure 1: Conventional vs TURNKEY RETROFIT renovation process

The services offered by the TURNKEY RETROFIT service through the Solutions4Renovation platform addresses drivers of building renovation that go beyond a desire to reduce energy bills and increase asset value, such as home improvement, increased comfort, enhanced health & quality of life (additional added-value services for e.g. accessibility, security, etc.).

1.2 What is on the platform?

The renovation process is a broad and fragmented process in which different agents intervene in each of its phases. This renovation process is different in each country, but schematically it can be said that it responds to the following scheme:



Figure 2: Phases of the renovation process

The phases of the renovation process can be summarized and grouped into the following:

- Contact with the client: The client may have a need to renovate or a desire to improve his home.

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- Project drafting: from an initial analysis, preliminary definition of the renovation project to the definition of the final project and budget.
- Contractual relationship: signing of service contract, financing systems.
- Renovation planning: scheduling of works, selection and purchase of materials.
- Construction phase: Preliminary preparation works, renovation works, control of work
- Finalization of renovation: deficiency check, end of work.

To provide solutions and cover all the phases and tasks necessary to carry out the renovation process, the digital platform gathers several services developed independently named “bricks”. Each brick is tailored to respond to a specific stage of the renovation process and to a specific need of the user. Solutions4Renovation offers these services to the user:

- Information and guides about energy performance renovation
- Tools for online diagnostics (Energy performance, thermal comfort, etc)
- Recommendation of renovation works
- Cost estimation of the renovation works
- Estimation of potential subsidies
- Tool for ordering the renovation works in time without construction disorder
- Contacts with professional advisors and contractors

Some bricks give information about the renovation, the comfort improvement due to renovation and financing options such as national subsidies for example.

Others elements of the platform are interactive tools where the user provides information about their home or building to get renovation recommendations for their homes. The recommendations provide an estimate the renovations cause in terms of energy, carbon emission and cost savings. Further details on these tools can be found in Section 7.

The service focuses on helping the customer to make the best decisions that will lead to an optimal renovation project. To achieve this, the main challenge is to have a clear understanding of customer needs in the local context. The structure of the platform by bricks allows it to have an “ad hoc” service allowing the service to be adapted to local needs (each country have specific needs for example), the bricks can be added or not in the platform after being adapted to the new context.

All the services that have been developed within the TURNKEY RETROFIT project are accessible to any building or home owner on the web platform, without any charges. At some point, a customer is asked to log in to save all the information about their renovation project. to potentially allow the platform to contact the user, as some partners were asking (in Spain for example).

1.3 Adaptation to different national contexts

The TURNKEY RETROFIT service (TR service, as of this moment) is adaptable to national contexts given the complex nature of renovation markets across countries. Renovation markets are influenced by a number of factors including but

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not limited to the existing building stock, meteorological conditions, national policy, economic costs, technical solutions, professional skills and numbers, and social and cultural norms of homeowners regarding energy renovation. Given the complexity of renovation, the TURNKEY RETROFIT project focused first on the adaptation of the service to the national contexts of Spain, France and Ireland. This revealed the needed elements to analyse the feasibility of each brick in the targeted country and the level of adaptation it requires. More details are given in Section 7.

Indeed, the needed effort to adapt some “bricks” of the platform depends on the type of development required. For “information and guide about renovation”, the content must be adapted to the targeted country and renovation context. For the first-approach-diagnostics (“punch diagnostics”), the adaptations are only on the computation of the results but the structure of the tool is the same for all countries. Different levels of adaptation are required for “bricks” but mainly include:

- Translation
- Change of the links to existing web services
- Change of the texts and visuals (images or drawings)
- Change of value in the computation chore of a tool
- Change of data base used in the tools (which needs a work of checking that the new database is fitting with the expected use : feasibility study)

Some “bricks” of the TURNKEY RETROFIT service have been designed and developed by CSTB from scratch for the TURNKEY RETROFIT project (e.g. generic content, Punch Diag, Roadmap). Some “bricks” have been adapted by EP from existing services that had been developed for their own platform Heero (e.g. Cost of works).

The Solutions4Renovation platform and TURNKEY RETROFIT services offers various bricks: for the use of them, specific agreements will have to be prepared between whoever wants to exploit it and the owner of the brick.

The TR service cannot be implemented as is in the different countries, as the contextual conditions must be taken into account. However, the steps to be followed for its correct adaptation to each country are similar. These are described in this document.

2. HOW TO GET STARTED

An objective of the H2020 European project One Stop Shop was to accelerate the adoption of one-stop-shops. For this propose, they developed a guide [1] to facilitate the process for organizations intending to establish a One Stop Shop business for holistic renovation of single-family homes. The guide is based on an intense study of different business models that have been launched in the participating countries and the authors’ substantial experience in business development. The guide includes a set of basic questions every promotor, developer or stakeholder should ask themselves before adopting the TURNKEY RETROFIT service to their country.

- 1. What are your motivations and expectations in undertaking this process?
- 2. What resources do you possess for the development process itself?

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- a. Regarding human resources; do you have project management capabilities?
 - b. Financial resources to cover the development phase?
- 3. Is the idea already deeply rooted in your organisation, including the Board?
- 4. Do you already have good partnerships with complementary skills?

From the TURNKEY RETROFIT project experience, these questions are very useful and can be used upstream by any stakeholder wishing to implement the service in a new country, either applied to the profiles of the TURNKEY RETROFIT project (private company or association) or to our potential partners.

If the answers to the questions above show too many weak points, we invite you to reconsider developing the TURNKEY RETROFIT platform in your country and maturing this project upstream, perhaps with other partners.

“If you have a clear picture of how you can develop a new business for your company within this field, you will also be better able to communicate and motivate other people to be enthusiastic about it”.

One-Stop-Shop Project

3. ANALYSIS OF THE CONTEXT

3.1 Environmental conditions of the country in which you want to implement the TR service.

For the implementation of the TURNKEY RETROFIT service is to analyse the environment in which this service is to be offered, in order to identify, analyse and understand the external factors that could affect its operation. This task is of vital importance as it impacts the implementation strategy to different target markets. The results of this analysis are to be used in the definition of the Business Models.

To carry out this analysis, it is necessary to use a methodology or tool that contributes to the identification of the external factors and allows an understanding of the difficulties, barriers and challenges that may arise when implementing the integrated renovation service TURNKEY RETROFIT service in a new country. There are numerous tools that can be used, but the recommendation of this guideline is the PESTLE tool [2] based on its useful and successful application in the TR project.

The PESTLE tools allows for the identification, structuring and analysis of the Political, Economic, Social, Technological, Legal and Environmental (PESTLE) factors influencing the prospect of developing a new service. Whatever the tool or methodology used for the analysis of the environmental conditions, it is necessary that all these factors are analyzed, because the result of this analysis is of vital importance and must be taken into account for the definition of the business model, and can be key to the success or failure of the implementation of the TURNKEY RETROFIT services.

As mentioned, the main factors that must be analysed and studied for the implementation of the TURNKEY RETROFIT service in a new EU country are the Political, Economic, Social, Technological, Legal and Environmental factors. The following are the aspects to be analysed and the questions to be answered for each of the factors analysed:

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- **Political:** government stability, government priorities, strategic framework to boost energy renovation in the building sector, existence of funding tools and grants.
- **Economic:** general economic situation (employment rate, GDP, inflation, private debt), spending in the renovation sector, fiscal incentives, cost for homeowners and developers.
- **Social:** culture (in favour or no) of energy rehabilitation, use of digital platforms, perception of value of sustainable dwellings, standard for rental sector.
- **Technological:** access to existing technological solutions, technological skills of professionals in the construction sector, R&D&I in the sector, development and use of platforms for the construction sector.
- **Legal:** building regulations, building energy performance certificates.
- **Environmental:** concern and awareness of climate changes, framework for energy and climate.

The results of the PESTLE tool analysis should be used in the definition phase of the future business model, based on the objective of identifying factors that can benefit the provision and implementation of the TR service, and resolve or mitigate the barriers or factors identified as negative.

The vast majority of these factors cannot be controlled or modified, but it is important to understand the consequences with positive or negative effects that they can have on the implementation of the TURNKEY RETROFIT service. In addition, this analysis exercise is necessary to identify strategic factors that are considered to directly affect the success or failure of the service.

As mentioned previously, although it is possible to use any tool that allows an analysis of the environment, given the experience of the implementation of the TURNKEY retrofit service in France, Ireland and Spain, in this guide for the implementation of the service in different European countries, the PESTLE tool used will be explained.

The objective of the PESTLE analysis is not to describe the characteristics of the environment from an economic, social, political, technological, legal and environmental point of view. The PESTLE analysis is a tool that allows a general analysis of the environment, identifying the difficulties and challenges that may arise when implementing a new service. Each of the factors analysed are evaluated and and quantified based on the following criteria:

- Very negative (--)
- Negative (-)
- Positive (+)
- Very positive (++)

The following are a series of questions that can help to facilitate the analysis of each of the factors, and to evaluate their impact using the above criteria:

- **Political factors:** Assesses in which way the government intervention can affect the provision of the service. Example of questions that guides the analysis:
 - Is the political situation stable in the country?
 - What is the main strategic framework for energy renovation in buildings? What does the country's long-term renovation strategy stipulate? Is the country's strategy favourable to the delivery of TURNKEY RETROFIT integrated renovation service?

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- What financial support measures are currently available for comprehensive renovation? Are they stable or likely to change?
- Is the public financial support designed to favour more comprehensive energy renovation projects compared to single-measure renovations?
- **Economic factors:** The macroeconomic context (current and future) can influence the supply of a service. Questions that guides the analysis:
 - What is the economic situation in the country? With respect to GDP, is it growing, stable or decreasing?
 - What is the economic situation in the energy renovation sector?
 - Are there any fiscal incentives in favour of actions that lead to improvement in energy efficiency in buildings?
- **Social factors:** Considers which elements of society can facilitate or hinder the delivery of the renovation service. Questions that guides the analysis:
 - What cultural aspects are more important? Is there a culture in favour of energy rehabilitation? Is there confidence in the renovation and rehabilitation sector? Is there awareness of climate change?
 - What elements in society can facilitate or hinder the delivery of the TURNKEY RETROFIT integrated renovation service?
- **Technological factors:** Identifies technologies and infrastructures that can positively or negatively influence the service provision. Questions that guides the analysis:
 - Do the companies in the country have enough knowledge of the products, materials, technological solutions and services that exist in the market to offer their clients?
 - Do the companies try to have access to the necessary knowledge and qualifications in order to be able to implement them?
 - Does the government support Research & Development and Innovation in the area of energy efficiency (specific sector/challenge)?
 - Which emerging technologies could influence the service?
- **Legal factors:** This refers to those regulatory issues related to our business opportunity. Questions that guides the analysis:
 - What national regulatory elements can influence in boosting or hindering the TURNKEY RETROFIT integrated renovation service?
- **Environmental factors:** Considerations should include the trends in sustainability which could affect the business related to the service to be provided. Questions that guides the analysis:
 - What are the environmental considerations?

For more information on the results of the PESTLE analysis carried out in France, Spain and Ireland [2],

3.2 Identification of current services that are addressing the demand for energy renovation of homes (benchmarking) in the country in which you want to implement the TR service.

After the analysis of the environment and evaluating the impact of each of the factors, it is necessary to carry out a review of the existing renovation services or One-Stop-Shops in the country where the TURNKEY RETROFIT service is to be implemented.

After the recasting of the EU Energy Performance of Buildings Directive [2010/31/EU], different innovative customer-oriented services offering an integrated renovation service started to emerge in Europe, known as OSSs (One-Stop-Shops). Therefore, and in view of the growth of this type of service, it is necessary to analyse the possible competition that the TURNKEY RETROFIT service could have.

The benchmarking process should include at least the following five steps when benchmarking other services:

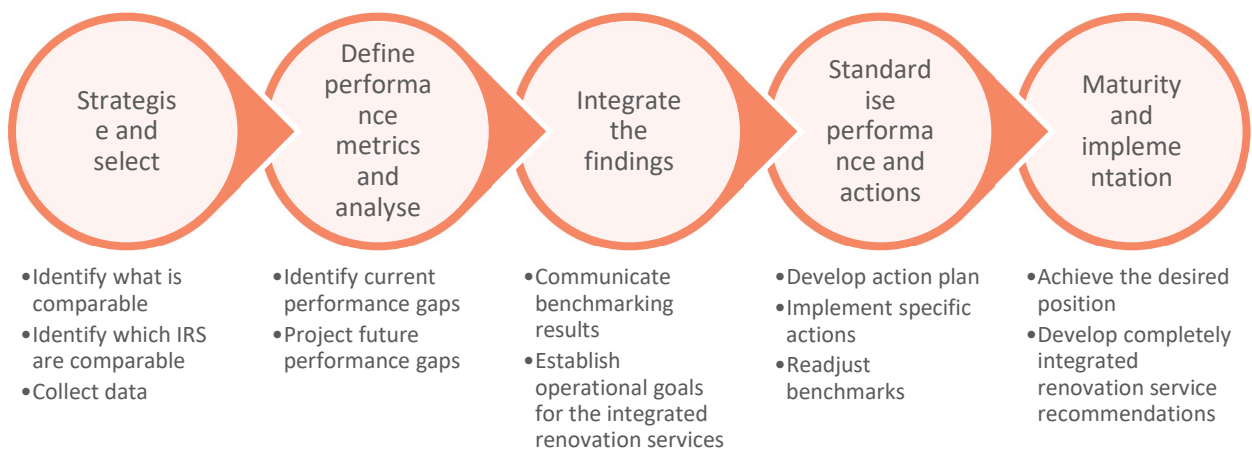


Figure 3: Five steps of the benchmarking process

A qualitative analysis of the existing integrated renovation services in the country's market is recommended, in order to identify their strengths and weaknesses, what type of services they offer, which is their target client, their collaborators, business model, renovation journey, market penetration etc. This analysis should be carried out by means of interviews with the directors of the OSS and the study of reports and projects completed. Several characteristics of existing OSS can be studied and analysed, but the most important points to be analysed for benchmarking and that were used for the study in France, Ireland and Spain are the following [3]:



Figure 4: Points to be analysed for benchmarking

4. DESIGN OF THE BUSINESS MODEL

Taking into account the result of the previous sections, in which the environmental conditions have been analysed and the existing renovation services have been identified, the business model of the TURNKEY RETROFIT service, for the country in which you want to implement it, will be defined.

The business model of the TURNKEY RETROFIT service must meet all the necessary requirements to guarantee the success and survival of the service, both in its implementation and in its start-up and service phase. To accomplish this task, there are several methodologies and tools that can facilitate the work of designing and adapting a business model.

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A highly validated and traditionally used methodology for the definition of a business model is the Business Model Canvas (BMC), which describes a business model as “the rationale of how an organization creates, delivers and captures value.” A well-known image from the business model generation community that describes this approach is shown in figure 8 [4]. From the implementation and development experience of the TURNKEY RETROFIT service in France, Ireland and Spain, it is recommended to use this methodology to design and define the complete business model.

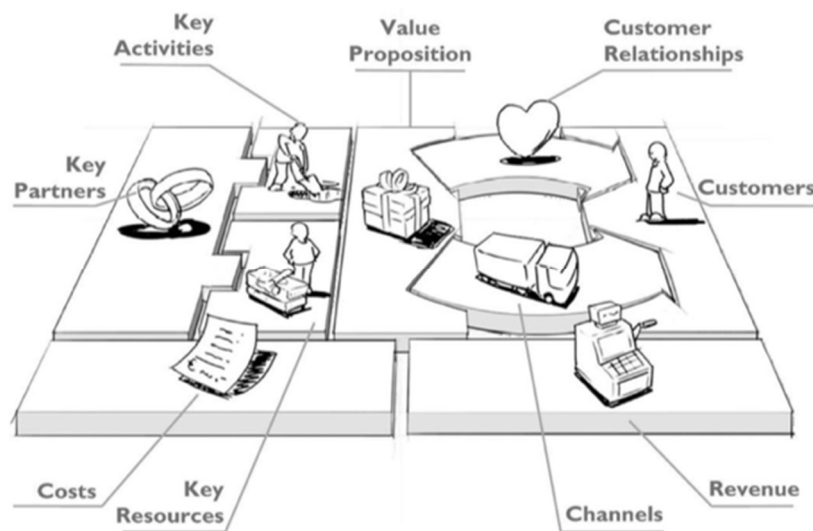


Figure 5: Business Model Canvas

The Business Model Canvas (BMC) concept is explained to be used as part of implementing of the TR service in a new country. The starting point for canvas development and business model work is a clear definition of what is being offered, to who, and for what purpose. This topic is treated by the business model generation community as the so-called Value Proposition Design [5]. The Value Proposition Design Canvas is depicted in Figure 5 where the value proposition (product or service) is on the left and customer segment is on the right. It actually is a focus on two building blocks of the business model canvas. The principle of the Value Proposition Canvas is to focus on the “fit” between what is offered and what customers actually need.

Generally, a business model is understood to describe the rationale of how an organisation creates, delivers and captures value. A concept created by Osterwalder and Pigneur [4] was proposed to create a shared language in developing business models. Nine building blocks (shown in Figure 5) have been identified to build a successful business model. These nine building blocks provide a relevant framework to design business models in the renovation industry.

The following is a description of each of the blocks that can be used to support the creation of the business model of the TR service in a new country. It indicates the objective (what to define and what questions to ask), in each of the blocks that make up the Business model canvas:

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- **Customer segments:** the community of potential customer the model is aiming for (building typology, income level, geographic area etc.)
- **Value propositions:** what provides value to the customer, what is the specific service
- **Channels/outreach:** which communication channels are used to reach potential customers
- **Customer relationships:** are established and maintained throughout and beyond the renovation journey
- **Revenue streams:** sources of income for the business model
- **Key resources:** the assets required to offer and deliver the previously described elements
- **Key activities** what key activities do the value proposition require
- **Key partnerships:** relationships with private and public actors, enabling a better renovation service
- **Cost structure:** costs related to the business model

The following table corresponds to the diagram of the Business Model Canvas above, and can be used as a basis for this exercise:









<p>Key Partners</p>  <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p>	<p>Key Activities</p>  <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p>	<p>Value Propositions</p>  <p>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p>	<p>Customer Relationships</p>  <p>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</p>	<p>Customer Segments</p>  <p>For whom are we creating value? Who are our most important customers?</p>
<p>Cost Structure</p>  <p>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</p>	<p>Revenue Streams</p>  <p>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?</p>	<p>Key Resources</p>  <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</p>	<p>Channels</p>  <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p>	

Table 1: Business Model Canvas

4.1 What is the starting point?

The TURNKEY RETROFIT service is a *multi-sided platform*, which means that it brings together two different groups of customers (contractors and building owners). According to Business model generation, [6] such platforms are of value to one group of customers only if the other groups of customers are also present. The key is that the platform must attract and serve all groups simultaneously in order to create value.

