



**TURNKEY
RETROFIT**



D3.1. Conclusions of the identification of local needs and actors in place



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EXECUTIVE SUMMARY

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

This report is the deliverable D3.1 of Task 3.3 corresponding to WP3 'Local implementation' of the TURNKEY RETROFIT project. One of the objectives of this WP3 is to analyze the local needs and actors in place in the 2 EU countries / regions (Spain and Ireland) to implement the integrated TURNKEY RETROFIT service adapted to the local context in these 2 countries, where will be further operated. This report provides the first results.

An in-depth analysis of the renovation market has been carried out to identify those interested in using this service (suppliers and clients) and those who carry out the work by the creation of the local implementation groups (LIGs). 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.

Due to the particular characteristics of each country, and the need to adapt to the local context, it has been necessary to count on the collaboration of the local implementation groups (LIG) from the initial phases of the project, and to maintain a constant communication with them, to make them part of the project.

The report details the different works carried out and the steps followed to adapt the Turnkey Service to Ireland and Spain, defining the One-Stop Shop business models and explaining the final result of the customer journey in each country.

For both the Irish and Spanish markets, the success of the Turnkey Retrofit platform depends on building strong partnerships to create a one-stop shop platform that supports the existing retrofit ecosystem and provides the customer with all the information and allows them to perform all steps of the home renovation process, and at the same time, offering quality assured companies and contractors, providing a retrofit roadmap and connecting the customer to an available and impartial renovation consultant. In addition, the dissemination process will be crucial to quickly reach citizens when the development of the Turnkey retrofit service and Solutoins4Renovation is completed.

INTRODUCTION

The TURNKEY RETROFIT project aims to define, develop and implement a new renovation service, whose main value proposition is to help the user throughout a renovation project. Currently, when someone decides to undertake a renovation project in their home, they must overcome numerous problems, as the process is so complex that it can often dissuade the user from even embarking on such a project, in addition, the process is different in each of the countries.

The TURNKEY RETROFIT has set itself the objective of adapting to the local context, identifying the local needs and actors in place in the two countries involved and defining the One Stop Shop model that will provide service in each country.

To achieve this aim of the TURNKEY RETROFIT project, it has been created the Local Implementation Groups (LIG) composed of local expert groups which gathers key representatives actors that have been required to collaborate with the project partners in the adaptation of the TURNKEY RETROFIT project and how to build and run the service in each country.

This document describes the analyses performed for the countries where the implementation of new service is targeted: Ireland and Spain.

1 GENERAL OVERVIEW OF THE CONTEXT

First of all, before being able to identify the local needs and actors in place in each of the countries, it is necessary to remember what is the general vision of the context of each country [1], what are the different promising experiences that are being carried out in the EU [2] to have them as an example and to analyse the different business models of One-Stop Shops to define which one adapts better to the objectives of the Turnkey Retrofit Service in each country.

1.1 The national contexts in Ireland and Spain

The PESTLE analyses carried out in each target country have made possible to obtain information about the context, including the identification and analysis of external factors that may influence the implementation process, all of which are included in deliverable D2.1 Market & PESTLE Analysis (November 2019). While most of the factors cannot be controlled or modified, it is important to understand their impact and take them into account when adapting the TURNKEY RETROFIT to each context.

Table 1 summarizes the factors identified in Ireland and Spain as well as their impact on the business opportunities required to run and upscale the TURNKEY RETROFIT service. The scale for the impact assessment is:

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

	IRELAND	SPAIN
Political	Policy and public measures in place (+) The government’s role & competing priorities (-) Lack of compliance with commitments in the fight against climate change (-) The short and long-term impacts of Brexit negotiations (- -)	Favourable future scenario (+ +) Strategic framework for boosting the energetic renovation of the buildings sector Urban Agenda 2030-2050 and the Long-Term Strategy for energy renovation in the building sector in Spain (+) Insufficient and fragmented public support measures for the energy renovation of buildings (-) Decisions on urbanistic and dwelling matters are taken by the autonomous regional governments (-) Political instability (- -)
Economic	The availability of financing and grant supports (+) Decrease in GDP (-) Increases in inflation (-) Economic uncertainty about Brexit negotiations (-) Decreased Consumer Sentiment Index (CSI) (-) High household debt (-) Uncertainty as to the future of fiscal incentives (-)	Economic situation in the renovation sector (-) General economic situation (-) Absence of strong fiscal incentives (- -)

	Householder spending in the Irish renovation sector (- -) High upfront costs for homeowners and developers (- -)	
Social	The effect on property value (+) Minimum standards for rental sector (+) Tenants' willingness-to-pay (+) The use of digital platforms (+) Climate change perspectives (+) Split incentives and stressed rental market conditions (-) Awareness and knowledge (- -)	Increase in the value of sustainable dwellings (+) New digital possibilities for business (+) General distrust of citizens towards the workers in the renovation and refurbishment sector (-) Lack of culture in favour of energy renovation (- -)
Technological	5G technology (+ +) Innovation, research and development (+) Lack of professionals skilled in energy renovations (-) The use of advanced measures and auditing deficiencies (-) Fragmented value chain (-)	5G Technology (+ +) Existence of a market for products and solutions for energy renovation (+ +) Upcoming boost to R&D&i focused on energy renovation (buildings) (+) Distrust of the clients (e.g. communities of dwellers in residential buildings) in new and untested technological products or solutions (-) Workers in the sector are not highly skilled in the technological solutions for energy renovation (- -)
Legal	Review of building regulations (+)	More demanding regulatory framework: "Código Técnico de Edificación" (Technical Building Code) & DB-HE update (Energy Saving) (+ +) Compulsory "Libro del Edificio" (Building Book) but only for new buildings (+) Devaluation of the building's Energy Performance Certificates (- -)
Environmental	Old building stock with high energy consumption (+) Environmental awareness (-)	Future stricter strategic framework for Energy and Climate (+ +) Old building stock with high energy consumption (+) Increase in environmental sustainability (+) Lack of compliance on climate change-related commitments (- -)

Table 1 – Summary of the factors identified and their impact on the business opportunities required to run and upscale the TURNKEY RETROFIT service in Ireland and Spain

As can be seen in Table 1 one of the main factors that will directly influence the success of the TURNKEY RETROFIT service is the political framework adopted by the country to boost energy renovation in the building sector. But, as described in the report, it is not enough to establish ambitious long-term renovation strategies; it is also necessary to prioritize and to work on facilitating its implementation.