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Usually, multi-sided platforms solve this dilemma by subsidizing one of the customers segments (low cost or free services to attract them on the platform). To do so, it is very important to understand who should be subsidized and how to price correctly.

The main features of the **business model canvas of such platform** are the following:

- The key resource required for this business model pattern is the platform.
- The three key activities are platform management, service provisioning, and platform promotion.
- The main costs incurred under this pattern relate to maintaining, developing and supporting the platform.
- The value proposition usually creates value in three main areas: First, attracting user groups (i.e. customer segments); Second, matchmaking between customer segments; Third, reducing costs by channelling transactions through the platform.
- Two or more customer segments have each their own Value Proposition and associated Revenue Stream. Moreover, one Customer Segment cannot exist without the others.
- Each customer Segment produces a different revenue stream. One or more segments may enjoy free offers or reduced prices subsidized by revenues from other customer segments. Choosing which segment to subsidize can be a crucial pricing decision that determines the success of a multi-sided platform business model.

4.2 What do we want to offer with the TR service?

One of the most important activities to ensure the successful implementation of the TR service is the definition of the value proposition i.e. what is the service we want to offer to meet the customer's needs?

From the implementation in France, Ireland and Spain, the service in each country, although similar in all countries (same tools and services offered), has its own characteristics. To adapt the service, it is necessary to know the **customer's journey**: that is, how the customer lives the integrated renovation process, and what needs the customer has at each stage.

4.3 Identification of the stakeholders

To make the implementation of the TURNKEY RETROFIT service truly effective in each country, it ought to integrate a community supported by market actors', with a strong network of local stakeholders in the regions it is implemented.

4.3.1 Identification of clients (owners, property managers)

The successful implementation of the TURNKEY RETROFIT service in a new country requires an analysis of the target customer. It has been found that the building stock and customer typology in each country is different. Basically, there are two main types of building stocks / profiles:

- **Single houses:** the owner is the only one person responsible for the decision to retrofit the home and is the main source of data and documents (technical but also legal) about the building.
- **Multi-family buildings:** the owners are organized in condominiums and share the responsibility of the decisions that concern the whole building. In each country, the decision process can be more or less complex. The owners may not have a full knowledge and property of the data regarding the building. Thus, they may not be the only one stakeholder to use the service.

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While in Spain the most representative typology responds to a multi-family building, in Ireland the most representative building is a single-family home, and France presents a mix between both typologies. For that reason, it is of vital importance to relate the study and to have well defined the most representative building typology in the country in which you want to implant the TURNKEY RETROFIT service.

In the case of single-family buildings, there is only one owner, who acts be the user and customer of the platform. In the case of multi-family buildings, there are multiple owners. The client of the platform is the community of owners, with the contact made through the property managers.

TURNKEY RETROFIT should identify the most probable customer segment for single-family houses and multi-family buildings and tailored outreach strategies should be applied to the different groups. Therefore, it is necessary to define the profile or profiles of the customer targeted to use the TR platform in the target country, to focus the business model and outreach strategies of the service to the client and target user.

To carry out this task, it is recommended to use the information from the [TABULA Project](#), in which the typologies of representative buildings from 13 European countries have been characterized.

The information gathered in previous steps up to this point (e.g. PESTLE analysis, benchmarking of customer service) in combination with the TABULA project info, should be used to define the target customer profiles.

4.3.2 Identification of suppliers, necessary profiles, etc.

Once the value proposition and the target customer segment of the TURNKEY RETROFIT service have been defined, it is necessary to carry out the identification of suppliers, and the necessary profiles to provide the services that will be offered by TR services.

To ensure the successful launch of the service in a new country, it is necessary to count on the contribution and collaboration of local experts who are involved in phases of the renovation process. These processes are not the same in all countries, nor are the same agents involved. Thus, is necessary to create a group of local experts with the appropriate knowledge, who represent the different types of companies and associations that carry out or promote renovation projects.

An integrated renovation service needs to aggregate services from various actors in the renovation value chain. It is important to define clear roles for all the involved actors, including benefits and responsibilities that come with being involved in the TURNKEY RETROFIT process. This provides the necessary expertise to respond to all the barriers and difficulties that may arise during the design and implementation of the TURNKEY RETROFIT service in a new country. This group of local experts is called the Local Implementation Group (LIG). Their active participation and collaboration throughout the project ensure that the TR service responds to the needs of the local market. LIGs are groups of experts from local/regional organizations that bring together the key representatives of the supply side actors needed to build and manage the TR service in each country. The LIGs must be formed by all the stakeholders involved in the renovation process.

It is recommended to create the LIGs at the beginning to integrate their expertise into the development of the TURNKEY RETROFIT service. The LIG must be active during the implementation process of the TR service in a new country to integrate their expertise. Engaging with the LIG through several avenues is recommended such a workshop, seminars, etc.

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For the selection of the LIG, it is recommended to make a selection of the profiles of companies, agencies and organizations that can provide the necessary knowledge about the renovation process for the region where the service is to operate, and, in case they want to participate, can provide the service when it is operational. Identified the participant organizations should be categorised into different sectors such as government agencies, regional or local government, financial organisations, standards authority, SMEs in the building industry, main contractors and suppliers, architects, engineers and building surveyors and professional associations. This is to ensure all stakeholders in the renovation market are included in the LIG.

It is recommended to present in a meeting or interview to the participants organizations the idea and the benefits that can be achieved with the implementation of the TR service. This increases their interest and motivation in the service to get their involvement and participation in the implementation and development of the service.

This task can be carried out through a Mapping of potential market players, whereby relevant stakeholders and their interests can be identified and mapped. This exercise allows stakeholders to be identified according to their levels of power and interest. Stakeholders who have high "power" mean that they have the power to influence the impact of the renovation model in one way or another, either positively or negatively. Mapping the stakeholders into these categories (low power/interest; low power/high interest; high power/low interest; high power/high interest) will enable us to best define the strategy to use for each of them.

To perform this task, the following steps should be followed:

- **Step 1: Develop a power grid**

Identify all stakeholders that have the power to influence the delivery of the integrated renovation service, without considering where they should be on the grid yet.

- Those groups without whose support the organisation would cease to exist⁵
- Those groups or individuals affected by the organisation
- Those groups or individuals who can affect the organisation⁶
- Those who can make demands on the organisations in various ways

- **Step 2: Identify the relevant stakeholders and set out prioritisations**

Identify stakeholders and develop a list of organizations to whom it would be important to inform about the TR service.

- **Step 3: Identify power dynamics and develop a power/interest grid**

The next step is to understand the dynamics and interdependent interactions between the groups/individuals. Partners are asked to consider each stakeholder's power to influence the project as well as their interest in the project.

- **Step 4: Define a stakeholder strategy**

Define the communication between stakeholders and identify who can most easily use their influence to help the platform.

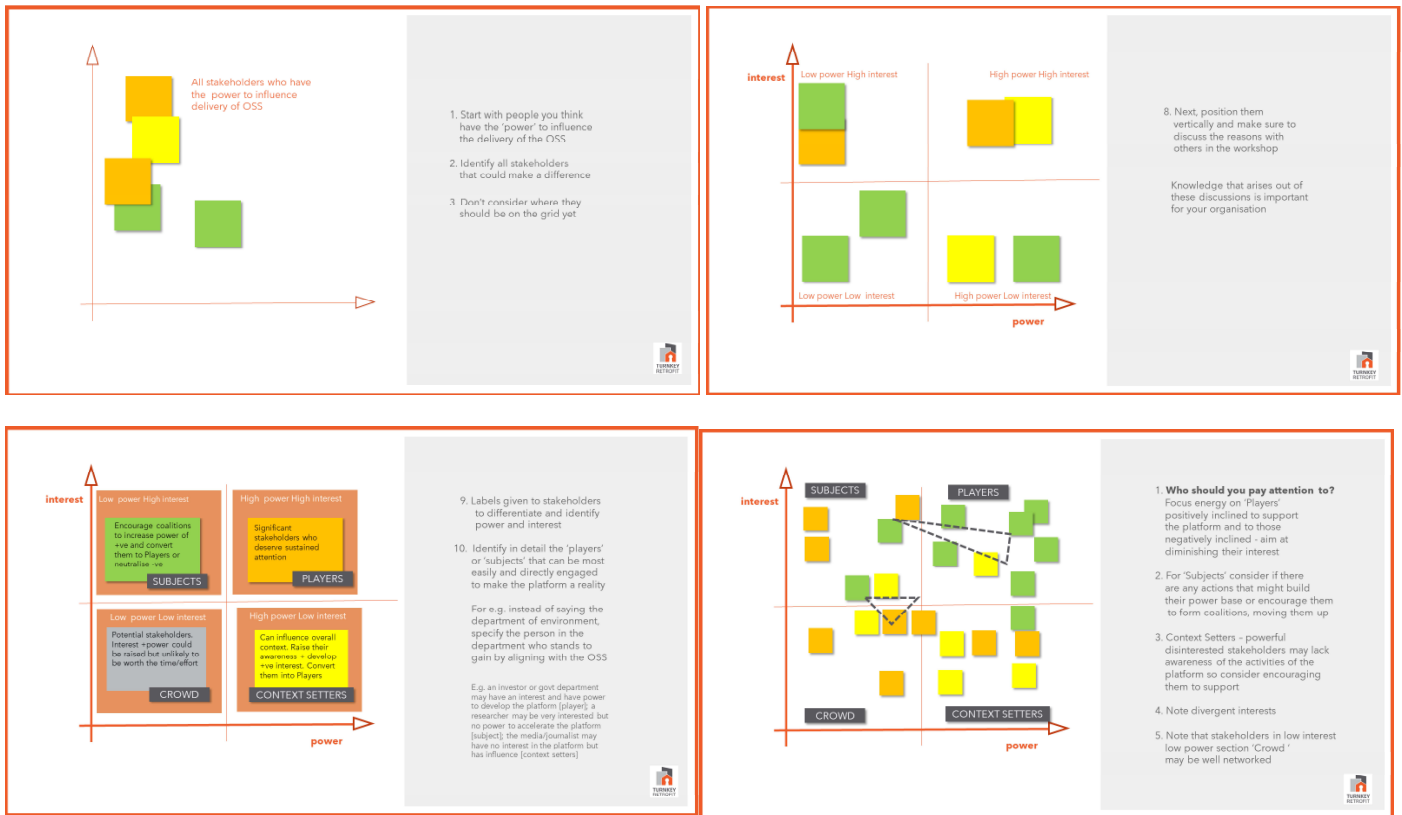


Figure 6: mapping of potential market actors

This strategy to achieve the mapping of potential market actors is more detailed in deliverable D2.3 TURNKEY RETROFIT market actors' community [7].

Some organizations may not be able to join the LIG. However, communication channels with these parties should be kept open during the development, implementation and operation of the TR service as they may provide important feedback.

LIGS are asked to identify specific stakeholders and create a list of organisations that would be important to the implementation of the TURNKEY RETROFIT one-stop-shop.

4.3.3 Identification of key alliances

In addition to suppliers, it is important to have local partners to successfully deliver the TURNKEY RETROFIT service.

It is important to consider which local actors are needed to promote the TURNKEY RETROFIT service and establish alliances with them to ensure the success of the new service. It refers, for example, to government agents that support the initiative and see it as a tool to achieve their objectives, also to ensure that the framework for action is the right one; or financial agents that support the retrofit process with specific financial services for energy rehabilitation.

Moreover, if they are involved from the beginning in the LIG, they can contribute with a new vision that enriches the TURNKEY RETROFIT service.

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4.4 How to define the business model

As already explained, there are several points to identify and analyse in order to design the TURNKEY RETROFIT service in the country where it is to be implemented. The most important thing is to understand the needs of the target customers and design the service to satisfy them. It is also important to determine which aspects are the most important, which ones require more effort, which ones have competitors, etc.

To sum up, the three important steps are below:

- Sizing customer needs
- Design the service
- Priorities according to attractiveness, competitors and effort needed

In this phase, the organizations promoting the implementation are responsible for defining a first draft of the TR service business model in the new country. From this point on, this work should be carried out in collaboration with the LIG, because it has the necessary knowledge close to the renovation market to adapt this first draft until the definition of the final business model.

Below, we present five tools that could help you in the process of designing your project. These tools, which are aimed at thinking and making choices, can be used in any order, and there are many other tools that can complement them.

Choose the tools that best suit your habits and the context of the country where the TR service is to be implemented. The most important thing is that the implementation team feels comfortable with these tools and have confidence in them.

4.4.1 Local Implementation Group

The definition of the business model requires the collaboration of Local Implementation Group (LIG). As explained in sub chapter 5.2.3, LIGs are groups of experts from local/regional organizations that bring together the key representatives of the supply side actors needed to build and manage the service in each country.

The purpose of the stakeholders of the Local Implementation Group is to gather support around TURNKEY RETROFIT and its integrated home renovation services, in order to assemble a foundation for sustainability and further replication of the model.

For this reason, before launching the TR service in a new country, it is necessary to search for and identify local market actor who are committed to join and participate in LIGs. The work to be developed with the LIG is of vital importance to ensure that a coherent framework is established and to jointly create the TURNKEY RETROFIT service. Therefore, the members of the local Implementation group are chosen based on the experience and advice they can contribute to the development.

The recommendation is to invite LIG members to participate in meetings, workshops, interviews, etc. that are organized during the design and adaptation process of the TURNKEY RETROFIT service.

The following points describe some of the main systems and methodologies used and recommended for use in the case of implementing the TR service in a new country.

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4.4.2 Customer journey map tool

A customer journey map is a visual representation of the process a customer or prospect goes through to achieve a goal. A customer journey map allows the team to get a sense of customers' motivations, needs and pain points.

It is very important to design a customer journey that responds to all the customer's needs and includes all the tasks and phases that a customer who wants to carry out a renovation project has to go through. Knowing the phases and activities to be carried out, it is possible to define the business model and identify the activities and services (Value proposition) to be offered within TURNKEY RETROFIT that respond to the customer's needs. There are several customer journey design tools that can be used to represent the defined customer journey in collaboration with the LIG (Microsoft Visio [7], Gliffy [8], Custelligence [9], etc). These tools serve to facilitate the creation of the renewal process flow and reflect and represent the defined customer journey.

It is recommended that this customer journey design work be done and contrasted with the LIG members, because they may have information closer to the renovation process. This point is described in more detail in Section 6 First Step.

4.4.3 User story mapping tool

A user story mapping tool helps to organize discussion about a user's experience with the product or service you are designing. It is used to improve the group's understanding of, in this specific case, Solution4Renovation customers and to prioritize work. It is helpful when thinking about product/service interactions from a user's perspective.

The backbone of a user story mapping is the core flow of user activities (and sub-tasks if needed) that the product or services are performing. The core set of activities are ordered chronologically.

Then a user story mapping is created using the following format — As a *[type of user]*, I want to *[action]* so that *[benefit]*. Then, each user story is ranked based on its attractiveness for the customers (level of priority) and positioned accordingly on the map.

The upper part of the map corresponds to the first release of the software and so on.

The user story mapping is organized into different activity groups that are developed in the user journey and some activities are also prioritize from the others in each group.



Figure 7: Generic example of a user story mapping

There are different digital tools on the market such as (Miro [10] or Storiesonboard [11]) that can be used to create the User story mapping.

4.4.4 Design Thinking

Design Thinking technique is a way to support stakeholders to understand complex problems, to empathise with their counterparts (customers, partners or employees) and to define truly innovative and impactful solutions (See Figure 8). This cross-cutting methodology approach is inspired by the Institute of Design at Stanford. Design Thinking is a methodology focusing on understanding, going deep, defining needs and testing hypotheses in order to fail and learn early as a strategy to save money, time and engagement from participants while getting to unexpected new ways to solve a problem. Tackling any activity (elaboration of a roadmap, choice of a topic for a case study, organisation of a workshop, design of the knowledge management platform...) with a Design Thinking mindset is an excellent first step to reach high-quality results.

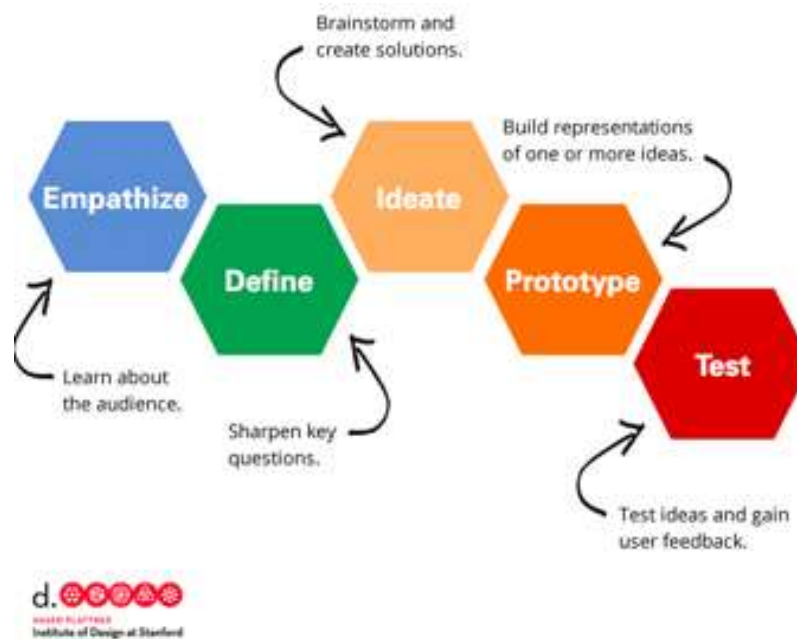


Figure 8: Design Thinking Process, Institute of Design at Stanford

Design thinking is a human-centred approach to innovation—anchored in understanding customer’s needs, rapid prototyping, and generating creative ideas—that will transform the way you develop products, services, processes, and organizations. By using design thinking, you make decisions based on what customers really want instead of relying only on historical data or making risky bets based on instinct instead of evidence.

Design thinking brings together what is desirable from a human point of view with what is technologically feasible and economically viable (Figure 9).

- Desirability: What makes sense to people and for people?
- Feasibility: What is technically possible within the foreseeable future?
- Viability: What is likely to become part of a sustainable business model?