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The Irish Government Climate Action Plan 2019 has set ambitious targets, including the completion of 500,000 energy efficient retrofits to a B2-BER or better, at a rate of 50,000 per year, by 2030. In Spain, the Long-Term Strategy for the energy renovation in the building sector had originally aimed at the renovation of 250,000 buildings per year (private dwellings), starting with those with serious structural and energetic problems; and now the IDAE is drafting the National Comprehensive Plan for Energy and Climate 2021-2030 and has set the objective of the improvement in energy efficiency (thermal envelope), throughout the next 10 years, of a total of 1,200,000 residential dwellings. This plan has been updated in June 2020 and presents more ambitious goals.

The reality is that the targets are not being met. In Ireland, in 2019 there were 2,600 deep energy retrofits; in Spain 25,000 per year.

There is no doubt that these ambitious goals offer a great opportunity for a service like the TURNKEY RETROFIT. But in order to achieve this, political stability in the country is crucial. In Ireland it will be necessary to wait for the short and long-term impacts of Brexit negotiations. As important as the political stability is that the government has clear political priorities. In the case of Ireland and Spain, the same Government who has set their ambitious targets in the Climate Action Plans, has also failed to meet climate mitigation targets thus far. And last, but not least, it will be important to have instruments, fiscal measures, etc. that facilitate the achievement of these objectives to allow the renovation rate to be increased. In Ireland and Spain exist the availability of financing and grant supports, but they can be improved. For example, in Spain there are subsidies but there are almost no fiscal incentives.

Another factor that may facilitate the implementation of the TURNKEY RETROFIT service is to have more strict regulations. In Ireland, Part L of the 'Irish Building Regulations' has been subject to considerable review, with the 'Building Regulations' (Part L Amendment) 2017 signed into law to set higher building energy performance standards. Buildings must achieve cost-optimal performance when more of 25% of the building surface area undergoes major renovation works. In Spain, the updating of the Basic Document on Energy Saving of the 'Spanish Building Technical Code', approved by the Order FOM/588/2017, on 15th June, includes the criteria for energy efficiency in the renovation of existing buildings, and also considers the procedure to verify the meeting of the requirement, and criteria for setting the scope of the renovation. This new DB-HE document updates the requirements to drive the new buildings and the renovation of existing ones towards a set of parameters for high energy efficiency and a very low energy demand.

These regulations, which include requirements to direct renovations towards high energy efficiency parameters and a very low energy demand, can be a good impulse for the TURNKEY RETROFIT service, if it can offer the owners a set of technological solutions that allow them to achieve those parameters.

Two factors have been identified, shared in the 2 countries, which could negatively influence the implementation of the TURNKEY RETROFIT service. One of them is, that **professionals in the sector are poorly qualified** in technological solutions for energy renovation. Facing the renovation challenges requires competent and well-trained professionals. Professional practices must evolve in the technical fields (insulation, ventilation, airtightness, installation of renewable energy systems) but also in global approaches. As described above, the construction sector is taking great strides with respect to innovation. But there are technological solutions that are not implemented because there is no knowledge or specialization, so professionals tend to use the usual solutions. Therefore, there is room for integrated renovation services such as TURNKEY RETROFIT if the companies performing the work are qualified.

And the other, **the lack of culture in favor of energy**, combined with a lack of knowledge about the return on the investment they will get (benefits of energy saving measures), may influence directly the demand for the service. The

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fact that the payback period for the money invested is longer than 10 years, or the lack of public access databases that demonstrate the energy performance of renovated buildings and information on how to carry out a deep renovation, feed this lack of culture.

When a renovation project is undertaken in a building, owners are more worried about issues like accessibility, comfort or the building aesthetics, which are usually the main reasons that lead their decision to go ahead with the building renovation works. Energy efficiency and the building performance tend to be secondary aspects.

Other factors that highlight its possible negative impact are the following:

- In Ireland, the householder percentage spending in the Irish renovation sector is very low (Ireland's residential energy renovation market segment accounted for under 1% of the energy renovation market across all EUROCONSTRUCT countries assessed; Spain (4%), France (15%)) and the high upfront costs for homeowners and developers (the average cost of a deep retrofit being between €30,000 and €40,000).
- In Spain, the devaluation of the building's Energy Performance Certificates (i.e. Energy Performance Certificates). Both the technical staff that execute the project as well as the owners that apply for the Energy Performance Certificate must take this document very seriously. Nowadays, many consider it a mere formality to apply for the public support or to sell or rent a dwelling, thus underestimating the value it has and looking for the service provider, that you can do it in the fastest and cheapest way as the content of the certificate is not valued. This factor can have a very negative impact in the TURNKEY RETROFIT service, if the energetic diagnostic is considered a mere formality and is not valued, the client demanding the service will not want to pay for it.

And finally, it is also important to mention the following factors that may positively affect the implementation of the TURNKEY RETROFIT service:

- Increasingly in Ireland, the sales value of properties being affected by the BER (Building Energy Rating). Moreover, homeowners are increasingly placing high value on BERs with prospective homeowners frequently checking BERs before purchasing. This is an important factor that could contribute to increase the demand for the service.
- In Spain, several agents and organizations within the sector are promoting initiatives that could represent an important boost to the TURNKEY RETROFIT service. This Spanish initiative called 'Pasaporte Energético' (Energetic Passport), is an adaptation of the one existing in Germany, Belgium (Flanders) and France. Unfortunately, until now, this is only a proposal that has been presented to IDAE; it is understood that it will resume when there is governmental stability.

What has happened in Ireland and Spain during these months? Do we have the same context as when the PESTLE analysis was carried out (November 2019)?

The situation in both countries has changed considerably, both in the political, economic and social framework, promoted by the new reality in which we find ourselves due to the influence of the COVID-19.

The crisis caused by Covid-19 has had a major impact on the world economy and the construction sector has also been affected by an unprecedented situation. The latest Euroconstruct Report [3] highlights the negative effects that the crisis caused by Covid-19 will have on the construction sector, in Europe in general. The forecast for the construction

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sector contemplates a fall of -11.5% in 2020, after which it will rebound, reaching an increase of +6% in 2021 and +3.5% in 2022. The fall in the rehabilitation business will be of 165,000 million Euros, with a share of production loss of 38%.

The effects of the pandemic caused by the COVID-19 have reached all of Europe, and although in the European Union the real data are still scarce, the PMI index of the construction sector, which in March suffered the greatest contraction in its history, (falling from 52.5 points to 33.5) already predicts the effects of the pandemic in the Old Continent, achieving in March and April a drop in the EU of 11.7% and reaching its lowest level since 1995. The containment measures adopted against COVID-19 by EU Member States had a significant impact on production in the sector, producing a general decline in the Twenty-Seven Member States compared to the previous month. Spain was the second country in the European Union where the production of the construction sector fell most in April compared to the previous month, with a decrease of 26.3%. Only France is ahead of Spain, with a fall of 32.6%. The economic intervention of the European Union to stop the crisis and the plans in energy efficiency and rehabilitation must play in our favour in the medium and long term and become an aid for the TURNKEY RETROFIT service.

On the other hand, in Spain the COVID-19 crisis has also revealed to homeowners the deep inefficiencies about comfort and life quality in their homes. *"Confinement has caused six out of ten households to want to make improvements to their houses"* according to Sebastián Molinero Secretary-General of ANDIMAC (National Association of Ceramics and Building Material Distributors) [4].

"The fear of future outbreaks has prompted actions related to swimming pools, air conditioners and gardening, in addition to the main interior reforms such as bathrooms and exterior and window conditioning". According to these data, 61% of households in Spain are willing to make reforms in their home after the confinement derived from the coronavirus, according to ANDIMAC based on the USP report. This study reflects that 91% of those surveyed say they spend more time at home than they would under normal circumstances. Therefore, the Spanish people have been able to notice the deficiencies in their homes and consider future improvements, apart from the fact that their intensive use has possibly deteriorated the state of certain rooms.

The other novelty is the claim to recover little-used farmhouses or single-family houses to enjoy the holidays, which have new uses due to possible closures or for work and online training. Insulation, heating, air conditioning, gardens and terraces are now subject to improvements with an uncertain outlook.

According to data from Reformanerr.com [5] that reflects the opinion of the associated companies:

- *"In general terms, renovation seeks to adapt the home to new needs, such as teleworking or the need to spend more leisure time at home"*
- *"The need to optimize areas, air quality, environmental stability ..."*
- *"Many of them are to isolate –thermally or acoustically– and redistribute the space. Everything to improve the home and the quality of life"*
- *"They want more spacious, open spaces, luminosity and hygiene. And at the same time, attention is paid to the materials"*
- *"There is more demand for ecological things so that the house is healthy. It's a growing trend that didn't exist a decade ago"*
- *" The attention is focused on the whole house, with works from the kitchen to the garden, the bathroom or the living room, but the integral reform is a smaller percentage"*

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Another point to be noted is that the political situation in Spain has changed, and now with the formation of a new government, the political instability reflected in the table (Table 1: Summary of the factors identified and their impact on the business opportunities required to run and upscale the TURNKEY RETROFIT service in Ireland and Spain) with a very negative impact, has changed and the country presents a more stable political framework.

But it is also important to note that there has been a change in the legal framework, government aid and funding. IDAE (“Institute for Diversification and Energy Saving - Ministry for the ecological transition”), was the national institution in charge of managing the resources for renovation and energy efficiency project but from 2020 on the Regional Communities governments will be in charge of these questions. So now every region, over the national framework, must define “what” and “who” can be included on these funds. Among others PREE (Programa Rehabilitación Energética de Edificios/Energy Rehabilitation of Buildings Program) plan has just been opened to application and FEDER funds for renovation.

In the case of Ireland, the Irish government launched a major retrofit programme for homes and communities, in response to the problems identified during the pandemic. The total allocation for homes and community retrofit amounts to 221 million euros, which is an increase of 82% with respect to the last program of this type promoted in the country.

The results of a survey of 120 people at a recent IGBC conference indicated that 51% of participants reported that their homes did not meet their needs during the COVID 19 pandemic. The main gaps identified by respondents are Lack of cellular space, and lack of space to work at home.

1.2 Ongoing promising experiences

One of the actions developed at the beginning of the project was to analyse and compare the integrated renovation services that are working in Europe. The results of the analysis are described in the document “D1.1 Benchmarking of promising experiences of integrated renovation services in Europe” and are included in this first introductory part because the good practices identified, as well as the key aspects, have been a fundamental input for the adaptation of the TURNKEY RETROFIT in Spain and Ireland.