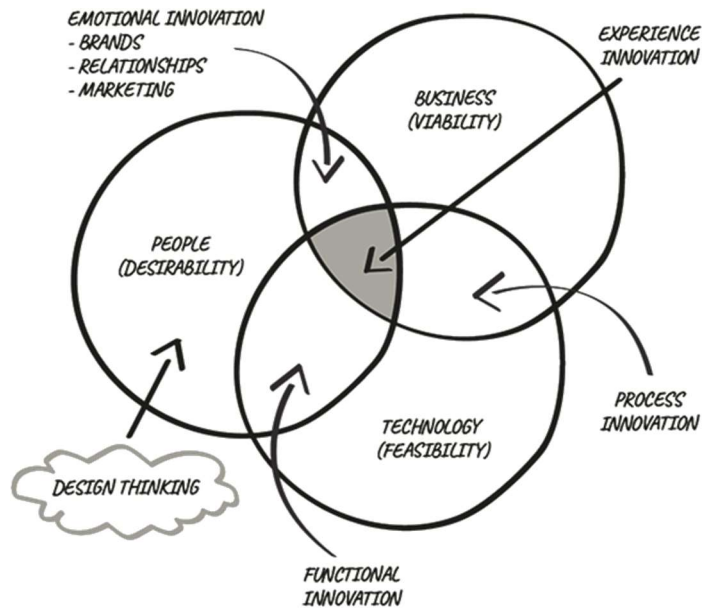


Figure 9: Venn diagram used for product design



Figure 10: Design Thinking applied to TURNKEY RETROFIT services development, animated by R2M Solution

In the market there are several collaborative online tools that allow to carry out the Design Thinking, such as Userforge [12], Smaply [13] or Invision [14], but to achieve better results it is recommended to perform this task in a face-to-face way with different group dynamics.

4.4.5 Ad libs

The Ad Libs tool allows a project team to quickly and easily initiate reflection around the business model. This type of tool is a good way to quickly shape alternative directions for value proposition. They force a project team to pinpoint how exactly value is created [15] which is a very useful tool for the implementation of the TR service in a new country. Figure 11 is an Ad Libs empty template that should be used to determine how a service can offer value to the market. Figure 12 show a completed example to show the usefulness of this tool.



Figure 11: Ad libs tool template

Our **TURNKEY RETROFIT market actors' community (LIG)**
Products and Services

help(s) co-owners for multi-family buildings
Customer Segment

who want to renovate their building or home
Jobs to be done

by a database of market actors' community (LIG) to avoid choosing an unqualified company
Verb (e.g., reducing, avoiding) and a customer pain

and providing services with enough quality

and improving customer experience and satisfaction.
Verb (e.g., increasing, enabling) and a customer gain

(unlike _____
Competing value proposition, if relevant

Our **TURNKEY RETROFIT market actors' community (LIG)**
Products and Services

help(s) Construction sector
Customer Segment

who want to guarantee a quality result
Jobs to be done

by avoiding professional intrusion
Verb (e.g., reducing, avoiding) and a customer pain

and increasing market options
Verb (e.g., increasing, enabling) and a customer gain

(unlike _____
Competing value proposition, if relevant

Figure 12: Ad libs tool examples

4.4.6 Other online tools: JAMBOARD and MURAL

Google JAMBOARD is a collaborative digital whiteboarding tool that works with G Suite products (Google Drive, Google Sheets, Google Docs, etc [16]). Available to Enterprise, Business, Basic, and Education G Suite customers, this tool can be incredibly useful to collaborate and design together with a team virtually.

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MURAL is a virtual tool that enables innovative teams to collaborate visually and brainstorm solutions to their problems or challenges. Being able to create simple but comprehensive diagrams and throw ideas down in a virtual, collaborative space are some of the top reasons innovative teams cite loving this tool. In a lot of ways, MURAL is a “thinking canvas” that you use to organize your ideas in lists, flowcharts, frameworks, or drawings.

4.5 FIRST STEPS

Although the promoter, developer or interested in the implementation of the TR service in a new country can and should think about the business model to get a first approximation, it is advisable that this is contrasted with the LIG.

As mentioned in the previous point, the LIG is formed by a group of different experts from local/regional organizations that include the main representatives of the supply-side actors needed to implement and operate the service in each country.

Members can change along the process if necessary, but to get clear evolution and improvement, we recommend getting a stable group. Of course, some missing points of view can be included, promptly or as stable part of the LIG. Once a community has been created that is involved and includes all the necessary actors, it is necessary to carry out the different activities described in this section:

- Identification of the customer journey (Value proposal)
- Identification of the main barriers and obstacles
- Readaptation of this first approximation of the business model

4.5.1 Defining the business model with the LIG

This section presents the main objectives and activities to be carried out in collaboration with the LIG.

Joint identification of the customer journey in the country in which you want to implement the TR service.

In this phase, it is necessary to identify how the renovation process works in the country where the TR service is to be implemented and to define the customer journey. A renovation process is a highly complex process that presents very common entry barriers including but not limited to a great lack of knowledge about the process, uncertainty about decision-making, fears such as the consequences of the day-to-day work, and the possibility of unpredicted costs.

Once the customer journey has been defined, the ideal customer journey can be designed, which TURNKEY RETROFIT service will provide.

To carry out this task, it is recommended to hold workshops and meetings with LIG members and with other relevant organizations in the renovation market. There are several group dynamics or mechanisms with which to obtain the necessary information for the definition of the customer journey. Among all of them, in the case of Ireland and Spain, face-to-face group dynamics based on panels of ideas, post It and on-line tools such as Jamboard or Mural were employed.

Once the most appropriate group dynamic is identified (it is necessary to take into account the profile and the number of participants), the recommended steps to define the actual customer journey are identifying the customer, identifying their needs, identifying the phases involved in the renovation process and identifying the actors involved

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in each phase. The following is a description of each of the steps and indicates the objective (what to define and what questions to ask) in each of the steps:

- **Customer identification:** It is necessary to place ourselves in the customer's position and approach it from their point of view and needs. Who is the target customer? What does he/she need?
- **Identification of their needs:** Why think about renovation? To save money / increase comfort / accessibility / replace some obsolete element in my house / legal revision / etc. The client must be guided to build their roadmap, as they may not have the knowledge to decide on the renovation of their home.
- **Identify the steps and actors involved in each phase of renovation process:** since the user decides to carry out a renovation Construction companies, financing companies, administrations for building permissions, materials companies, etc.

With all this we will have an idea of the current customer journey from this information, a customer journey can be created which can be used is to identify the inefficiencies and gaps in the fragmented process. For this purpose, it is recommended to have other specific workshops with the LIG members and other participating associations, organisations and companies. To achieve the objective of defining the ideal customer journey, the following steps are recommended:

1. Identification of inefficiencies and gaps in the homeowner renovation process. It is necessary to think about what problems the user encounters when he/she wants to carry out the home renovation.
2. Define with which tools or mechanisms these inefficiencies can be solved.
3. Define the process flow to achieve the ideal customer journey.

Methodology notes:

To address this point, it is recommended to use methodologies and work tools that facilitate collaborative ideation as it has been explained in this document.

As the objective is to jointly define the ideal energy rehabilitation process from the user's point of view, the "Design Thinking" methodology, discussed in Section 5.5.4, was applied for France, Ireland and Spain. It is simple and allows you to unblock the initial barriers by getting the participants to get involved in the process of a nice experience. Since the challenge posed is a "complex problem", it must be approached from a very creative point of view to find the best solution.

It is recommended to propose a guided process in which all the "ideal" services and all possible barriers arise, to focus on the best solutions. In this evolutionary and incremental process, a Minimum Viable Product (MVP) can be defined. The dynamic goes through a divergence and convergence processes. It is important to clearly define how each step and each service incorporated into the process should be.

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To make LIG members feel involved in the implementation of the TR service, it is recommended to share the results obtained after each meeting. In this way, the network of collaborators that will make the service grow will be established.

For this reason, we believe that the use of this type of methodology supported with physical or online tools to create group dynamics, is the most appropriate to obtain the design of the ideal customer journey used to define the functionality of the TURNKEY RETROFIT service in the country in which it is to be implemented.

The following are images of the workshops held in Spain and Ireland:

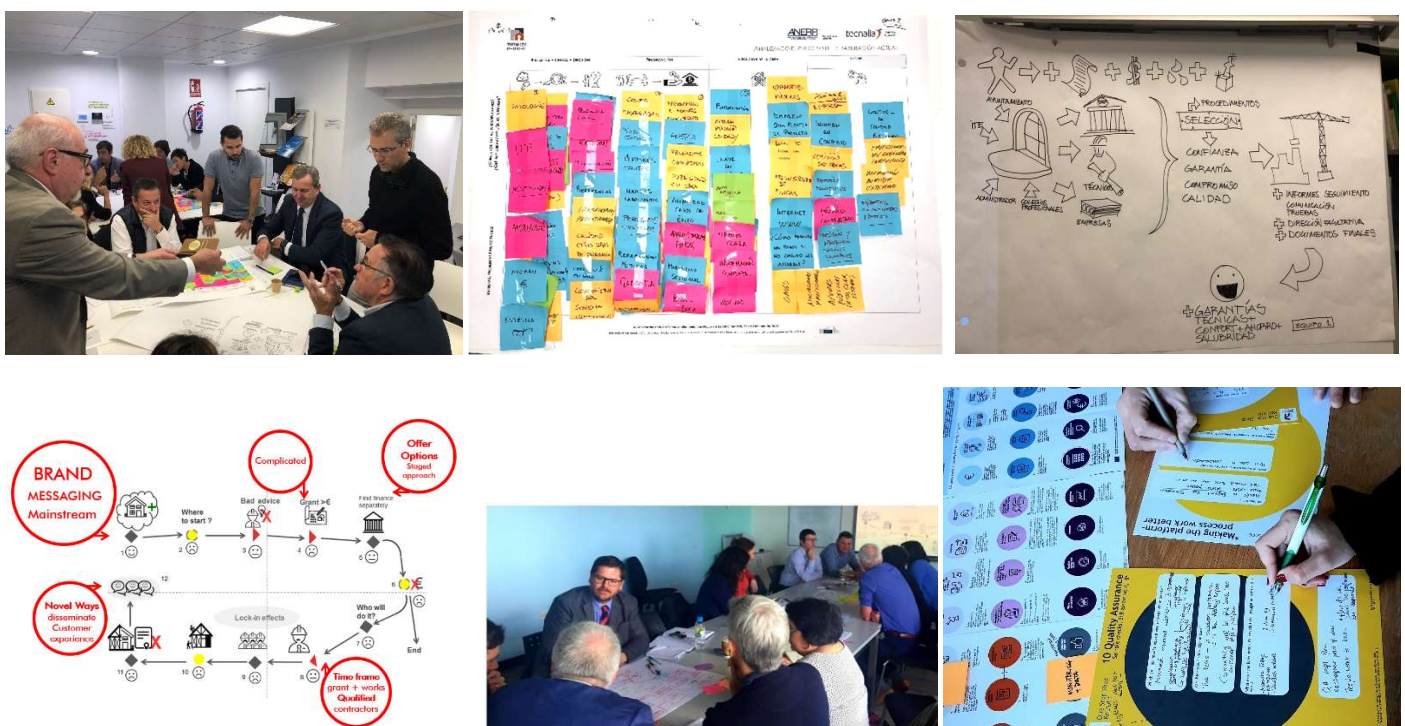


Figure 13: Pictures of the workshops realized with LIG members in Spain and Ireland

Joint identification of the main barriers and obstacles

After defining the ideal customer journey, it is necessary to identify the barriers and obstacles that may arise in its implementation.

The objective of identifying these barriers is to identify ways to solve them. In this phase of implementation, one must be open to a service design in which the technology is supported by professionals and experts, especially in the advisory and technical control phase.

Based on the experience of implementation in France, Ireland and Spain, barriers of many types are possible, but the most relevant and that may arise in the implementation of the TR service in a new country are:

- For the owner end-user:

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- Lack of commitment from the Property Administrators/ Managers, due to the complexity of the processes.
 - Access to financing options, both public and private due to lack of knowledge
 - Delays in the management of public aids.
 - Regulatory changes
- For Renovation companies:
 - Access to quality work opportunities
 - Lack of digital training
 - Need for advice on available technologies
 - Lack of specialized personnel
 - Present a "certification" that guarantees the quality of their work
 - Financing of works due to delay of financial aids.
 - For the development of the service:
 - Complexity of the necessary developments
 - Design the adequate User Experience (UX) to the target market and audience
 - Design marketing campaigns targeting specific audiences
 - Budget and time resources

The challenge is to improve the TR service and the platform through which the service is provided, to solve all these barriers and to include all the necessary phases and steps to service the customer during the complete home renovation process. All the steps included in the "ideal customer journey" should be supported in the platform to have the whole process digitized.

4.5.2 Selection of the most appropriate TR service

Definition of the implementation model of the TURNKEY RETROFIT service and its digital platform for the country in which you want to implement it.

Taking into account the result of the previous sections, in which the environmental conditions have been analysed, the existing renovation services have been identified and the business model have been defined, the implementation model of the TURNKEY RETROFIT service, for the country in which you want to implement it, will be defined.

The TURNKEY RETROFIT service aims to create a renovation experience for the homeowners and provide a comprehensive service that goes beyond the desire to reduce energy consumption and related costs, but also addresses home improvement, aesthetics, improved health, increased comfort and the overall quality of life. For this reason the model of implementation of the TURNKEY RETROFIT service in a new country should be designed as a model oriented towards digital services and to serve as a single point of contact with the customer, where the owner is offered customized solutions based on their specific needs, optimizing the value chain by minimizing the loss of efficiency and the communication problems.

Depending on the identified environmental conditions and the current services that are addressing the demand for energy renovation in the residential buildings in the country in which it is intended to implement the TR service, the implementation model may be different.

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The definition of the TR service implementation model is dependent on the results obtained in the customer identification, the identification of the needs, the identification of the steps and actor involved and the identification of suppliers and necessary profiles. With all this information, it is necessary to hold several working meetings with both the LIG and the companies that will offer their services within the platform, in order to design together the implementation model that best suits the implementation of the TR service in a new country. This work should be carried out through meetings in which, based on different group dynamics explained in the previous section (design thinking, online tools, etc.), the ideal implementation model is defined and selected.

If the TURNKEY RETROFIT service can be developed from 0 by creating a new service (Independent implementation model), developed through the One Stop Shop an already existing service (Support implementation model), or replicating the TR service by integrating this service with one or more services already existing locally through commercial associations (One-stop-shop digitization implementation model or Meta-platform implementation model). Many options are possible, but they will have to be tailored to the needs and the context of the country where it will be implemented.

The most suitable TR service implementation model has not been the same for France, Ireland and Spain in the TR project.

The TR service and the Solutions4Renovation platform can be developed from scratch, independently without using any existing OSS or renovation services in a country. This first model could be used if no renovation service exists in the target country, or no collaboration agreement is reached.

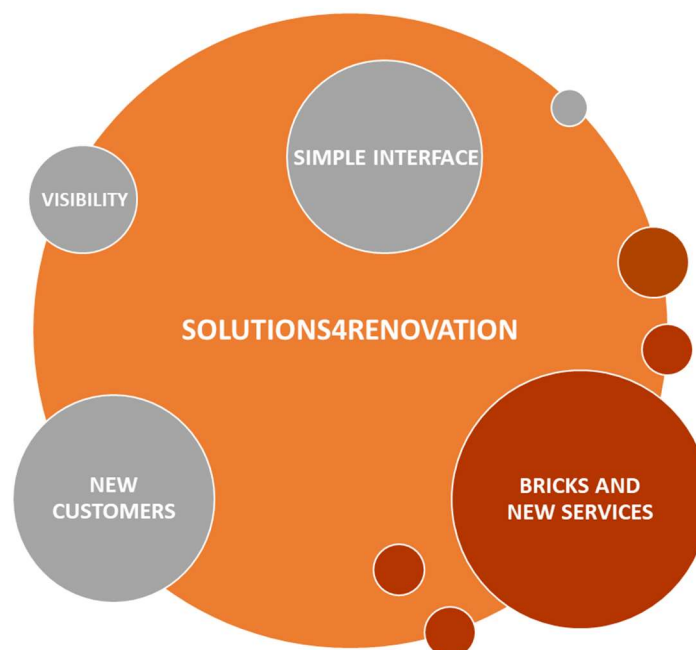


Figure 14: Independent implementation model

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The following are the three different implementation models applied in France, Spain and Ireland, which can also be used for the implementation of the TR Service in a new country.

The Solutions4Renovation platform can support an existing OSS in a country (Figure 14), through the enhancement of the existing OSS services with the TR service bricks and developments. This supports the attraction of new customers and offers new additional services to make it easier for owners to carry out renovation processes in their homes. This is the implementation model used in France.

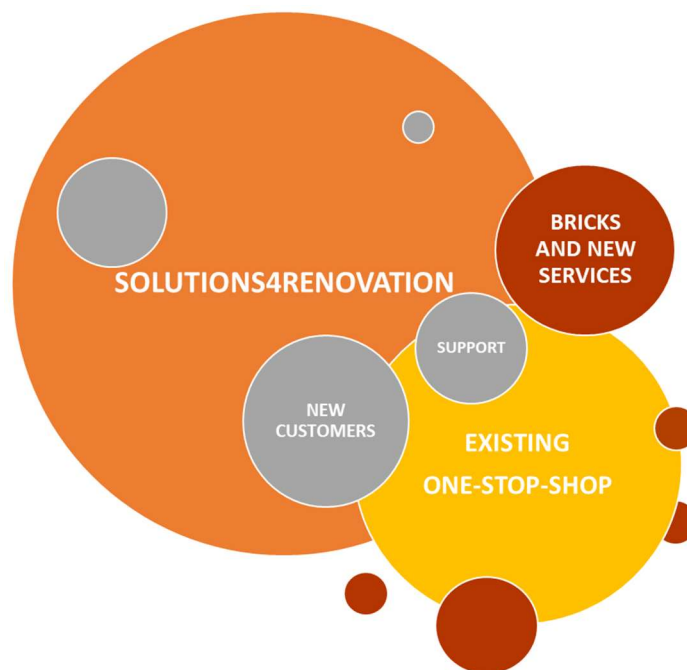


Figure 15: Support implementation model

The Solutions4Renovation platform can support an existing renovation service (Figure 15), through the digitalisation of an existing renovation service to transform it into a one-stop shop with the TR service bricks and developments. This supports business development by attracting new customers and making it easier for building owners to start the renovation process. This is the implementation model used in Spain.

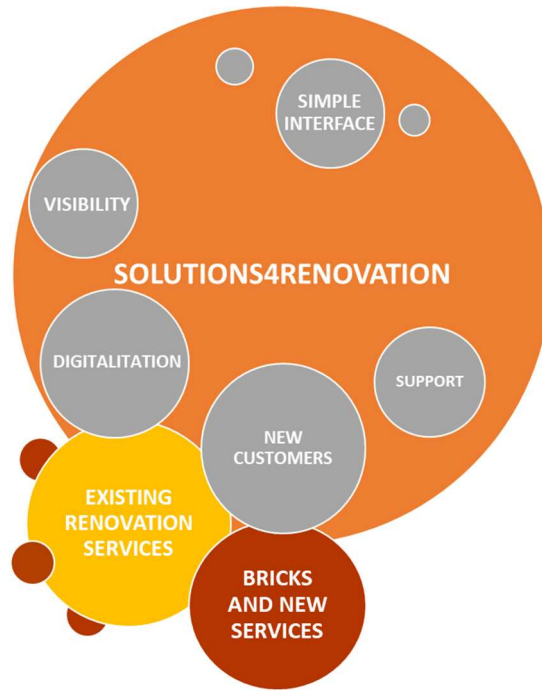


Figure 16: One-stop-shop digitization implementation model

The Solutions4Renovation platform can support a meta-platform (Figure 16), that can host several one-stop shops and existing renovation services. Solutions4Renovation can offer the developments and bricks of the TR service, serve to attract clients and according to the customer’s needs, distribute them and connect them with the different actors of the platform. This supports the commercial development of existing services by attracting new clients and facilitating the client's home renovation process. This is the implementation model used in Ireland.