Table 2 shows the integrated renovation services that were analysed and the result of the comparison of their different parameters. As can be seen, in the case of Ireland, there are 2 integrated renovation services, and in Spain, one called SIRE, which as will be detailed in a later chapter, will be part of the adaptation of the TURNKEY RETROFIT in Spain.

Description of renovation services	France			Spain	Ireland		Denmark	Netherlands	United Kingdom
	izigloo	Operene	Oktave	SIRE	Super-Homes	ProEnergy Homes	BetterHome	Energiesprong	Retrofit-Works
Launch									
Active since (first renovation)	2015	2014	2016	2015	2015	2019	2014	2013	2015
Host organisation type									
Service provider	Independent org.	Independent org.	Semi public	Private association	Energy agency	Collaboration of Energy service company, community credit and government agency	Component manufacturers	PPP	Co-operative

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Target building typology

Single-family houses	+		+	+	+	+	+	+	+
Multi-family buildings		+		+		+	+	+	+
Other (non-residential, social housing, public buildings etc.)		+					+	+	+

Renovation level

Nearly Zero Energy			+		+			+	
Deep renovation (≈50%)		+							
All renovation levels	+			+		+	+	+	+

Data gathering

On-site		+	+	+	+	+	+	+	+
Extrapolation (based on climate, building typologies etc.)	+								
User-inserted data	+						+		

Key partners

Contractors/installers	+	+	+	+	+		+	+	+
Products/energy suppliers			+	+	+	+	+	+	+
Energy auditor		+	+		+		Installer	+	+
Financial institutions			+		+	+	+	+	

Outreach channels

Online	+	+		+			+		+
Network of actors	+		+		+	+	+	+	
Renovation advice centres		+	+					+	
Local meetings		+	+	+	+			+	

Customer relationship

Single contact throughout process		+	+		+		+	+	
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Key resources

Product/project manager		+	+		+	+	+	+	+
Renovation employees and logistics			+		+		+		+
Online portal/solution	+			+			+		

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Distribution network				+			+	+	+
Key activities									
Building inspection and energy audit	+	+	+		+	+	+	+	+
Approvals from local authorities and apply for subsidies		+	+	+	+	+		+	+
Manage renovation works		+	+		+	+	+	+	+
Independent post-renovation inspection		+	+		+	+		+	
Energy performance contacting		+	+					+	
Training of experts			+	+	+		+		+
Revenue streams									
Customer pays for renovation/ project management		+			+	+		+	
Energy performance contacting		+	+					+	
Detailed energy audit					+				
Commission for project leads	+								
Commission for project wins	+			+					+
Membership fees		+		+					+
Commission from suppliers (energy or products)				+			+		
Cost structure									
Marketing	+						+	+	
Salary of product/project manager		+	+	+	+		+	+	+
Administration and support	+	+	+	+	+	+	+	+	+

Table 2 – Comparative assessment of the integrated renovation services

The detailed analysis of the 9 integrated renovation services allowed to extract some key lessons for the Turnkey Retrofit service. The key aspects identified, the canvas business model proposal, as well as the renovation customer journey, have been the inputs considered for the adaptation of the Turnkey Retrofit Service in Spain and Ireland.

Key aspects

- **Key Partners:** Turnkey Retrofit needs to build strong networks with local actors in the regions it will be implemented and involve them from the early stages of the service implementation process.
- **Key Activities and resources:** Turnkey Retrofit should be the single-point contact for the homeowner and project manager of the renovation works. For multifamily buildings it is necessary to contact with the figure of property manager and collaborate with co-contractors, while in smaller projects the actual work can be

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sold/offered to an external partner that fulfils certain quality criteria. Turnkey Retrofit Service should be a smart digital platform that can make the customer journey easier and more enjoyable and inspire potential customers to renovate.

- **Value proposition and customer relationship:** Turnkey Retrofit value proposition should focus on the overall customer experience and renovation outcome. The process should be transparent and keep the customer informed, with the aim of minimise any unpleasant surprises for the customer, such as a final cost that surpasses the initial budget or delays to the renovation process. As the Turnkey Retrofit Services is the unique selling point of contact for the client, he must feel supported, informed and involved, so the client's perception of the relationship with the OSS during the course of the renovation project will be satisfactory.
- **Outreach:** Turnkey Retrofit should be promoted through local networks and online through the website. The website will feature a function for both single-family homes and multifamily building that enables the customer to easily get a first grasp of the renovation potential and inspire potential customers to renovate.
- **Customer segments:** Turnkey Retrofit should identify the most probable customer segment for single-family houses and multi-family buildings, and in each country this same action will be carried out, to implement outreach strategies tailored to the different client groups identified.
- **Revenue and cost:** Turnkey Retrofit should combine different revenue streams, including project (management) fees and charges for connecting a potential customer with the right professionals, and the potential of a membership fee will be explored.

Business model canvas proposal

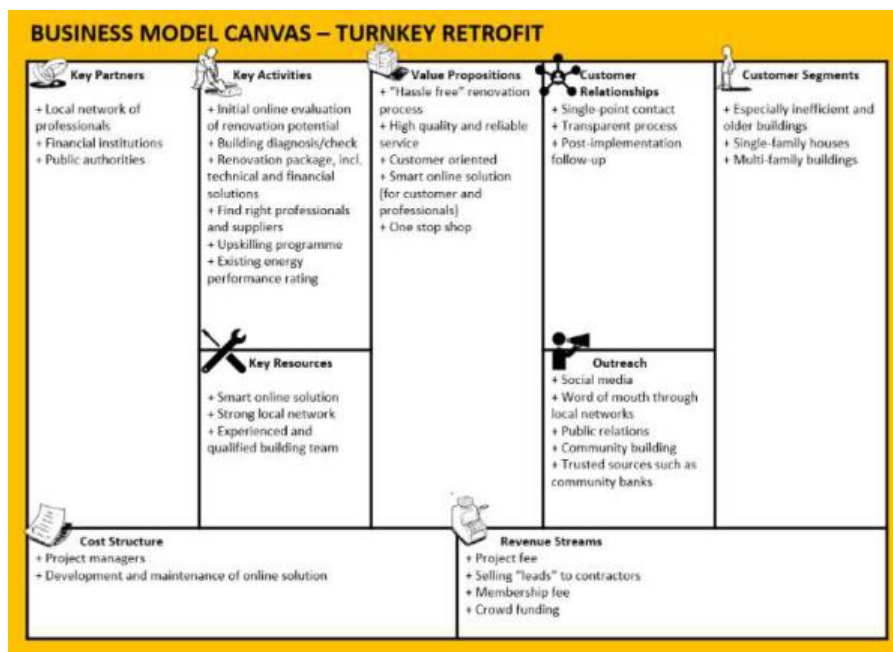


Figure 1: Turnkey Retrofit Business Model Canvas

Turnkey Renovation Customer Journey

The Turnkey Retrofit services should focus on the overall customer experience and renovation outcome, therefore the customer journey needs to facilitate an effective collaboration among professionals, while enabling a smooth and transparent renovation process for the homeowner improving the satisfaction client's perception.

The following graphs show the suggested customer journey for single-family and multi-family buildings for the TURNKEY RETROFIT Service:

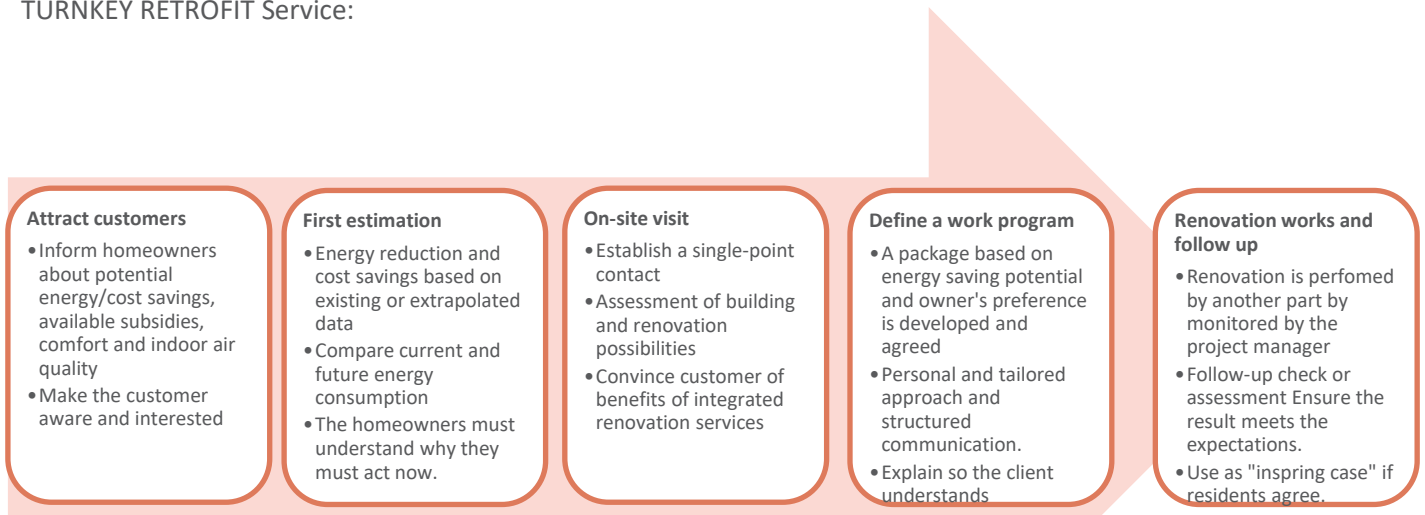


Figure 2: Proposal for Turnkey Retrofit customer journey – single-family houses

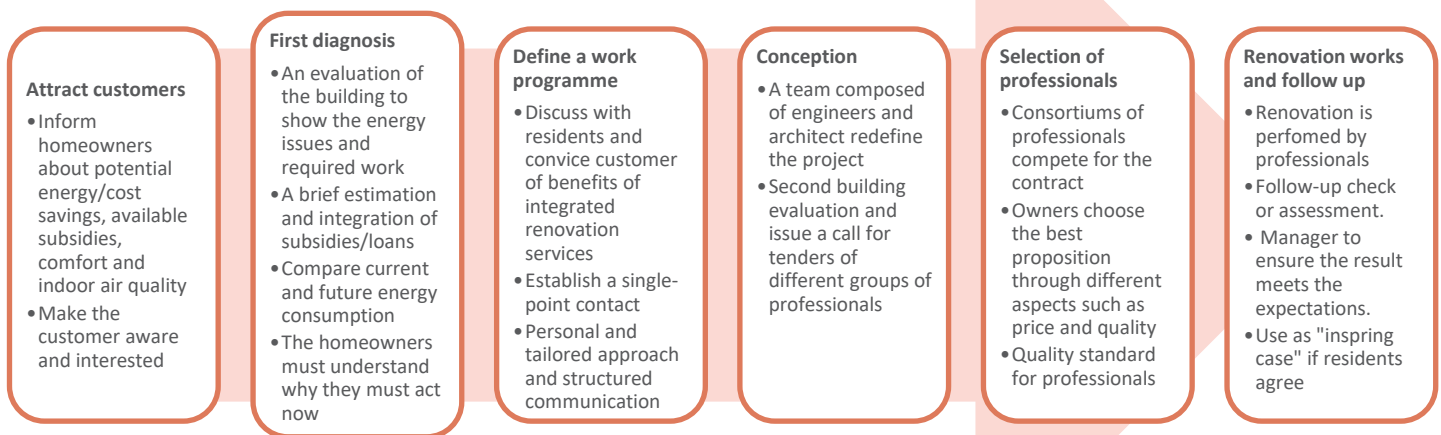


Figure 3: Proposal for Turnkey Retrofit customer journey – multi-family buildings

It is clear that the specific country/regional context (including culture, regulations and existing value chain structure) needs to influence the design of the integrated renovation service and the customer journey. These aspects will also influence the chances of success for the Turnkey Retrofit service. The review also shows that the OSS must be embedded in a larger policy framework in order to be effective. These aspects have been further analysed in the different workshops and meetings held with the LIG and their results are presented in section 3 of this document.