Figure 17: Meta-platform implementation model

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The result of this task will define the implementation model that will specify how the TR service will work and how the S4R platform through which TURNKEY RETROFIT will offer its services should be developed and deployed, and how the relationship and connection with the potential participating companies is.

The implementation models described have their own characteristics and are different from each other, so that each of them may offer a series of advantages or disadvantages with respect to the others.

Independent implementation model

- Potential advantages:

The service and platform are created from scratch and can be developed freely, without depending on existing developments.

- Potential disadvantages:

The development cost may be higher than in other models in which an existing service is adapted, because it must be developed from scratch.

No starting market or group of customers is available, because the service is new and there is no participation of any OSS or renewal service.

Support implementation model:

- Potential advantages:

Fewer bricks will need to be developed as the existing OSS will already have some of them.

To have a market of customers thanks to the renovation services involved.

- Potential disadvantages:

The design and operation of the TR service will have to be compatible with the development and structure of the existing OSS.

One-stop-shop digitization implementation model

- Potential advantages:

Fewer bricks will need to be developed because the existing renovation service may already have some tools developed.

To have a market of customers thanks to the OSS involved.

- Possible disadvantages:

It will be necessary to complete the services offered by the renovation service to convert it into a One-Stop-Shop.

The design and operation of the TR service will have to be compatible with the development and structure of the existing renovation service.

Meta-platform implementation model

- Possible advantages:

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Having several OSS and renovation services that can offer a large part of the services that will be offered by TR, which may imply less development.

To have a large market of customers thanks to the various OSS and renewal services involved.

- Possible disadvantages:

The need to have to connect and configure several OSS and renovation services, with different business models, structures, and objectives.

Need to define a larger number of contractual relationships between all participating services and companies.

Regardless of the country in which the TURNKEY RETROFIT service is implemented and the model defined, the TR service must offer the same key activities to respond to customer needs and operate as a one-stop shop. These activities should cover the entire process, from the first moment the client has the idea or need to renovate, until the work is completed. These key activities in the generic customer journey are as follows:

- ACTIVITY 0: Get help about the platform or login activities
- ACTIVITY 1: Get general information about retrofit
- ACTIVITY 2: Get into it – Evaluate the renovation potential of your building
- ACTIVITY 3: Get support
- ACTIVITY 4: Let's Go – Start the renovation works
- ACTIVITY 5: Follow the works
- ACTIVITY 6: Control the works

However, while the activities and services that the TURNKEY RETROFIT service offers to customers should be the same, these activities are not required to be carried out in the same way from one country to another. This depends on the local context and environment, where some activities should be more developed than others.

To implement the TURNKEY RETROFIT service in a new country, it must be analysed which is the optimal implementation and OSS model. In addition, the leading manager is to be identified to allow a correct implementation of a service in the local market that facilitates and accompanies the customer throughout the renovation process.

Identification of one-stop-shop model

The concept of a one-stop-shop (OSS) is to provide integrated renovation services for existing buildings. OSSs offer a turnkey solution to customers, providing a single point of contact with the customer. However, it is necessary to analyse the services to be offered and to choose an OSS model that best suits the TURNKEY RETROFIT service in the country in which it is to be implemented. An OSS can offer and perform different functions depending on the different business model concepts. These services may be different depending on the company, organisation or association that perform them.

There are different types of OSSs depending on the company or associations that drives it (Figure 17). The first type is an industry-driven OSS, in which manufacturers and installers aim to expand their business. Another type is an OSS driven by a consultant company, in which they develop customer-related business models. Another type is an OSS driven by energy service companies, which aim to expand the value-added solutions they offer. Local administrations can also form an OSS, which may be focused on climate or energy related programs. A cooperative OSS can also be

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formed between different profiles of companies or associations with the aim to obtain social benefits beyond energy or cost savings. Several examples of these types of OSS already exist in Europe, as shown in **¡Error! No se encuentra el origen de la referencia..** Below is a diagram that shows some of the existing OSS in Europe categorized into the five different roles that have been analyzed for the development of the TR service.

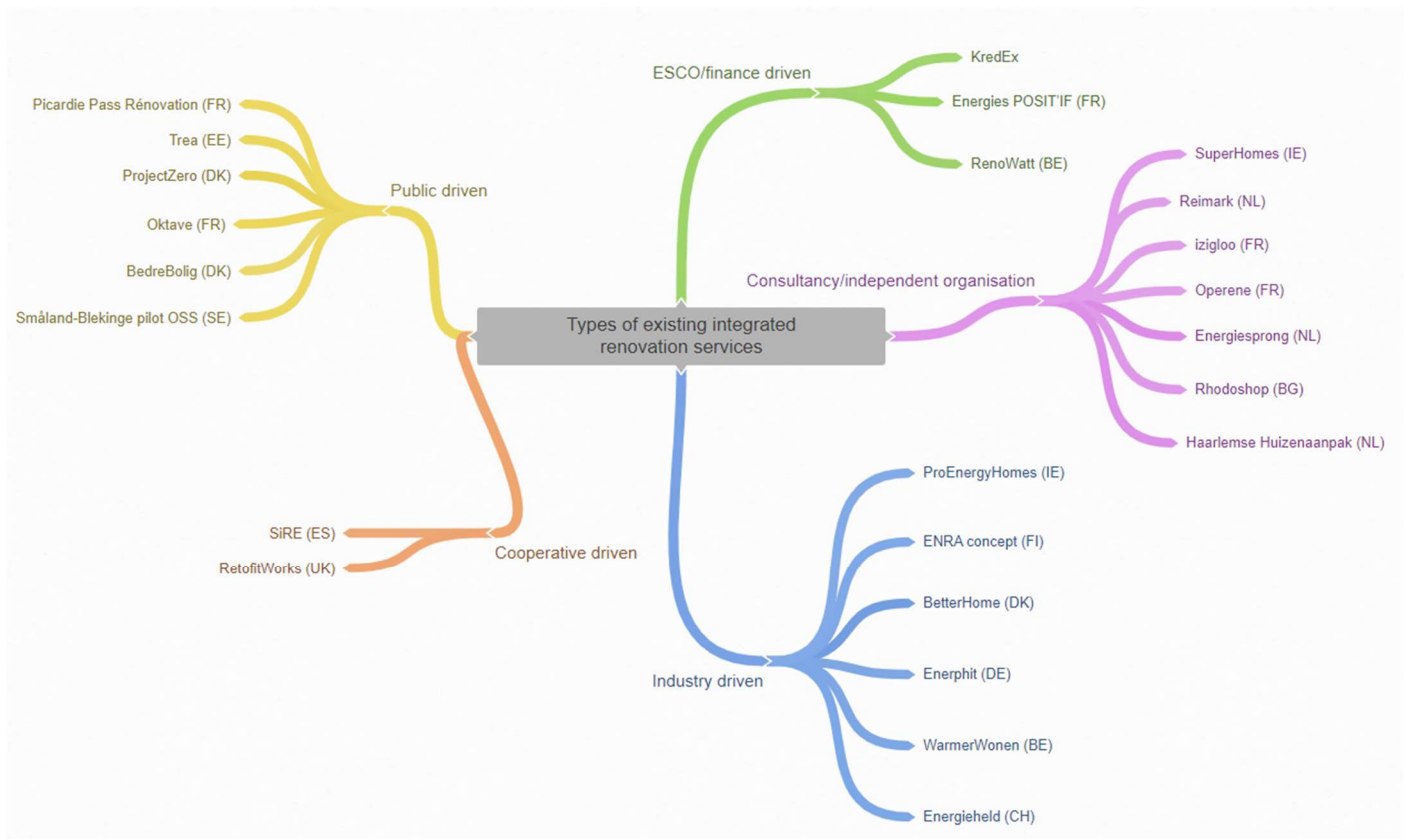


Figure 18: Compilation of existing OSS (compilation by TURNKEY RETROFIT consortium [3])

In view of the different possibilities that exist, it is necessary to carry out a study in the country where the TR service is to be implemented to identify the type of OSS that best adapts to the companies, organisations or associations responsible for its implementation, and the services offered through it.

The H2020 Innovate project [17] has developed a guide that also can be used to define the business model of an OSS. The OSS can be classified into four types of business models with different characteristics (**¡Error! No se encuentra el origen de la referencia.**). The main difference between them lies in the responsibility that the one-stop shop has for the result of the renovation works and for the overall customer journey.

The guide also gives a **checklist with the services** that a one-stop-shop is likely to provide (Table 2). They are arranged from the lightest to the strongest support level. The level correlates with the level of resources that the one-stop-shop needs to deploy. **¡Error! No se encuentra el origen de la referencia.** can help in the implementation of the TR service in a new country to identify the type of OSS business model that best fits the services to be offered.

Table 2: Comparative assessment of the integrated renovation services (Source: [17])

Business model	Roles & responsibilities	Practical example of what the one-stop-shop offers to homeowners
Facilitation model	<ul style="list-style-type: none"> • Raise awareness on energy renovation benefits • Provide general information on optimal renovation works • First advice at the 'orientation stage' 	It advises on how to renovate your house and can provide you with the list of suppliers.
Coordination model	<ul style="list-style-type: none"> • Coordinate existing market actors (suppliers) • Make sure all one-stop-shop services are offered to homeowners • No responsibility for the result of renovation works (only overlooking the whole process) • No responsibility for the overall customer journey (just the first part) 	It advises on how to renovate your house and will push suppliers to comply with their promises. Suppliers remain responsible for the final result.
All-inclusive model	<ul style="list-style-type: none"> • Offer a full renovation package to homeowners • Bear responsibility for the result of renovation works • Bear responsibility for the overall customer journey 	The one-stop-shop is a contractor that sells you the whole service package and is your main contact point in case something goes wrong with suppliers.

Table 3: Innovate checklist (Source: [17])

	FACILITATION OSS	COORDINATION OSS	ALL INCLUSIVE
Marketing & communication			
Awareness-raising of the benefits resulting from energy retrofits			
Promotion of existing services offered by other stakeholders (local authority, suppliers, etc.)			
Proactive demand generation through marketing and communication measures for specific target groups (e.g. low income, specific city districts, young families, elderly persons, etc.) based on a previous market segmentation			
Promotion of the one-stop-shop services in a physical shop, demonstration site, virtual platform			
Communication through a network of one-stop-shop partners – local actors who are present at the 'life-changing moments' of homeowners: real estate agents and banks (when a new house is being purchased), insurance companies and public institutions dealing with young families/elderly people (considering house extension/ adaptation), the authority issuing building permits, etc.			
Development of products adapted to consumers' concerns			
Customised home renovation products including house extension or adaptation to a specific life situation (e.g. flat adaptation for older / disabled person, new kitchen, maintenance needs, etc.)			
Standardised off-shelf ready-made products for a specific type of the housing stock (e.g. same type of houses in terms of age and construction techniques within the same neighbourhood)			
Independent technical assistance			
Recommend relevant energy saving measures, technologies and materials and provide the list of existing suppliers			
Preliminary building analysis / energy audit			
Development of an 'Energy renovation roadmap' aiming at deep renovation (NZEB standard)			

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Supplier selection: Provide the list of suppliers that are certified by the one-stop-shop as 'quality suppliers', develop standard templates and requirements for suppliers' quotes and contracts, check the quotes and assist in selecting suppliers. All-inclusive one-stop- shops can work with their own supplier network and will take the burden of selecting the supplier from the client			
Preliminary contract proposal			
Tailor-made financial advice			
General advice on existing financing options for which the homeowner is eligible (subsidies, tax credits, energy efficiency certificates, etc.)			
Assistance to homeowners in developing a tailor-made financing plan and in preparing all documents necessary for accessing financial instruments s/he is eligible for			
Preparation of a tailor-made financing plan and all documents necessary for accessing financing on behalf of homeowner			
Coordination of renovation works			
Assistance to the homeowner with the coordination of suppliers and renovation works			
Coordination of suppliers and renovation works on behalf of homeowner			
Long-term and affordable financing			
Provision of products negotiated with partner technology suppliers and service providers (e.g. lower prices or 0% interest loans)			
Set up of local incentive schemes if the one-stop-shop is supported by local and regional authorities: e.g. a guarantee fund to cover eventual payment defaults by homeowners, a local revolving fund or 'advance payment fund' for homeowners who cannot overcome high upfront investment costs, subsidies, tax incentives, etc.			
Provision of one-stop-shop's own financial product (loans) to homeowners who have difficulties to obtain a bank loan and to make energy renovation accessible to all homeowners. These loans can be paid back via monthly instalments, service fees or tax payments that, ideally, take into account achieved energy savings			
Guaranteed results & post-work monitoring			
Development of a certification scheme for 'quality' suppliers: create a local label / charter / selection procedure to select only suppliers that provide works at the expected quality level			
Training of local suppliers and enabling them to collectively coordinate renovation works			
Responsibility for the quality of works and achievement of estimated energy savings			
Post-work monitoring			

5. DESIGN, DEVELOPMENT AND / OR ADAPTATION OF THE TURNKEY RETROFIT PLATFORM

Solutions4Renovation is a unique online platform where customers can find the services developed within the TURNKEY RETROFIT Project. This platform aims to guide homeowners and building owners to different type of projects thanks to different services.

As a first step, it is important to define the targeted user by identifying the different types of renovation projects. Those target defined, the global journey (called "customer journey") of the user through a One-stop-shop service for renovation was studied to respond to the needs at each step of the renovation process and was fragmented in small developed elements that can be understand, developed and adapted independently.

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5.1 Overview of Solutions4Renovation platform

In a generic way, the Solution4Renovation platform can be described as an aggregation of several components with each of these components adapted to a specific country where the platform is used, as well as the way those components are linked to each other:

- **Customer Journeys:** It is important to identify this journey for the targeted country as it is determining the need for each “bricks” or tools to develop and add in the platform. And the way the tools need to be connected to each other.
- **“Bricks” (or tools):** Digital services that provide tools or informative content that help the homeowners or building owners in their renovation process. depend on the what’s already existing, what’s needed as revealed by the customer journey, and what business model is chosen.
- **Links to the existing renovation service platforms (if any):** Indeed, if some web sites exist in the country and propose services useful for the user, links to those platforms are added. For example, in France, Heero is an existing online platform that provides digital tools that guide the owners through their renovation process (audit/diagnostic, choice of the works to be done, calculation of the cost and the subsidies, link to a professional). At the end of this digital process, an advisor calls the owner to finalize the journey, give extra advice and launch the project. ReformAnerr in Spain provides basically the same tools and advice but in a more direct way: owners give their contact details and a ReformAnerr advisor calls them to follow them through the customer journey.
- **Interface and design:** adapted to the cultural codes (images, language, references, etc.).

It is important to identify whether there is an (or several) existing platform to link it to S4R in the country, or if it’s required to create a new platform. To choose in which Implementation model (see part 4.1) the platform needs to be developed. In the first case, homogeneous design and interface must be provided for the main S4R platform (to the existing one) as well as fluid weblinks from one website to the other. The type of technical web integration must be decided: parallel webpages or integrated webservices (e-frame) plugged into the main existing platform. The development work can be very different from one option to the other.

This has been the experience of adapting TURNKEY RETROFIT in France, Ireland and Spain:

- Existing French platform Heero in France – through weblinks (no eframe tools) => Support implementation model (see part 4.1)
- Existing ReformAnerr in Spain – through weblinks (no eframe tools) => One-stop-shop digitization implementation model (see part 4.1)
- Generic webpages in Ireland – no link to a specific platform => Meta-platform implementation model (see part 4.1)

This table explains and illustrates the work that has been done to adapt Solutions4Renovation to each of the three countries of the project and that can be helpful for the implementation of the TR service in a new country.

Table 4: Adaptation of Solutions4Renovation to each of the three countries

COUNTRY / COMPONENT	FRANCE	SPAIN	IRELAND
Customer Journeys	Single houses mainly but also multi-family building	Multi-family building mainly but also Single houses	Single houses only
Bricks or tools used by the owners	<p>Punch diagnostic: computation of the impact and improvement results obtained with the renovation, linked to the French context of renovation.</p> <p>Cost of works: Costs corresponding to the French renovation sector.</p> <p>Information about renovation: information corresponding to the French renovation sector, such as the main French subsidies for example.</p> <p>Roadmap: guide for the owner to plan the recommended works through a timeline avoiding disorders.</p>	<p>Punch diagnostic: computation of the results linked to the Spanish context of renovation.</p> <p>Cost of works: Costs corresponding to the French renovation sector.</p> <p>Information about renovation: information corresponding to the Spanish renovation sector, such as the main Spanish subsidies for example.</p>	<p>Punch diagnostic: computation of the results compared to the Irish context of renovation.</p> <p>Cost of works: Costs corresponding to the Irish renovation sector.</p>
Links to the existing platforms	Linked to Heero (a French private platform about home renovation)	Linked to ReformAnerr (a Spanish public service helping owners in housing renovation)	No direct link to an existing platform at first (public service), a private partner will be found by the end of the project.
Interface and design	<p>Similar to Heero (a French private platform about home renovation)</p> <p>Pictures with happy people</p> <p>Not so many colours</p> <p>Speech directed to the user</p>	<p>Similar to ReformAnerr (a Spanish public service helping owners in housing renovation)</p> <p>No pictures</p> <p>Not so many colours</p> <p>Speech directed to the user</p>	<p>Pictures with happy people</p> <p>Not so many colours</p> <p>Speech directed to the user</p>

All this must be contrasted and verified in the workshops previously carried out with the LIG. This guarantees that they respond to the characteristics and needs of local agents and potential clients in the target country.

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5.1.1 Customer Journeys and platform flow diagram

Customer Journeys are one of the most crucial parts to adapt on the platform as they depend on the business model that chosen, but also on the needs of the customers and the technical development feasibility.

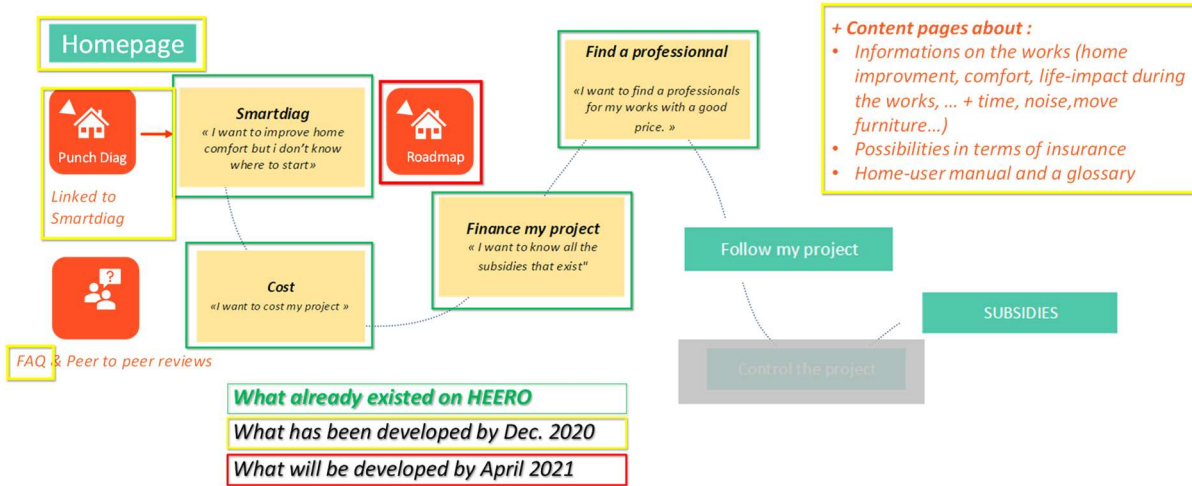
It is important to clarify that the customer journey replies to the needs of the customer. The platform flow diagram shows how the system works to meet the needs of the customer journey and defines all the inputs and outputs required to make the customer journey smooth and efficient.

Following the method used in the TURNKEY RETROFIT project in section 6, the Costumer Journey reveals a list of services (called “bricks”) that are gathered in the platform. The platform Solutions4Renovation is composed of the following bricks that each country has to adapt:

- **Information about renovation:** information presented to the user discussing the renovation process, the national subsidies, the expected improvement in comfort thanks to renovation, the life impacts during the works and links to web site listing qualified professionals. This brick depends highly on the national context. Therefore, the content must be totally adapted to the targeted country.
- **Punch diagnostic:** an online and interactive tool, where the user can indicate the condition of different building elements of their home (e.g. windows or heating system). The user is provided with an evaluation of the potential of improvement to their home if they renovate. The evaluation is based on four criteria: energy savings, thermal comfort, acoustical comfort and indoor air quality, on the other hand, a list of recommended works. The structure of the tool is stable but can be adapted (e.g. air conditioning is included in Spain). The computation leading to the results must be adapted to the target country context. Some adaptation can also be done
- **Roadmap:** a tool allowing the user to organise the renovation works agenda. The user gives an approximate date for each work and get recommendation about gathering or change the order of the works. The structure of the tool is stable, but the computation leading to the results must be adapted to the target country context.
- **Cost of works:** a tool indicating the cost of each renovation work. The user selects a specific type of renovation works, gives some indication about their housing, and get an approximation of the amount it could cost to carry out the works. The database of costs must be adapted to the targeted country context.
- **Subsidies:** help co-owner to find the subsidies they can get about their works by giving information on amount in euros, eligibility criteria, documents needed.

As an example, here are the French Customer Journeys with the features that have been developed, for the single houses and for the multi-family buildings. An example is shown of the results of the development of customer journey carried out for the case of France and the expected developments.

Presentation of the French Customer Journey **V2** – single houses only



Presentation of the French Customer Journey **V2** – multi-family buildings

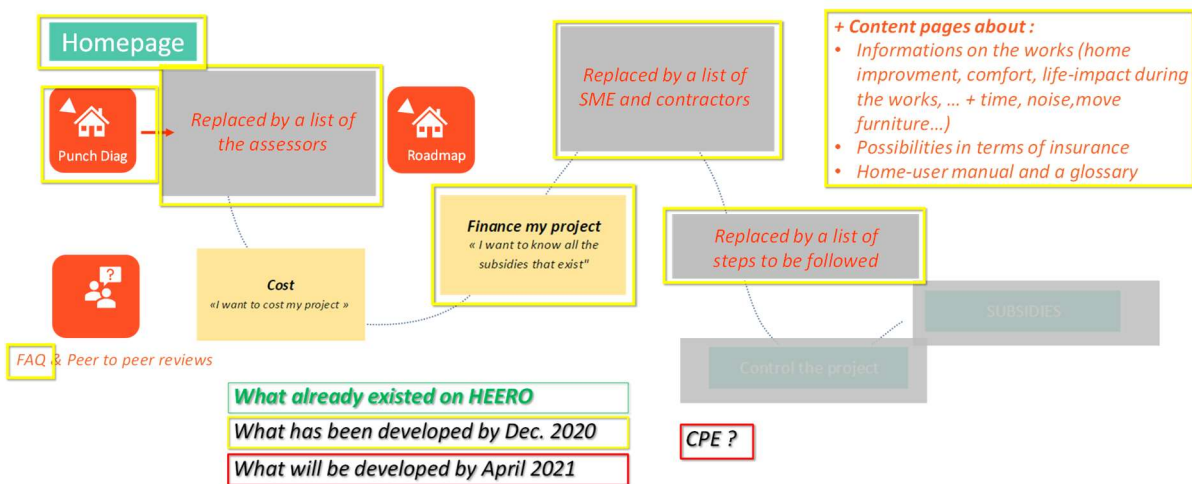


Figure 19: French customer journeys – work plan

After defining the customer Journey, arrange each "bricks" or service to be offered order of priority. Figure 20 and Figure 21 show the customers journeys for each version of the platform. The little dots in colour represent the priority of the bricks. The vertical arrow in Figure 21 highlights the priority level of each version of the development of the platform. Figure 20 and Figure 21 refer to the User Story Mapping in Annex 1. The User Story Mapping in Annex 1 gives the list of all the bricks (each "bricks" or element of the platform) identified as useful for an OSS. The priority column concerns only France, Ireland and Spain but this list of bricks can be used for any European country as the issues of the renovation process and the needs of the customers are similar, despite differences in the business models and the level of maturity of the existing services.

User story mapping -reminder

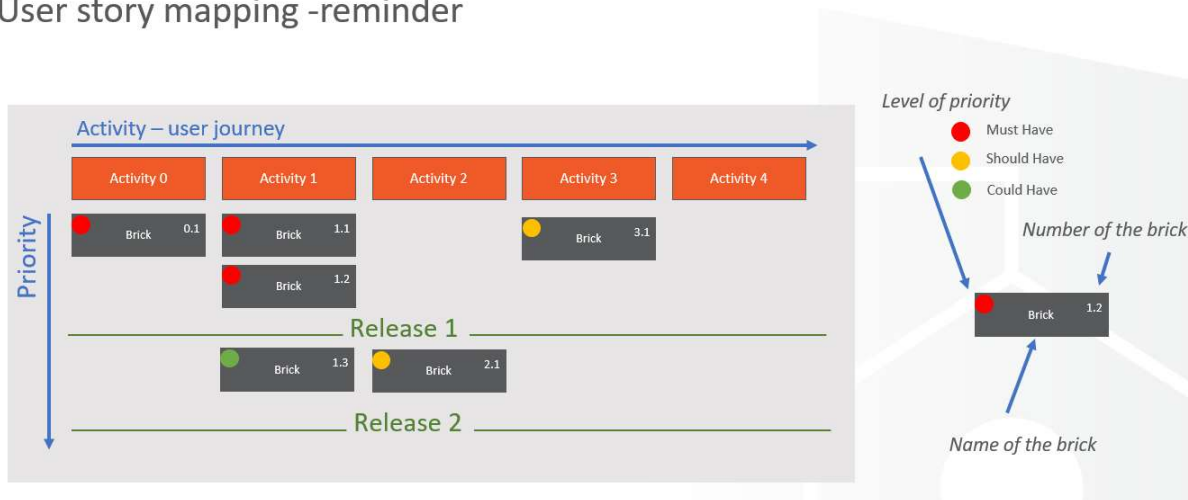


Figure 20: User Story Mapping principles

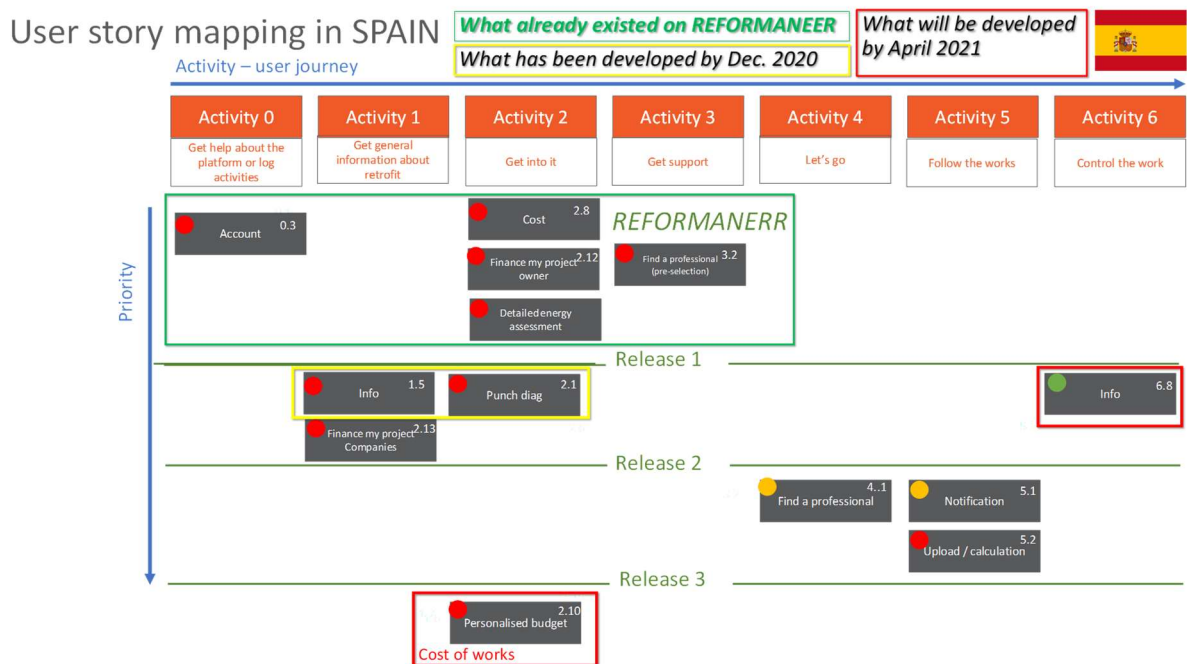


Figure 21: User Story Mapping principles of Spain

5.1.2 Bricks and adaptation needed

For example, in the implementation of the TURNKEY RETROFIT service in France, Ireland and Spain, the following difficulties have been identified for the development and implementation of some of the functionalities:

- There is no automatic way to access and analyse cadastral data available in Spain and Ireland =>Smartdiag difficult / impossible to adapt;
- Different types of typical works to take into account into the Cost of Works bricks; bricks => a solution have been found to implement Cost of Works in each country;

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- Availability of the cost of the works in each country => again a solution has been found with the partners

5.1.3 Links to the existing platforms

Basically, the links to the existing platforms are related to the business model that will be chosen as described in part 5. The interface and design must be adapted to each country and a web designer is needed to do so. This part is much more important than it seems as we really need to convince and seduce people about the energy retrofit of their home.

In the next part we explain what has been designed and developed for Solutions4Renovation and we explain the conditions required to adapt the brick to each country.

5.2 Data of service providers

Another fundamental step to ensure the operation of the service is to identify all the data necessary to supply and respond to the needs of the platform. It is important to carry out a study of these data.

In some cases, the data necessary for the correct functioning of the TR Service data may be in the public domain, but in other cases it may belong to different service providers. For this reason, it is necessary to analyze and define how to make use of these data and involve them in the TR Service.

In addition to identifying the data required, the effort required to adapt this data to the needs of the platform, and the budget that this may entail should also be considered. This depends on the developments required in the target country where the TURNKEY RETROFIT service is to be implemented.

Table 5 gives a summary of the data and adaptations needed for each brick detailed in 7.1 and in Annexes 1 and 2.

Table 5: Data needed of each brick

Name of the brick adapted	Data required	Estimated effort for the adaptation in one country (days)	Comments
Home Page	Translation	5	The structure/design of the brick is fixed but the content is editable
Contact	Translation Email address GDPR requirements	Depending on the quantity of information and the architecture of the original database.	The structure/design of the brick is fixed but the content is editable
Information	Translation Adaptation of the renovation process to the norms in the country. Information sources	Depending on the quantity of information	

	Web links (if necessary)		
Punch Diag	Translation Representative pictures of housing problems Links to be found at the end of the punch diag	15	The structure/design of the platform is fixed but the content is editable
Cost of works	List of all the works wanted on the platform List of cost for each works (decision trees) Translation of all the questions and answers asked to the customer Translation of the others word in the bricks Email address of customer Main colour of the platform (hex code) Host website	75	The structure/design of the brick is fixed but the content is editable
Road map	Estimation of the energy, CO ₂ emission and energy cost savings for renovation actions.	25	The structure/design of the brick is fixed but the content is editable

5.3 Lessons learned when implementing the service in different countries

The following sections describes some of the recommendations and lessons learned from the implementation of the TURNKEY RETROFIT service in Ireland and Spain, which may be useful and should be taken into account for a future implementation of the service in another EU country.

5.3.1 For the Irish context

Customer journey

A fundamental understanding of the customer journey is vital. Keep returning to it with iterations as new information is unearthed. Consider the question “what needs to be done now so that future retrofits are done well, and the customer journey is protected and reliable”.

Identify what issues make the customer journey challenging. In Ireland, these were identified as quality assurance and impartial advice. The customer journey was broken down to consider comprehensive quality assurance at each step.

Difference between the customer journey and the platform flow diagram

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The customer journey serves only the customer, but the platform shows how the system works behind the customer journey plus all the inputs and outputs that are required for the customer journey to be smooth. The platform should be useful to other players in the retrofit context.

Design for scale and not just an immediate solution

An understanding of the scale of the challenges so that the solution brings scale and coherence. Do not start with a technical solution immediately. Whose future are we designing for?

Be lead by the LIG knowledge

The LIG Knowledge of what the market really needs – is it another one stop shop to be added to the existing market, or renovation advisor, do we need to enhance an existing one stop shop or create a marketplace. A small network of committed LIG is more powerful than a large number of members who are not committed.

Disseminate what you are doing

Whenever there is a chance, disseminate the vision as it becomes part of the branding and awareness, plus your organisation becomes associated with it.

Building partnerships

Time and resources are required to build partnerships that support the design, development, operation and maintenance of the platform if the project is to scale up.

Be clear what each partner wants to achieve

Who owns the platform (if a partnership is created)? Who owns the data?

Skills required

Specific skills are required – Marketing, UX design, backend developer, front end developer, start-up facilitator, financial consultant, to develop new bricks and relationships between them on the platform.

Costing

Get a clear idea of how much each step costs in terms of time and resources as this informs the type of actions and funding required to be drawn in.

5.3.2 For the Spanish context

Key actors

It is essential to analyse in each country which are the valid stakeholders for the existing housing typologies. In the case of Spain, multi-family dwellings are constituted in communities and therefore the figure of the Property Manager is very relevant. A property manager is a professional contracted by the board of owners of a building, who is responsible for managing (under request of the owners of the property, or by decision of a board of owners) the financial, legal and technical matters necessary for the maintenance and economic management of the property. In

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the case of carrying out building renovation, a property manager is responsible for channelling the requests of the residents, contacting suppliers, requesting financial aid, etc.

That is why they have been included in the LIG. There are other essential figures such as neighbourhood associations or commonwealth.

Customer journey

Innovative methodologies such as design thinking, customer journey map tool, Ad libs, etc. help to reach all objectives in a simple and easy way. So, it's highly recommended for the customer journey definition process. This methodology requires a professional facilitator and a previous work to define the objectives to be achieved with each meeting or group dynamic. Non-presence is not an insurmountable barrier since we have a wide range of collaborative tools on the web that allow this type of interaction. Co-creating is essential to get engagement.

Difference between the customer journey and the platform flow diagram

The customer journey is focused on customer needs, and the platform must be open to a "service design" in which technology is supported by professionals and experts who can provide answers to those needs, especially in the technical advice and control phase. So combined process presential and online it's recommended. In addition to communicating through the platform, the technicians will have to visit the house physically. It is essential to accompany the online process with specialists who advise and supervise the execution and control. But the platform is the essential guide to centralize all the documentation and monitoring of the processes, and customer's single point of contact.

Designing for scale and not just an immediate solution

The management of grants requires a special mention. In Spain, the need for special support for the management of grants is needed due to the lack of resources and training of rehabilitation companies and the complex management for property managers. The financial part that is the essential condition must be well harmonized with the public and private financing must be effectively managed options so integral renovation projects become as effective and possible.

Be lead by the LIG knowledge

The TURNKEY RETROFIT service must be clear, simple and with a total guarantee of control and quality. The incremental development should be tested and prioritized at every step by the LIG members, to be sure that it is well understood by all actors involved.

Disseminate what you are doing

The dissemination and communication aspect are essential for all project partners to inform potential customers about the benefits of the service, building renovation technologies and the benefits in quality of life and comfort that can be achieved from renovation. It is necessary to break the "taboos" surrounding renovation projects. It is important to count on the help of manufacturers who develop very didactic and effective communication materials in their prescription processes.

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Building partnerships

In Spain, Significant time and funding was needed to build strong relationships and partnerships with the suppliers necessary to provide response and service through the platform.

Skills required

It is necessary to have different companies or agencies that have all the necessary skills for all the developments and tasks to be carried out.

Regulations

Spain has considered in the project as the paradigm of housing in a multi-family block constituted in a community of neighbours. The fundamental nucleus of the legislation on Communities of Owners is the Horizontal Property Law, although it is also important to know the Urban Leasing Law, of great importance for both owners and tenants, within which issues such as the Law for the Rehabilitation and the Housing Plan.

The regulations must be updated with the current context. The Horizontal Property Law is the one that regulates everything related to the elements and services shared in the Communities of Owners

Costing

It is necessary that all stakeholders know from the beginning or as soon as possible the cost of the development of the necessary functionalities of the platform, and the cost of the implementation of the different Bricks. Not knowing this information clearly from the beginning may decrease the commitment of the participating actors.

In the case of Spain, it has been detected the need of a special support for the management due to the lack of resources and training of the renovation companies and the complex management for the property administrators. The financial part, which is the essential condition, must be supported with public and private financing options, in order to make effective and possible the aborting of integral rehabilitation projects.

5.4 Readaptation of the business model

Depending on the results obtained in the previous sections, it may be necessary to adapt the initial business model, so that it can respond to the functionalities required for the specific case and the identified barriers.

Therefore, it is necessary to have time and resources to make this adaptation. This ensures that the final business model responds to the result of the needs of local agents, because ultimately, they are the actors providing support and offering their services within the platform.

If this step is not carried out, the success of the implementation of the TURNKEY RETROFIT service cannot be guaranteed, because the business model designed at the beginning does not respond to the characteristics, functionalities and barriers defined and identified by the members of the associations, companies and experts that are part of the LIG.

With all the information obtained with the work carried out in the previous points, we should redefine, if it is necessary, the specific target customer and market segment and estimate the revenues streams from the main customer.