1.3 The different One Stop Shop business models

This part of the report specifies the different One Stop Shop business models thanks to the guide, drawn up by the H2020 Innovate project [6].

A one-stop-shop service is a virtual and/or physical place where homeowners can find all information with the objective to helping the homeowner make the best decisions that will lead to an optimal renovation project.

In order to increase the renovation rate, the one-stop-shop needs to cover the following services:

- Proactive engagement of homeowners: market segmentation, targeted communication and marketing tools are a key to reach out to the right groups at the right moment (e.g. young families, elderly people, low-income households, etc.) with the right message.
- Energy renovation and financial plan: These tailor-made plans should aim at achieving deep renovation implemented in one shot or planned step-by-step, depending on the financial means of each homeowner.
- Coordination of the renovation process on behalf of the homeowner. Long-term and affordable financing especially for low- and medium-income families, elderly people and other vulnerable groups who cannot access other financing means although the value of their energy savings is large enough to pay off.
- Guaranteed results and post-work monitoring including of the quality of works and, ideally, energy savings.

The OSS can be classified into four types of business models with different characteristics. 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.

Business model	Roles & responsibilities	Practical example of what the one-stop-shop offers to homeowners
1 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.
2 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.
3 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.
4 ESCO-type model	<ul style="list-style-type: none"> • Offer a full renovation package with guaranteed energy savings to homeowners • Bear responsibility for the result of renovation works • Bear responsibility for the overall customer journey 	The one-stop-shop sells you the renovation package and guarantees the energy savings for the contract duration. The one-stop-shop is paid through energy savings achieved.

Table 3 – Comparative assessment of the integrated renovation services (Source: [6])



Figure 4: Business model diagram of Facilitation model (Source: [6])

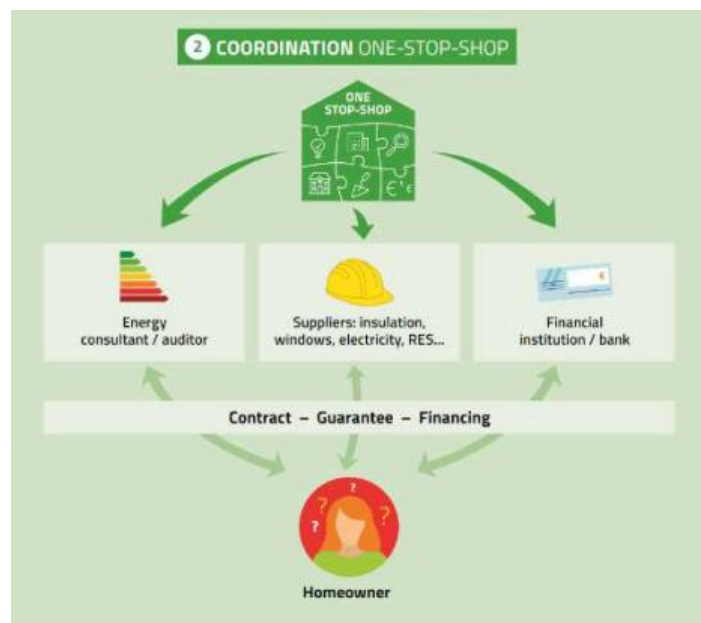


Figure 5: Business model diagram of Coordinator model (Source: [6])



Figure 6: Business model diagram of All-inclusive model (Source: [6])

D3.1. Conclusions of the identification of local needs and actors in place



Each of the different business models of an OSS presents advantages and disadvantages, which have to be analyzed in order to select the model that best adapts the services to be offered, with the aim of helping the homeowner to make the best decisions that will lead to an optimal renovation project and that will make the customer's journey easier and more enjoyable.

During the definition of the TURNKEY service type, the different business models have also been considered, in order to move towards the desired service.

With the knowledge gathered by the market analysis, the Business Models definition and the different One Stop Shop models presented previously, it has been possible to define the One Stop Shop model that will provide service in each country. Based on the checklist developed by the H2020 Innovate project, it has been defined the type of One-Stop-Shop, the content and the necessary development of the TURNKEY RETROFIT offer that will be developed in each country.

	FACILITATION OSS	COORDINATION OSS	ALL INCLUSIVE	S4R in ES + Reform'ANE RR	S4R in IR + Local partner
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)					
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					

Table 4 – One-Stop-Shop Checklist (Source: [2])

2 THE SPANISH case

2.1 Analysis of the national and local markets to identify local actors

Business opportunities in the renovation sector

The renovation process in Spain is running less quick than other countries. Although the last two years the government has suffered a kind of instability, the urban agenda 2030 in Spain has been established, and the investment to expand the energy renovation of the building stock is on the agenda.

As mentioned in previous analysis, around 80% of buildings are about to be 50 years old. Spanish legislation has a building maintenance control tool called ITE (Technical inspection of buildings). ITE is a type of preventive maintenance legally binding, by which buildings are periodically subjected to the review of a series of elements that affect the safety of the property and the people who inhabit it. The ITEs is regulated by Royal Decree-Law 8/2011 of July 1 and by the different Municipal Ordinances, which determine the conditions for inspections.