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Customer and partner relationships and channels are to be outlined to ensure the service quality, paying special attention to user experience and the services to be offered within the TR. Remarkably, it has to be carried out in a collaborative way integrating knowledge and expertise from the different stakeholders (multi-stakeholders approach).

6. Other business model issues

This section describes the necessary mechanisms and processes related to define the financial model, establish the contractual relationships with the service providers, marketing and communication plan that should be carried out for the deployment and implementation of the TURNKEY RETROFIT service in a new country.

6.1 Financial model: income / expenses

6.1.1 Pricing strategies

Determining the price can take many ways. Most importantly, it is important to choose either a customer value-based pricing strategy, cost-based pricing strategy or competition-based pricing strategy [18]. Further information on these strategies is as follows:

- Customer value-based pricing: This strategy is based on a customer's perception of value. The customer decides whether a product is worth its price or not. Therefore, we start with customer value. When a customer buys a product, they exchange something of value (the price) to get something of value (the benefits of having or using a particular product). Therefore, it is crucial to understand how much value consumers place on the benefits they receive from the product and setting a price that captures exactly this value. This means that we cannot design a product and marketing programme and then set the price. Price is considered along with all other marketing mix variables before the marketing programme is set.
- Cost-based pricing: While in customer value-based pricing, customers' perceptions of value are key to setting prices, whereas in cost-based pricing, the seller's costs are the primary consideration. Costs set the floor for the price that the company can charge. Therefore, cost-based pricing involves setting prices based on the costs for developing, distributing, selling and maintaining the TURNKEY RETROFIT services. In order to make some profit, a fair rate of return is added to account for efforts and risks.
- Competition-based pricing: Finally, competition-based pricing involves setting prices based on competitors' strategies, costs, prices and market offerings. In highly competitive markets, consumers base their judgements of a product's value on the prices that competitors charge for similar products.

To deploy the TURNKEY RETROFIT in Spain and Ireland, we chose to use the cost-based pricing, as the knowledge of customer perception of value was not deep enough. The difficulty with TURNKEY RETROFIT, in the countries where has been implemented, is that the value perception by customers falls far short of the cost required to provide the services. Contractors and building owners are not enough to support the cost of the services.

In France however, a third actor is involved, the energy providers, who benefit from the renovation works, due to the white certificate scheme and in return subsidize the Turnkey retrofit services. The customers of the service obtain an improvement of the comfort in their homes, and in return they offer the white certificates obtained to the energy providers, so that they can achieve their targets, and the energy providers subsidize part of the renovation.

6.2 Establishment of contractual relationships

This section includes a series of guidelines on the establishment of contractual relationships with TURNKEY RETROFIT service providers.

The TURNKEY RETROFIT service cannot exist as a stand-alone service, for that reason it has to be connected and promoted by market community actors.

The execution of the necessary tasks to establish the contractual relationships has a strong connection with the business model design phase. After business model is defined, partners participating and offering their services through the TR service need to be identified. These partners can be can also be members of the LIG.

It is not necessary to wait until the end of the platform development to define or sign a relationship contract with companies and agencies committing to provide their services, thus guaranteeing the implementation of the service. This work can be done while the implementation of the service is being developed or after subscription to the TR service.

As the TR service must operate as an integrated service for renovation, it is necessary to collaborate with various partners to ensure the service covers all phases of the renovation journey. The following is a series of guidelines when establishing relationship contracts for the implementation of the TURNKEY RETROFIT service.

- **Suppliers contract:**

To finance the platform and give subsidies to the homeowner, a contract with an energy supplier may be necessary.

This contract may establish the terms and conditions of:

- The dissemination and promotion of the platform
- Duration
- The pricing policy
- Exclusive rights (if yes, on which areas: all the country or just a part of it)

This type of contract has to be signed by both the energy supplier and the manager of the platform.

- **Contractors contract:**

Contractors can "buy" leads directly on the platform, thus need to sign a contract before hand to understand what their rights and obligations are.

This contract can establish the following terms and conditions:

- Presentation of the platform
- Definitions
- Conditions acceptance
- Certificates (insurance, contracts certificate...)
- The use of the platform
- The quality guideline

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- The pricing policy
- Financial penalty (late payment fees, ...)
- Responsibility of the contractors
- Responsibility of the manager of the platform
- Intellectual property
- Rights transfer

This type of contract can be signed online after subscription to the TR service.

- **Users contract:**

For platform users, they must read and accept the terms and conditions of the platform when accessing and registering for the service. These terms and conditions must include:

- Definitions
- Conditions acceptance
- Description of the services included (i.e. cost of works, home passport, ...)
- How to create and delete an account
- Conditions of a contractor's evaluation (at the end of the project)
- Pricing policy for the homeowner
- Responsibility of the user
- Responsibility of the manager of the platform
- Users conditions violation
- Cookies policy
- Personal data
- Intellectual property
- Links hypertext
- Website update
- Rights transfer
- Litigation
- Customer relations

For more information on the establishment of contractual arrangements for the implementation of the TURNKEY RETROFIT service in a new country, it is recommended to analyse deliverable D3.3 Stakeholders Contractual arrangements [19].

6.3 Market Plan

6.3.1 Operational marketing

Operational marketing uses tactics that convey the strategic message to meet the strategic customer segment of the TR service. To do this, it is recommended to work on developing a plan that integrates daily activities to attract customers. To do so, market segmentation, targeted communication and marketing tools are a key to reach the right groups at the right moment (e.g. young families, elderly people, low-income households, etc.) with the right message.

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Operational marketing uses tactics that convey the strategic message to satisfy the strategic customer segment of the TR service.

6.3.2 Traffic monitoring

A crucial activity of operational marketing is to monitor the online traffic generated by your One-Stop-Shop. The number of visits to your site and the average time spent by Internet users on each page are indicators that help you determine whether they have been interested in your content or if they have only skimmed them and immediately moved on. The study of your online traffic also takes into account the sources of traffic that led your visitors to each of your sections such as direct access to your URL, passage through a referring site, search engine results, etc. As part of a web traffic analysis, the creation of dashboards and tailor-made traffic reports is an important step to have a quick and synthetic view of the performance of your site. These should match your objectives (KPIs) and your target audience. To do so, you can use the tool Google analytics [20], or other existing tools on the market. **¡Error! No se encuentra el origen de la referencia.** shows an example of the traffic monitoring following the initial implementation and launch of the Solution4Renovation service in France, Ireland and Spain.

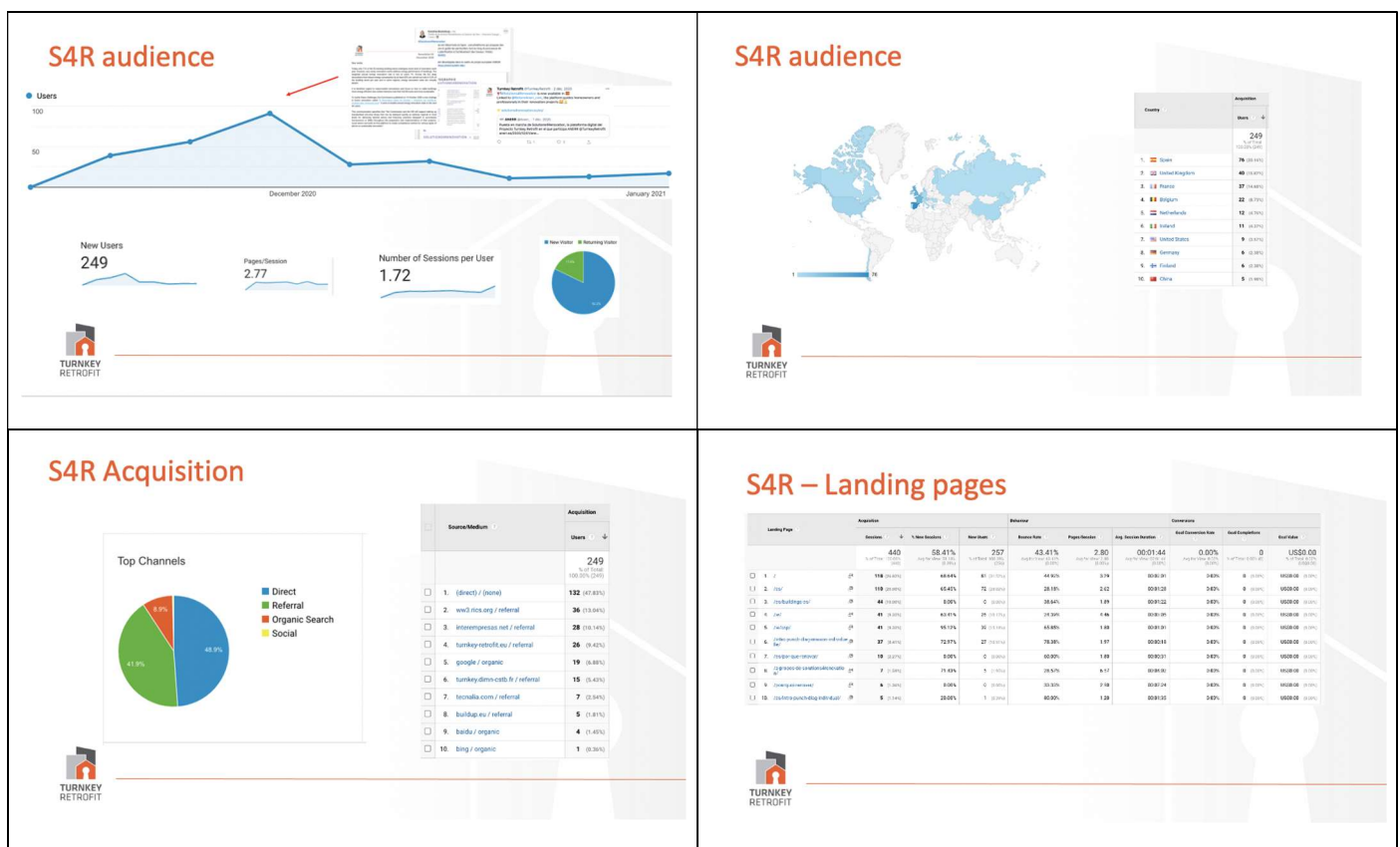


Figure 22: Example of traffic monitoring for Solution4Renovation

6.3.3 Mechanism of lead generation.

The Solutions4Renovation platform through which TURNKEY RETROFIT provides service, operates as a tool that delivers a high-quality service while being a lever to motivate people to get on their renovation journey. This is a

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mechanism with which to attract customers and generate leads for the other paid services of the TURNKEY RETROFIT solution.

Its added value proposition is to be public and free. It provides **impartial advice** to customers and is based on **collaborative research**.

During the adaptation of the TURNKEY RETROFIT service in a new country, communication actions should be carried out to attract potential users. These communication actions can be carried out through conferences, social networks and press releases. In addition, it is strongly recommended that a budget be dedicated to support the promotion of Solutions4Renovation with advertising (specialized press).

6.3.4 SEO marketing campaign

The purpose of the SEO methodology is to increase both the quality and quantity of people that will land into your web through non-paid (also known as "organic") search engine results. A Search engine optimization (SEO) study is a small keyword study in which we scan the main keywords in a sector and their associated search volume. To do so:

- Define a list of key words that customers could type in search engine related to your Turnkey retrofit project
- Evaluate the volume and prices of each of those key words

What is SEO:

SEO stands for "search engine optimization". A search engine is web-based platform that is making it easier to find a web page among the very large number of sites that populate the web. Internet users insert one or more keywords in a search bar and in response, the algorithms specific to each search engine, a list of websites is displayed that most closely matches their request as quickly and precisely as possible.

According to experts, "despite the acronym, SEO is as much about people as it is about search engines themselves. It is about understanding what people are searching for online, the answers they are seeking, the words they are using, and the type of content they wish to consume. Knowing the answers to these questions allow you to connect to the people who are searching online for the solutions you offer. This is why this type of methodology is suitable to achieve a greater impact and improve the positioning of the TR service after implementation in a new country.

Based on this in-depth understanding of customer preferences, there are several ways to optimise a website in form, content, performance and activity as outlined in the SEO Hierarchy of need presented in **¡Error! No se encuentra el origen de la referencia.** [21].

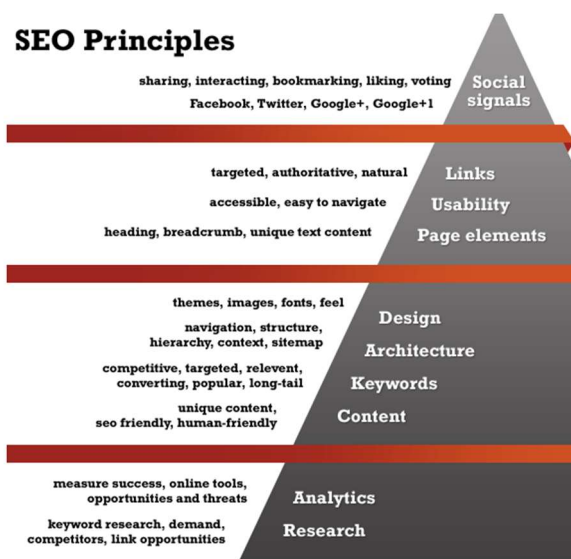


Figure 23: SEO- Hierarchy of Needs

Assessment of the effort required to enter the market

During the business model development phase, it is also useful to perform a basic SEO study to evaluate the size of the market and the effort required to enter the market.

The goal is to conduct an SEO study of the renovation sector, studying a list of keywords used, their associated search volume, the type of keywords used by TURNKEY RETROFIT’s competitors, and if you are considering to pay ads to implement the TR service in your country.

For the TURNKEY RETROFIT platform in France, as the business model is based on a large number of B2C (mass consumer market, i.e. companies that offer products or services to end consumers), it has been highly recommended to advertise the service on search engines. To perform this upstream SEO market analysis, a number of tools are available on the market under the name of SEO platform.

A means to achieving a successful TR service marketing campaign is the SEO marketing campaign. Search engine optimization (SEO) is the process of improving the quality and quantity of website traffic to a website or a web page from search engines.

To achieve this goal, many different tasks shown in **¡Error! No se encuentra el origen de la referencia.** can be performed:



Figure 24: Important steps in SEO marketing

6.3.5 Marketing tools

It is necessary to carry out an effective marketing plan, to get people and companies interested in the TR service. There are many marketing methods and tools that can be effective, and in case of implementing the TR service in a new country, it is necessary to carry out a study of which is the most appropriate for the case and phase of the service implementation.

The following are the marketing tools used in the communication plans for the countries of France, Ireland and Spain, with which good results have been obtained and can be replicated in other EU countries:

- **Brochure for homeowners:** A brochure to give a clear and short introduction of the TR service, the S4R platform and the benefits of renovation using the platform.
- **Informative video:** A video when the platform becomes operational, about two minutes long. The objective of the video is to promote the platform to homeowners and can be disseminated widely on YouTube and other social media channels.
- **Press releases:** Press releases in specialized websites, with the aim of targeting both customers and potential companies interested in being part of TURNKEY RETROFIT service.
- **Conference:** The objective of this conference is to promote the platform and look for potential actors interested in helping to develop and/or offer their services within Solutions4Renovation.

All of these activities are to help prevent the risk of a lack of customers on the platform, especially in countries where the market is mature and there is already a similar service in place. It is therefore important to build on the existing networks of partners and the TURNKEY RETROFIT Community (LIG, companies, agencies and organizations participating in the implementation of the service) to promote the TURNKEY RETROFIT service and the Solutions4Renovation platform.

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6.4 Communication plan

One of the most important and necessary steps for the implementation of the TURNKEY RETROFIT service in a new country is the Communication Plan. The activities related to the communication plan, are necessary to create interest in the TR service and to inform a wide range of stakeholders. In addition, the communication plan can also be used to involve interested stakeholders in participating and offer their services within the TURNKEY RETROFIT services.

To achieve a successful communication plan, it is necessary to put great emphasis on online and offline communication and collaboration with other TURNKEY RETROFIT implementation or existing initiatives in other countries and EU projects with the aim of growing the Turnkey community

6.4.1 Communication and dissemination strategy

The following are some of the communication and dissemination tools and strategies used:

Visual identity and communication guidelines

A common public image / branding for the project allows an easier identification by the public and ensures better visibility and immediate recognition. This includes developing a professional-quality project logo together with associated templates for all presentation and marketing collaterals (e.g. presentations, deliverables, brochures, leaflets, posters, etc.) and a service / project motto.

Promotional and informational material

- **Project brochure:** it provides an overview of the project with links for readers to find out more, will be written in an accessible language and produced with an eye-catching design. A second brochure will be developed once the platform 'Solutions4Renovation' is launched. It will explain in a clear and understandable way how the platform works and will be targeted to homeowners but also all stakeholders involved in the renovation works.
- **Roll-up banner:** It could be used to ensure a good level of visibility of the project at events by communicating the key elements at a glance.
- **Poster:** It will be developed after the first results of the project are available.

Digital communication

In these times it is necessary to carry out an adequate communication and digital dissemination to guarantee the success of a service. Therefore, for the implementation of the TR service in a new country it is necessary to use the following tools or means of communication and dissemination of the TURNKEY RETROFIT service.

- **Video**
- **Website and digital platform**
- **Newsletters**
- **Blog content and infographics**
- **Social media accounts and strategy**

A mix of social media tools will be used to broaden outreach and to create a 'buzz' about the project.

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- **Digital networking and partnering: communication boosters**

Digital Networking refers to the outreach to interesting organisations/initiatives/projects (such as platforms, blogs, associations, NGOs, etc.) that can help to spread the project's messages.

The communication and dissemination strategy for the TURNKEY RETROFIT service must establish several key communication messages that to be used to address the different target groups. These messages should be designed to reach target groups, depending on the identified customer segment, and to also reach the companies and agencies that are to be part of and offer their services within the TR.

Listed following are examples of sample messages (which should be adapted to the new country) that could be launched as part of the communication plan for the implementation process of TURNKEY RETROFIT service and the Solutions4Renovation platform in a new target country:

Targeted at homeowners:

- Solutions4Renovation and TURNKEY RETROFIT services not only help you reduce your energy bills, they increase your home comfort and enhance your overall health & quality of life.
- Solutions4Renovation brings people on their retrofit journey
- Solutions4Renovation is an easy, transparent, single step platform that guides you on your renovation project, from planning to the completion of the works.
- It is cheaper to renovate several areas at the same time than separately over time
- Inadequate and poor housing causes high energy bills, health issues and a lower quality of life

Targeted at a wider audience (local authorities, policymakers, engineers, architects, etc.):

- The TURNKEY RETROFIT service is a service-oriented model where the homeowner is offered tailor-made solutions, covering energy improvements separately or in an integrated way with solutions focusing on the building envelope, heating, cooling, ventilation, hot water systems, renewable energies & more.
- The Solutions4Renovation platform provides building owners guidance, follow-up and digital tools for a smoother renovation journey
- The Solutions4Renovation platform is a single contact point responsible for the whole renovation process, coordinating all stakeholders involved in the renovation of the same property, allowing for better planning, quality assurance and building trust with the homeowner.
- TURNKEY RETROFIT services is a homeowner-centric renovation journey which transforms the complex and fragmented renovation process into a simple, straightforward and attractive process.
- Solutions4Renovation by TURNKEY RETROFIT services, makes the renovation process easier for the building owner & delivers independent advice

7. CONCLUSIONS

After the experience of the implementation of the Turnkey Retrofit service in France, Ireland and Spain, it can be concluded that even if the process for implementing the OSS in a new country has been defined, it will be necessary to take into account the specificities of each case.