Art.21" Obligation of technical inspection of building.

"1. Building older than 50 years, unless the Autonomous Communities set different age in their regulations, for residential use...must be subject... of a periodic Technical Inspection that ensures its good condition and proper conservation, and a minimum, the following requirements:

- a) Evaluate the adequacy of these properties to the legally required conditions of security, health, accessibility and decoration.*
- b) determinate the works to that are required to keep the properties in the legally enforceable state, and the time indicated for that purpose.*

Art.22: Inspection Effects"*...the obligation to carry out the ITE corresponding to the owner/s of the building, who must hire an independent technician or approved technical inspection entity, in order to issue a report, which establishes the state of conservation of the same, and of it is necessary, or not, to carry out conservation/rehabilitation. "*

Therefore, in the upcoming years, there will be high business opportunities for buildings renovation in Spain especially in energy renovation due to the new CTE “Technical building code” [7]. The recent social “noise” around energy rehabilitation, driven by the EU administrations, the Spanish Agenda 2030 and its public-private dissemination, with companies in the sector, has caused an increase in interest and demand from citizens. Main driver comes from possible saving on energy bills (heating and cooling in the same proportion), better quality on air and increased comfort. The current Covid-19 crisis increases the concern of citizens.

Multifamily Buildings with an upcoming ITE date are beginning to consider whether it is feasible to contemplate any action in this regard. The Property Administrators, as managers of the Communities constituted by several owners, play a relevant role in the approach to the citizen.

The targeting of rehabilitation works (the one outside the house, such as on the facades of buildings) is paralyzed. To have this activity unlocked, it is necessary to unlock government funding with the help of the Reactivation Plan after the COVID -19 crisis, of which a great pillar is the rehabilitation of buildings. Institutional support in the decarbonization goal pillar and the 2030 agenda are key. From the citizen’s side, the desire to live better and small-scale modifications are the driving force.

So, people, citizens in general, are more aware of it and the energy saving opportunities that come from the renovation. Also, the new recovery funds coming from UE to Spain, will give a strong impulse for renovation. Therefore, the opportunity seems to increase in the coming months.

Supply

Traditionally renovation works have been carried out by specialized companies in the construction sector. It represented a small part of the market due to its technical complexity and management processes with the communities of owners, in addition to having highly specialized personnel.

This added to the fact that they involve working with much lower profit margins than the new construction. For this reason, it has not been an attractive business area.

With the previous economic crisis, some construction companies of new construction, seeing the market reduced or almost paralyzed, have sought ways of survival in rehabilitation, thus expanding their services and creating their specialized departments.

Today, the market has been consolidated and has grown in this way. But not all construction companies can tackle this change due to all the characteristics of the required actions.

The other actor that has broken into the energy rehabilitation market is the energy services companies that finance this type of action. Energy service companies offer energy rehabilitation with intervention on the façade, roof and boiler room. In exchange, a supply contract is signed with an average of 10 years. The benefit comes from the energy savings generated with the energy renovation. They support the financing and take on the role of prime contractor for the work to be carried out. Buy, as mentioned before, the execution is always carried out by specialized companies.

Works makers

Depending on the size of the action, or its complexity, a technical Architect or Quality Surveyor, carries out the Project and/or directs the works. Some companies have a specialized staff or work with external collaborators. In many cases they work in a mixed model depending on the workload of the moment and the scope of the action.

Usually, a company called "contractor" is hired and it manages and coordinates all the work, the "subcontractors" depend on it, there is a Law in Spain that regulates subcontracting relationships, their particularities, permitted levels, etc. (Law 32/2006, of October 18, regulating subcontracting in the Construction Sector). . Art 3. For the purpose of this Law, the following shall be understood as:

- a) Construction works:** any work, public or private, in which construction or civil engineering work is carried out.
- b) Promoter:** any natural or legal person on whose behalf the works carried out
- c) Facultative Direction:** the competent technician or technicians designed by the promoter, in charge of the management and control of the execution of the work.
- d) Coordinator in health and safety matters** during the execution of the work: The competent technician integrated in the facultative direction, designated by the promoter in to carry out the tasks established for this coordinator in the safety and health regulations in the works of construction.
- e) Contractor or main employer:** the natural or legal person, who contractually assumes before the promoter, with human and material resources, their own or others, the commitment to execute all or part of the works subject to the project and the contract. When the promoter carries out all or certain parts of the work directly with its own human and material resources, it will also be considered a contractor for the purposes of this Law; likewise, when the contract is made with a Temporary Union of Companies, which does not directly execute the work, each of its member companies will be considered a contractor company in the part of the work that it executes.
- f) Subcontractor:** the natural or legal person who contractually assumes before the contractor or another commissioning subcontractor the commitment to carry out certain parts or units of work, subject to the project by which their execution is governed. The variants of this figure can be those of the first subcontractor (subcontractor whose principal is the contractor), second subcontractor (subcontractor whose principal is the first subcontractor), and so on.
- g) Self-employed worker:** the natural person other than the contractor and the subcontractor, who personally and directly carries out a professional activity, without being subject to a work contract, and who contractually assumes before the promoter, the contractor or the subcontractor the commitment to carry out certain parts or installations of the work. When the self-employed worker employs workers on the job, he will be considered a contractor or subcontractor for the purposes of this Law.
- h) Subcontracting:** The commercial practice of productive organization by virtue of which the contractor or subcontractor instructs another subcontractor or self-employed part of what has been entrusted to him.
- i) Level of subcontracting:** each of the steps in which the subcontracting process that is developed for the execution of all or part of the work contractually assumed by the contractor with the promoter is structured.