As a result of all the work developed, it has been detected that each country presents different conditions, the agents participating in the renovation processes and the relationship between them show differences, and the starting point of the companies or associations that want to implement the TR service are not usually the same. All the factors and tasks included in this document directly influence the success of the TURNKEY RETROFIT service, from whether the political framework of the country is favourable towards renovation to the culture among the population to ensure that the service is accepted or if you want to create a new TR service from scratch, or if you are going to implement it on top of an existing OSS. Moreover, the effort required to implement the TR service will not be the same in a country where the different companies and public entities have the interest and the material and economic means necessary for its implementation.

In any case, regardless of the country in which the TURNKEY RETROFIT service is implemented, it is necessary to create and maintain a network of partners and collaborators that participate from the beginning, both in the conceptualization and development of the service, and operation of the services.

Therefore, to ensure the successful implementation of the TURNKEY RETROFIT service and the Solutions4renovation platform in a new country, it is recommended to follow the procedures, tasks and activities outlined in this document, and to collaborate with companies and associations that have the means and knowledge necessary for the development and implementation of the TR service.

Although this document gathers in the different chapters and subchapters all the activities and tasks that are necessary to achieve the implementation of the TURNKEY RETROFIT service in a new country, and the relationship between all of them, it is necessary to indicate that, although in the document they are classified in an order, this does not imply that each one of the activities must be carried out when the previous one is finished. Many of these activities contribute to each other and must be carried out in parallel.

In order to facilitate the reading and understanding of these implementation guidelines, it was considered that this is the most appropriate document structure. On the other hand, as indicated in the respective chapters, some of these activities must be developed by the organizations promoting the implementation, and others must be carried out with the collaboration of local agents and members of the LIG.

The following diagram shows an overview of the implementation process, including each step of the guidelines necessary for the successful implementation of the TR service. It relates the different activities to each other and identifies which activities should be carried out by the promoter organizations, and which activities should be developed in collaboration with the LIG and local stakeholders.

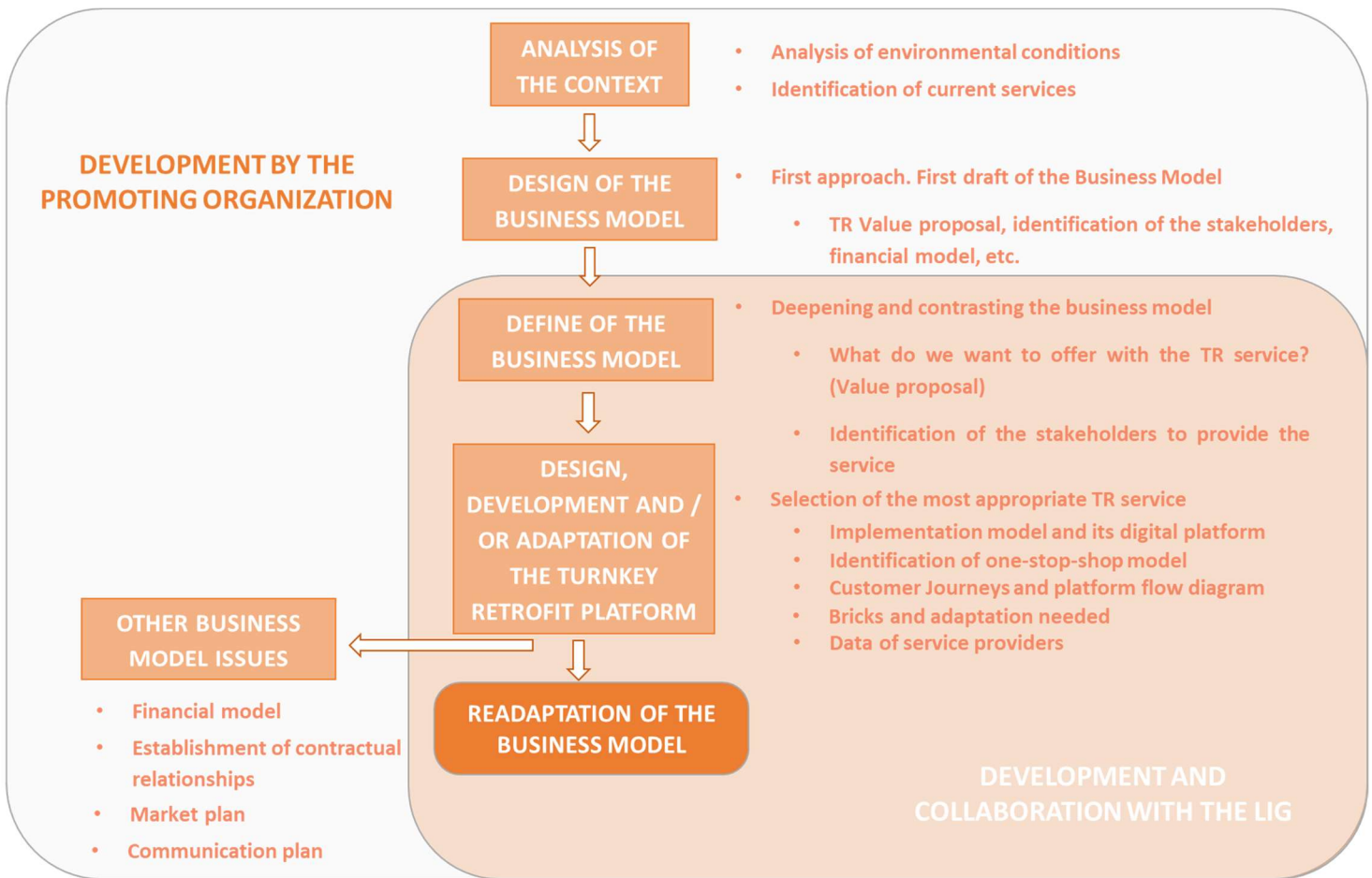


Figure 25: Diagram of implementation guidelines

7.1 Summary guide

This last section summarizes the activities, tasks and conditions to be analysed for the implementation of the TR service in a new country. All these activities and tasks described in this document are recommended to implement the TURNKEY RETROFIT service.

The following is a summary guide that can be used as a checklist to identify the main activities and tasks that need to be carried out. It is important to remember that this list of tasks is not in chronological order. Many of the activities must be completed at the same time with the results of some used to define other tasks.

Table 6 can be used as a checklist to know the current status of the new TR service implementation, and to know which tasks are pending:

Table 6: Summary Guide

ANALYSIS OF THE CONTEXT	Analysis of the environmental conditions of the country	
	Benchmarking - Identification of existing current services for energy renovation	
DESIGN OF THE BUSINESS MODEL	First approach. First draft of the Business Model	
	TR Value proposal, identification of the stakeholders, financial model, etc.	
DESIGN OF THE BUSINESS MODEL	Deepening and contrasting the business model	
	What do we want to offer with the TR service? (Value proposal)	
	Identification of the stakeholders to provide the service	
	Defining the business model with the LIG	
DESIGN, DEVELOPMENT AND / OR ADAPTATION OF THE TURNKEY RETROFIT PLATFORM	Selection of the most appropriate TR service	
	Customer Journeys and platform flow diagram	
	Bricks and adaptation needed	
	Data of service providers	
OTHER BUSINESS MODEL ISSUES	Financial model: income / expenses	
	Establishment of contractual relationships	
	Design Market plan	
	Design Communication plan	
READAPTATION OF THE BUSINESS MODEL	Based on results, adapt the business model	

REFERENCES

D3.2. Guidelines for implementation in different European countries

- [1] "BUILD UP The European portal for energy efficiency in," September 2012. [Online]. Available: <https://www.buildup.eu/sites/default/files/content/Guidelines-How-to-develop-a-business-model.pdf>.
- [2] "D2.1 Market & PESTLE Analysis," 2019. [Online]. Available: <https://www.turnkey-retrofit.eu/>.
- [3] J. Volt, S. Zuhaib and S. Steuwer, "Turnkey Retrofit project. D1.1 Benchmarking of promising experiences of integrated renovation services in Europe," September 2019. [Online]. Available: <https://www.turnkey-retrofit.eu/reports-findings/>.
- [4] Y. P. A. S. A. Osterwalder, "Business Model Generation," 2010. [Online]. Available: <https://www.strategyzer.com/books/business-model-generation..>
- [5] A. e. a. Osterwalder, "strategyzer.com," 2014. [Online]. Available: <https://strategyzer.com/value-proposition-design..>
- [6] A. O. a. Y. Pigneur, "Business model generation: a handbook for visionaries, game changers, and challengers," John Wiley & Sons Inc. , Hoboken, New Jersey, 2010.
- [7] "D2.3 TURNKEY RETROFIT market actors' community," 2020. [Online]. Available: <https://www.turnkey-retrofit.eu/>.
- [8] "Microsoft Visio," [Online]. Available: www.products.office.com.
- [9] "Gliffy," [Online]. Available: www.gliffy.com.
- [10] "Custelligence," [Online]. Available: www.custelligence.com.

D3.2. Guidelines for implementation in different European countries

- [11] “Miro,” [Online]. Available: <https://miro.com/templates/user-story-map/>.
- [12] “Storiesonboard,” [Online]. Available: <https://storiesonboard.com/>.
- [13] “Userforge,” [Online]. Available: <https://userforge.com/?>.
- [14] “Smaply,” [Online]. Available: <https://www.smaply.com>.
- [15] “Invisionapp,” [Online]. Available: <https://www.invisionapp.com>.
- [16] S. AG, “www.strategyzer.com/vpd,” [Online]. Available: <https://assets.strategyzer.com/assets/resources/ad-lib-value-proposition-template.pdf>.
- [17] I. Training. [Online]. Available: <https://www.innovationtraining.org/>.
- [18] M. E. T. M. Jana Cicmanova, “energy-cities.eu How to set up a one-stop-shop for integrated home energy renovation - A step-by-step guide for local authorities and other actors,” July 2020. [Online]. Available: https://energy-cities.eu/wp-content/uploads/2020/07/INNOVATE_guide_FINAL.pdf.
- [19] M. Claessens, “Marketing - Insider,” July 2015. [Online]. Available: <https://marketing-insider.eu/3-major-pricing-strategies/>.
- [20] “D3.3 Stakeholders Contractual arrangements,” 2021. [Online]. Available: <https://www.turnkey-retrofit.eu/>.

D3.2. Guidelines for implementation in different European countries

- [21] Google, "Google Analytics," [Online]. Available:
<https://analytics.google.com/analytics/web/provision/#/provision>.
- [22] "Digivate: Full-service Digital Marketing Agency in London," [Online]. Available:
<https://www.digivate.com/>.

ACRONYMS AND ABBREVIATIONS

ANERR	Asociación Nacional de Empresas de Rehabilitación y Reformas
BMC	Business model canvas
BPIE	Buildings Performance Institute Europe
CSTB	Centre Scientifique et Technique du Batiment
e.g	exempli gratia, meaning “for example
EU	European Union
GDP	Groos Domestic Product
H2020	Horizon 2020
i.e	id est, meaning “that is
IGBC	Irish Green Building Council
LIG	Local Implementation Group
MVP	Minimum Viable Product
NUIG	National University of Ireland, Galway
OSS	One Stop Shop
Q&A	Question and Answer
R&D&i	Research and development and innovation
R2M	R2M Solution SRL
S4R	Solution4Renovation
SEM	Small and medium
SEO	search engine optimization
SWOT	Strengths Weakness, Opportunity and Threat
TECNALIA	Fundación TECNALIA Research & Innovation
TR	Turkey Retrofit
TURNKEY RETROFIT	TURNKEY solution for home RETROFITting
WP	Work Package

ANNEXES

ANNEX	NAME	TITLE
1	User Story Mapping	TR T1.2 and T2.2 Turnkey retrofit User story listing_2020_07_20_V11
2	Next development	TR T1.2 and T2.2 Next developments_2021_02_04.pdf

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ANNEX 1 User Story Mapping

Activity in the customer journey	User story ID	User n°	Country	"Name"	As a <Type of user>	I want to <perform some task>	so that i can <achieve some goal>	Priority	Necessary to obtain a grant or incentives?	If yes which one?	Already exist in your country?	If yes on what existing platform?	Leader of the development	Co-developer	ER?	Required datas for adaptation	Estimated effort (days of work to develop)	+ adapt it to ONE other country (or to the multi-family buildings)	Comments	Go/No Go (France)	
ACTIVITY 0 : Get help about the platform or log activities	0.1	15	France	HomePage	Owner	Have some informations about the website	know what the services are (who, what, what is going on...)	Must have	NO		NO		CSTB	ALL		- Translation only	5	5	Need of a web designer	GO (V1)	
	0.2	16	France	Contact	Owner	Contact the people who manage the service (by tchat, contact form, mail, phone ...)	have some direct informations	Should have	NO		YES	EP - Heero	EP			- Translation - RGPD requirements	5	5	Who answers ?? FAQ is much easier Short term : TURNKEY team can answer	No Go	
	0.3	17	France	Account	home-owner	Can sign in/log in as a home owner	to follow my project online	Must have	YES	White certificate	YES	EP - Heero	EP	IGBC / ANERR		- Translation - RGPD requirements	2	2		GO (V1)	
ACTIVITY 1 : Get general information about retrofit	1.1	18	France	Account	Co-owner	Can sign in/log in as a co-owner	to follow my project online	Must have													
	1.1	38	Ireland		Homeowner	See a simple roadmap for energy retrofit journey	See evidence that my potential investment is worthwhile	Must have	NO		YES	https://superhomes.ie/your-retrofit/ http://www.dcienergy.com/ http://www.warmerhomes.ie/	CSTB	IGBC + ANERR	OUI	- Technical datas on the standard retrofit roadmap - Translation	3	2	Need of a web designer : process on going	GO (V2)	
	1.2	19	France		Owner	See some pictures of works before and after	to be inspired and know what I need to do	Should have	NO		NO										
	1.2	36	Ireland		Homeowner	Review successful energy retrofits	See evidence that my potential investment is worthwhile	Must have	NO		YES	https://superhomes.ie/casestudies/ https://www.renova.ie/our-work-item/apartment-renovation-monkstown-co-dublin/ https://www.renova.ie/our-work/#testimonials	EP	OPE + IGBC + ANERR	OUI	- Business cases from the 3 countries and different building types - Translation and images - RGPD requirements	10	10		GO (V2)	
	1.3	37	Ireland		Homeowner	Read Peer-peer reviews	See evidence that my potential investment is worthwhile	Must have	NO		YES	http://www.warmerhomes.ie/warmer-homes-scheme-reviews/ http://www.envirohead.com/testim	EP	OPE + IGBC + ANERR	OUI	- Peer reviews from the 3 countries and different building types - Translation - RGPD requirements	3	5		GO (V2)	
	1.4		Ireland		Homeowner	Find out what grants are available		Must have			YES		OPERENE	CSTB + IGBC + ANERR		- data from each country - translation	5	5		GO (V2)	
	1.5	44	Ireland		Homeowner	Discuss potential retrofit options available through a webchat	Get independent advice on what retrofit options are available to me and why one solution is better than another	Must have	NO		YES	https://churchfieldhomeservices.ie/ https://house2home.ie/ http://www.warmerhomes.ie/better-energy-homes-scheme-grants/	EP	ALL	OUI	- List of the FAQ for each country - Answers - Translation - RGPD requirements	10	10	Start with a FAQ	GO (V1)	
	1.6	20	France	Info	Co owner	Show the benefits of renovation to the other owners. I can access to a sheet where there are arguments in favour of energy retrofitting in order to convince my co-owner	Convince them to run a projet	Must have	NO		NO		OPERENE	CSTB + ANERR	OUI	- List of arguments - Translation	3	3		GO (V2)	
	1.7	21	France	Info	Owner	Have some informations on the works (home improvement, comfort, life-impact during the works, ... + time, noise,move furniture...)		Could have	NO		YES	EP - Heero									
	1.7	39	Ireland	Info	Homeowner	Find info on how much retrofits cost and the comfort, benefits + happiness factor	See evidence that my potential investment is worthwhile	Must have	NO		YES	https://energycommunitiestipp.ie/how-can-i-make-my-home-warmer/ http://www.dcienergy.com/ITipsandAdvice https://www.renova.ie/home-renovations/#benefits	CSTB	EP + OPERENE + IGBC + ANERR	OUI	- Content adapted to the usual works - Translation	3	6	Content + web design	GO (V2)	
2.1	40	Ireland	Punch diag	Homeowner	Make my home warmer, more comfortable, less damp, better indoor air quality, brighter, less draughty	Understand what improvements I need to make	Must have	NO		NO			CSTB	EP + OPERENE + IGBC + ANERR	OUI	- Images - Selection of questions - Ranking of the housing - Translation	15	5		GO (V1)	
2.2	4	Spain	Smartdiag	"owner"	Know if I have to do something about my home.	Realise that I must do something and know what.	Must have			NO											
	24	France	Smartdiag	Home-owner	Consult the cadastre data in Spain with my adress	Calculation of estimated energy savings	Should have	NO		YES	EP - Heero										
	22	France	Smartdiag	Home-owner	Have an energy assessment of my home	know if I have still works to do	Must have	NO		YES	EP - Heero										
	1	Spain	Smartdiag	"owner"	Have 3 roadmaps of renovation works	Know where to start and choose one (create a project)	Must have			NO											
	5a	Spain	Smartdiag	"owner"	Get a work definition	Dimension and estimate budget	Must have			NO											
	41	Ireland	Smartdiag	Homeowner Project manager	End the process with an initial estimation of described actions and cost shown on the screen.		Must have			NO		http://www.dcienergy.com/ https://www.igbc.ie/policy-and-regulation/renovation-strategies/building-renovation-passports/ https://churchfieldhomeservices.ie/de-ep-retrofit-upgrades/	EP	CSTB + OPERENE + IGBC + ANERR	OUI	- Cadastre - Climatic data - Technical building standards - Works priority - Link to the local thermic regulation - Price of the energies - Works costs	5	100	It's not really possible to put a number because we (EP and CSTB) need to know before what kind of datas we can get. What is clear is it will be more than 25 days. It cost EP more than 50 days only to use the cadastral datas. NO GO for multi-family buildings = too much complicated	GO (V1)	
2.3	42	Ireland	Benchmark	Homeowner Project manager	Find an estimate that is fair : [Type in address or MPRN number and budget] and SMART diagram should tell me what type and extent of renovation is possible for my budget inc. eligible grants OR [Type in address or MPRN number and no budget] and SMART diagram should tell me type and extent of renovation, inc. eligible grants and how much it will cost] This part is connected to TABULA EPISCOPE data	Get an idea about costs	Must have	NO		NO		EP							Seems too much complicated	No Go	
2.4	45	Ireland	Smartdiag	Homeowner	Review information on cost estimates of retrofit work	Examine an initial estimate of the investment required	Must have	NO		YES	https://churchfieldhomeservices.ie/ https://www.renova.ie/ http://www.dcienergy.com/ http://www.envirohead.com/	EP		OUI					Ok with Smartdiag or need of another specific brick?	Smartdiag	
2.5	50	Ireland	Smartdiag	Homeowner	Examine the different options available to retrofit home via an advisory report. The report should include details for each retrofit solution option including (i) costs, (ii) technical details, (iii) schedule of works, (iv) energy and carbon savings and (v) comfort and health improvements	Decide what is my best option	Must have	NO		NO		https://proenergyhomes.ie/home/ https://superhomes.ie/your-retrofit/ https://house2home.ie/	EP						Ok with Smartdiag or need of a more detailed assessment? It could be with the smartdiag but with some adaptations	No Go	
ACTIVITY 2 : Get into it	2.6	5b	Spain	Detailed Energy Assessment	"owner"	And "You are invited to request a more accurate diagnosis". Smart Dialog	Offer the visit of a specialized technician	Must have			NO										
	2.6	30	France	Detailed Energy Assessment	Co owner	Be helped to draw up an invitation to tender to carry out an Energy assessment	find a professionnel who is making Energy Assessment	Must have	YES	some local subsidies	NO		EP	OPE + IGBC + ANERR	OUI	- list of the professionals - translation - RGPD	2	5		GO (V2)	
	2.6	49	Ireland	Detailed Energy Assessment	Homeowner	Meet professional at my house to discuss retrofit journey and carry out house inspection	Have a professional answer the questions I have surrounding retrofit process so that I fully understand the journey I am committing to	Must have	YES		NO										
2.7	23	France	Detailed Energy Assessment	Owner	Adapt and play with the Energy assessment. after the professionals put his diag online. I can modify the work programs. If I do the work step by step I can redo the scenario with the remaining work.	Create my own work programm	Could have	NO		NO		CSTB	OPERENE		- need of the local thermal regulation code	15	30	For multi-family building only Based on the xml file	GO (V2)		

		25	France	Cost	Owner	Estimate the cost of my renovation. When I select a work program I want to get a simulation of a multi-year loan including the grants and the energy savings	know if my budget is ok (and create a project). I can know exactly what my future monthly payments will be for this project.	Must have	NO	YES	EP - Heero											
	2.8	2	Spain	Cost	"owner"	Tell what I want to do (Ok with the process with images that Hero shows in his mock up). Smart Dialog	Dimension and estimate budget	Must have				EP	OPE + IGBC + ANERR	OUI	- lists of the usual works - costs - translation	1	5			GO (V1)		
		7a	Spain	Cost	"owner"	Get my personalised budget on my private profile. Private profile on the platform	Get a private area where the user sees all their information easily	Must have						OUI								
		47	Ireland	Cost	Homeowner	Examine cost estimates for work to my home	Examine a more accurate estimate of the cost of the retrofit work	Must have	NO	NO				OUI								
	2.9		Ireland	Finance	Financial institution	Get a loan offer	Know what loan I can get	Must have		YES		EP	OPE + IGBC + ANERR		- legal issues - RGPD				Banks must be involved	No Go		
	2.10	7b	Spain		rehabitation Companies	Get my personalised budget on my private profile. Private profile on the platform	idem 7a	Must have				EP	OPE + IGBC + ANERR	OUI	- lists of the usual works - costs - translation	3	5	Already exists on REFORMANERR ?	?			
	2.11	43	Ireland		Homeowner Project manager Aggregator of projects	Aggregate the projects based on the the anonymous road maps per province so that project managers can cost for 5 projects at a time	Lower the price	Must have	NO	NO		EP	OPE + IGBC + ANERR	OUI	- Cadastre - Works costs - RGPD	10	15	Seems too much complicated : who decide which projects aggregate (contractor, user,...) and following which criteria?	No Go			
	2.12	26	France	Finance my project	Owner	Know all the grants and subsidies I can get	know if my budget is ok (and create a project)	Must have	YES	White certificate	YES	EP - Heero										
		10a	Spain	Finance my project	"owner"	Know what are the financing options from the "government" or the private banks. Financing Options	From government : It takes me to the list of national, regional or local government grants. Private loans: Link the specific products of each financial institution included	Must have						OUI								
		46	Ireland	Finance my project	Homeowner	Check my eligibility for available grants/finance options Review information on finance and grant options available for retrofit work	Examine how much money I can save with grants and the finance options available for paying for the retrofit work	Must have	NO	YES			EP	OPE + IGBC + ANERR	OUI	- local subsidies and associated rules	12	30	Need to improve the results and to adapt it to one other country - we need the definition of each grants and the method of estimation	GO (V1)		
	2.13	10b	Spain	Finance my project	rehabitation Companies in charge of works	Know what are the financing options from the "government" or the private banks. Financing Options	idem 10a	Must have				EP	OPE + IGBC + ANERR		- local subsidies and associated rules		5	Rehabilitation Companies in charge of works want to know the financing options for them or for the client?	No Go			
	2.14	27	France	Financial Engineering	Owner	Get an estimation of the added value of my home if i do renovation works. I can access real estate sales of dwellings equivalent to mine around me	to be reassured and helped me take the decision	Could have	NO	YES		EP - JOYOM	EP	OPE + IGBC + ANERR	OUI	- datas on the prices of all the houses (access to the selling/renting databases or websites) - EPR of all the houses - cadastre	10	20		GO (V2)		
	ACTIVITY 3 : Get support	3.1	11	Spain	Financial Engineering	Final User "owner"	Get help for managing grants or financing. FinancingOptions	It allows us to recommend an advisor or manager of the necessary aid or financing for the project	Should have				EP	OPE + IGBC + ANERR	OUI	list of the managers and advisors		10		No Go		
		3.2	29	France	Find professional	Owner	Find team project around me. Depending on my project the platform allows me to know my needs in terms of professional skills (architect, engineers...)	Have 3 quotes of local professional to select the best	Must have	NO	NO				OUI						GO (V2)	
		48	Ireland		Homeowner	Find a professional to manage the retrofit journey from beginning to end	Rely on an experienced professional to manage all the tasks involved with installing a successful retrofit, have one contact point throughout the entire retrofit journey and remove the stress from managing the project	Must have	NO	NO		EP	OPE + IGBC + ANERR	OUI	- list of local professionals	30	5			GO (V2)		
	ACTIVITY 4 : Let's Go	4.1	28	France	Find professional	Owner	Find the best professionals for my works	to be reassured, select and received 3 quotes	Must have	NO	NO				OUI							
			51	Ireland		Homeowner	Sign a contract with the contractor and finance provider	Have a guaranteed agreement in place before i commit to investing in the retrofit work	Must have	NO	NO		EP	EP + IGBC + ANERR	OUI	- list of professionals - legal contexts - standard contracts	10		Contract is signed online?		GO (V3)	
			8a	Spain	Find professional	"owner"	Accepte or refuse the budjet/proposal Private profile on the platform	This causes an alert to the chosen company and the declined one. It is shown in the admin panel of the company profile. The client file must include the type of work, the start and end dates and the budget.	Should have						OUI							
			4.2	6	Spain	"owner"	Get an appointment to visit a technical rehabilitation company which is close. "I want a professional / personalized diagnosis" button	Custom final budget	Should have				EP	OPERENE + IGBC + ANERR	OUI	- list of professionals	5	5	Could be a GO with the list of pros only.	No Go		
			4.3	8b	Spain	Find a project	rehabitation Companies	Accepte or refuse the budjet/proposal. Private profile on the platform	idem 8a	Should have			EP	OPERENE + IGBC + ANERR	OUI	- list of professionals	5	5	Work on the link with REFORMANERR	No Go		
			4.4	9	Spain	Find a project	rehabitation Companies	See on my private area the list of budgets I have sent and the status (accepted or declined). Private profile on the platform	The companies applying have a clear view at all times the status of their budgets and their work. Quick & easy	Should have			EP	OPERENE + IGBC + ANERR	OUI	- list of professionals	5	5	Work on the link with REFORMANERR	No Go		
	ACTIVITY 5 : Follow the works	5.0		France	Roadmap	Owner	Have an order to the list of works	I know what to do first	Must have	NO	NO	CSTB	EP + OPERENE + IGBC + ANERR	OUI	- list of usual works - translation	15	5			GO (V2)		
			5.1	32	France	Project	Owner	Receive emails	to follow and know in which status is my project	Should have	YES	White certificate	NO	EP	OPERENE + IGBC + ANERR	OUI	- Translation - RGPD requirements	3	3		GO (V3)	
				9	Spain	Project	rehabitation Companies	Get a notification when there is new information. Private profile on the platform		Should have				EP	OPERENE + IGBC + ANERR	OUI	- Translation - RGPD requirements	6			GO (V3)	
				33	France	Project	Owner	Upload documents and datas on my projects	get my subsidies	Must have	YES	White certificate	YES	EP - Mon Carnet	EP	OPERENE + IGBC + ANERR	OUI	- list of documents to be uploaded - translation - RGPD	5	10		GO (V3)
				3	Spain		"owner"	Upload a plan of the house to retrofit	Calculation of estimated energy savings	Must have						OUI						
				35	France	Project	Owner	checking process of the works. I can check on the platform the different steps of the work that have been done.	make sure the work is done right and keep to the schedule	Must have	NO	NO				OUI						No Go
			12	Spain	Client Follow up	Final User "owner"	Follow my project with : the work to be done, the beginning and ending compromise, the final budget. (A box of checking give status => green box when it is finished)	I know where I am in the process.	Should have				EP	EP + CSTB + IGBC + ANERR	OUI	- steps of the retrofit process - translation - RGPD	5	10		No Go		
			13	Spain	Client Follow up	Company in charge of works	Notify the platform when a specific work finishes (mark in green that it is ok in the list of my jobs)	Show that the works are properly done on time.	Should have						OUI						No Go	

	5.4		Ireland	Client Follow up	Final User "owner"	Keep records of all the actions about my renovation (aggregate documents and know where I stopped)	Remember where I was if I has to stop the process and get back to it later. And transfer the info if I sell/buy a house	Must have			NO		EP				1	5		GO (V1)	
	5.5	53	Ireland	Payment	Homeowner Finance SEAI for Grant	Pay on the platform	Financial institute pays directly on the platform and grant	Must have	NO		NO	https://proenergyhomes.ie/home/ https://superhomes.ie/your-retrofit/		ALL		- legal issues				Payment platform and bank to be involved	No Go
ACTIVITY 6 : Control the works	6.1	31	France	Evaluate	Owner	Evaluate the professional. I can give my feelings with a rating from 1 to 5 stars.	to give feedback to others users. It will also help the platform to identify issues with professionals and improve the service.	Should have	NO		NO		EP	ALL	OUI	- criterias - translation - RGD	5	5		Too much effort on the project already. Or just an email	No Go
		14a	Spain	Evaluate	"owner"	Tell if I am happy with the works Valuation as brick 11	Be sure the works are properly done on time and quality	Should have						OUI							
	6.2	52	Ireland	Evaluate	Homeowner	The retrofit work to be inspected and signed off on	Have peace of mind that the work was carried out to the necessary standard and the retrofit technology is operating correctly	Must have	YES		NO	https://proenergyhomes.ie/home/ https://superhomes.ie/your-retrofit/ https://www.renova.ie/	CSTB	ALL	OUI	- list of professionals - check list	5	5			No Go
	6.3	14b	Spain	Evaluate	rehabitation Companies	Tell if I am happy with the client. Valuation as brick 11	idem 14a	Should have					EP	ALL	OUI	- Translation - RGD requirements	5	5			No Go
	6.4	34	France	Evaluate	Owner	Receive a satisfaction form	to score the experience and the service	Should have	NO		NO		EP	ALL	OUI		5	5			No Go
	6.5	55	Ireland	Assurance	Owner	be informed about my possibilities in terms of insurance	be sure I'm well insured for my work and have examples of contracts	Should have	NO		NO		OPERENE	ALL	OUI	- example of contracts	5	5		Content only	GO (V1)
	6.6	55	Ireland	Assurance	Homeowner Professional advisor	Have assurance that I can contact someone if something does not work	I don't pay for something that doesn't work	Must have	NO			https://superhomes.ie/your-retrofit/		ALL		- legal requirements				Assurance company to be involved	No Go
	6.7	54	Ireland	Assurance	Homeowner Testing+ Monitoring	Know if my home has improved	Monitor the improvement of my home's performance and	Could have	NO		NO	https://superhomes.ie/your-retrofit/	CSTB	ALL	OUI	- list of professionals - protocole of tests	10	10			No Go
6.8	56	Ireland	Info	Homeowner	Find a home-user manual and a glossary	Find out how to use my home now that it has a different operating system	Could have	NO		NO		CSTB	ALL	OUI	- translation - technical adaptations	10	10		Content only	GO (V1)	

Ajouter BR passport

		Estimated effort (days of work to develop)	+ adapt it to ONE other country	TOTAL (Dev. + adaptation to Ireland AND Spain)
GLOBAL EFFORT OF DEV.	EP	193	291	677
	CSTB	81	78	240
	OPERENE	13	13	39

DETAILED EFFORT OF DEV.	V1	Due date : June 2020	Estimated effort for French version	Adaptation to 1 other country
			31	177
			30	
			5	

EP-CSTB-OPERENE can't bear the development effort alone. Help from local developpers / partners are needed.

V2	Due date : End of the project	Estimated effort for French version	Adaptation to 1 other country
		55	96
		36	
		8	

V3	Due date : Can't tell yet	Estimated effort for French version	Adaptation to 1 other country
		24	13
		0	
		0	

NO GO		Estimated effort	Adaptation to 1 other country
		80	91
		15	
		0	

D3.2. Guidelines for implementation in different European countries

ANNEX 2 Next development

Country	Status	"Name"	As a <Type of user>	I want to <perform some task>	Description of the result needed for the user (be very specific)	Leader of the development	Co-developer	Required datas for adaptation	Expected date for the answers	Estimated effort (days of work to develop from the date when all the answers have been given)	Expected date for delivery	Comments
France	DONE	HomePage	Owner	Have some informations about the website		CSTB	ALL	- Translation only		5		
France	DONE	Contact	Owner	Contact the people who manage the service (by tchat, contact form, mail, phone ...)	email adress	CSTB		- Translation - RGPD requirements				At the moment everything ends on a gmail adress that only CSTB can read
France	WIP	Account	home-owner	Can sign in/log in as a home owner	Correct the password Add that people can store Punch Diag results and Roadmap	EP		- Add mentions on S4R - Create the "box" in the client database of Heero	None	3		
France	if time remains	Account	Co-owner	Can sign in/log in as a co-owner								
France	if time remains	Home Passport	Co-owner	Can find all the document about his building and the refurbishment rproject	- Detailed information about the building - First studies for a refurbishment project - Energy performance diagnosis (if available)	CSTB	OPERENE	Translation Adaptation of the existing brick for individual houses		5		
France	DONE	Info	Owner	Have some informations on the works (home improvement, comfort, life-impact during the works, ... + time, noise,move furniture...)		CSTB	OPERENE			3		
France	TBD	Info	Co-owner	Have some informations about all the steps of works for a multy family buildings and a checklist of what need to be done and verify	- separate steps depending on the user (coowner, other ?) - how to start a project - What are the important step for a correct refurbishment	CSTB	OPERENE	Translation Adaptations of the process if norms are different in each country		20		Content + web design
Ireland	TBD	Info	Homeowner	Find info on how much retrofits cost and the comfort, benefits + happiness factor	- Which information (benefits, process, steps, ...) ? - From which source (SEAI, NUIG, IGBC, ...) ? - Who provides it ? NUIG / IGBC ? - CSTB can load the content onto the platform and do the design once it's written. - Give the accurate links to existing websites	CSTB	IGBC + NUIG	The info (text, images, etc...) to integrate to the plateforme and the location in the plateforme => IGBC / NUIG			April 2021	
Ireland	DONE	Punch diag	Homeowner	Make my home warmer, more comfortable, less damp, better indoor air quality, brighter, less draughty		CSTB	ANERR	- Check the final version => NUIG		15	févr-21	
Spain	DONE	Punch diag	Homeowner	Make my home warmer, more comfortable, less damp, better indoor air quality, brighter, less draughty				- Check the updates => ANEER			févr-21	
France	DONE	Punch diag	Homeowner	Know if I have to do something about my home.	- Possible to save the result on a easy format (PDF).							
Spain	TBD	Cost	"owner"	Examine cost estimates for work to my home	- What % (or euros) precision do you expect ? - Do you prefer a minimum estimation or an average one ? - List of works that you want to assess - What's the end of this brick ? Where does the user ends ? An email, an account, a link to ReformAneer ?			- List of all the works wanted on the plateforme - List of products cost for each works (decision trees) - Translation of all the questions and answers asked to the customer - Translation of the others word in the bricks - Email adress that will receive the leads on the plateforme - Main color of the plateforme (hexa) - URL of the website where the plateformes will be on		75		
Ireland	TBD	Cost	Homeowner	Examine cost estimates for work to my home	Same	EP			march 21	75		
France	TBD	Subsidies	Co-owner	Estimate the subsidies (White certificate "CEE") the user can get for his works Get information about other subsidies available	Thanks to a questionnaire, determine the amount of white certificate in € the co-owner can get at the end of his project Link to local portal for the other subsidies	EP	OPERENE	/no adaptations possible for this bricks, each subsidies have their own rules on each country	february 2021	15	April 2021	
France	TBD	Roadmap	Owner	Have an order to the list of works	- At the end of Punch Diag : automatic or another independent link / brick ? - Possible : priority of the works and group of works - On CSTB server - Possible to save the result ? In a Excel sheet ? - What's the end of this brick ? Where does the user ends ? An email, an account, a link to Heero ?	CSTB	EP + OPERENE + IGBC + ANERR	If energy savings and costs => provide the info => CSTB		10	April 2021	
Spain	TBD	Roadmap	Owner	Have an order to the list of works	Same	CSTB	EP + OPERENE + IGBC + ANERR	If energy savings and costs => provide the info => ANEER	Start of Februray 21	15	April 2021	
Ireland	TBD	Roadmap	Owner	Have an order to the list of works	Same	CSTB	EP + OPERENE + IGBC + ANERR	Energy saving data to complete the Tabula data (PV panels for example) => NUIG Confirmation that the estimation of energy savings can be done thanks to Tabula datas => exchanges between CSTB, NUIG and IGBC	Start of Februray 21	15	April 2021	