Grant / Subsidies

The management of the grants is complex and is generally carried out by specialized companies or independent technicians who give technical advice and manage the grants. In many cases, the construction companies have reinforced their administrative structure to manage the aid directly. There are also cases of rehabilitation companies that finance the periods in which the aid is in process. That a period can be from eighteen months to two years.

Government aid via IDAE was managed at the national level until 2020. The new aid programs are channelled through the regional governments, these being the ones that determine how they are distributed following the directive of the central government. Local adaptation should be fixed by every region by the end of 2020.

Financing

Until recently, the role of the bank in rehabilitation has been nil, with the rehabilitation companies themselves financing the work for € 0 via certifications or letters in periods of two years, maximum.

In the last two years, an opportunity for growth in new markets has become clear. And the associations have worked with the new needs of neighbouring communities. Banks like Santander [8] (UCI) and Deutsche Bank [9] have created business units specialized in loans for the rehabilitation of buildings, considering the community as a real entity.

These credits are settled, as the works progress and are certified, directly to the company that develops the works. BBVA [10] and other entities are beginning to create new products also at very low prices that are based on EU aid for decarbonisation.

The insurance sector is also developing products such as AXA's rehabilitation insurance (created in collaboration with ANERR) [11], which is adapted to the specific needs and coverage required by rehabilitation works, protecting the contractor and therefore the end-user.

Existing One stop shops

The development of the Internet and the digital transformation in Spain make users more mature and the use of the internet in these services, as in almost all of them, has grown significantly. According to the study of the information society in Spain, there are more than 42 million Internet users, which represents a penetration of 91%. [12]

In the last ten years, a wide variety of portals have been developed that offer services related to home renovation. They provide especially services for small indoor renovations of homes but cannot be considered as OSSs.

Outdoor or comprehensive rehabilitation is less common in this environment, and although some specialized construction companies have a digital presence on their websites and RRSS, REFORMANERR [5] is the only portal specialized in building retrofitting/renovation.

Some of the market players are franchises that extend throughout Spain, in general there are three different profiles:

- Large websites and/or franchises: this kind of websites provide with “inside house” small renovation services as bathroom, kitchen, redistribution of spaces etc. With national coverage and professional subscribed to the service to get leads. They connect the final client with professionals to get 3 or 4 proposals.
 - AQUI tu reforma [13]: Home renovation, budget (economic offer) without obligation, allows you to design the renovation online to the client's taste, choosing materials and finishes. Gives advice on decision-

making and support in the renovation process and the final delivery has a 2-year guarantee. Own financing platform AQUÍ credit.

- Habitissimo [14]: Provides detailed information, budgets and opinions about professionals and construction, architecture and interior design companies
- Yo Reformo [15]: Offers reform packages at a fixed price. In each type of reform, the client will see a description of what it includes and what it does not. To get a personalized quote, it can be requested a visit from one of their technicians. (cost 30€)
- Cubicup [16]: Services for inside renovation and integrated ones. They advise, observe and write project progress reports and costs control. Contract with a closed date, legal billing and free legal assistance insurance coverage

- **Local websites connecting professionals:** this kind of websites are focused on the following activities:
 - VIP REFORMAS [17]: They offer small renovations and rehabilitation prospects. The client gets 3 companies on the city offering services according to de pre-definition of needs. They rank professional with social evaluation on the site.
 - 3presupuestos [18]: They offer small indoor renovations proposals. The client gets 3 companies offering services according to de pre-definition of needs. They rank professional with social evaluation on the site.
 - Multihelpers [19]: They define the service as "the fastest, cheapest and most reliable way to solve your pending tasks at home". Small renovation and the handy task at home.
 - Tenders.es [20]: The service is limited to free estimates for small reforms in a postal code or location.
 - TOT REFORMAS [21]: Small and medium renovation for homes and professional buildings. Free professional visit and 5 estimations.
 - Houzz [22]: Houzz is an online platform for home design and renovation, connecting millions of homeowners with home professionals.

- **Manufacturers or distributors of construction material that have created the service of small reforms.**
 - Hogami [23]: It is a platform that belongs to Leroy Merlin (DIY, masonry and decoration retailer, which sells to individuals and professionals). It provides reform services with fixed prices. Connect with professionals and offer the necessary materials for the works:
 - Cosentino [24]: It provides ideas and solutions for partial reforms such as kitchens or floors, as well as proposals for comprehensive reform concerning their own materials. Inform where to buy them and give references to the local distributors who do the renovation work.
 - La Plataforma de la Construcción [25]: agregador of warehouses of construction materials.
 - Citiservi [26]: aggregator of warehouses of construction materials.

	Assist Govern Grant	Assist Energy Credits	Impartial Advice	Private Financing	Professional Indemnity	Online Tools	Monitor works	End to end management	Digital Plarform
Large Websites or Franchises									
AQUÍ tu reforma				+	+	+	+		+
Habitissimo						+			+
Housfy									+
YoReformo								+	+
Cubicup					+	+	+	+	+
Local Sevices									
VIPreformas									+
3presupuestos									+
Multihelpers									+
Tenders									+
TOPReformas									+
Houzz									+
Manufacturers or distributors of construction material that have created the service of small reforms.									
Hogami						+			+
Cosetino						+			+
La Plataforma de la construcción									+
Citiservi									+

Table 5- Existing One Stop Shops in Spain

The proposal action to solve the gaps in the Spanish energy retrofit market

To give a clear overview of the inefficiency status and existing gaps on the Spanish market, we will use the demand from the main Actors.

The "Rehabilitate the Future" proposal -made by GBCe [27], ANESE [28], ANERR and some other stakeholders in the market- proposed a framework of public-private collaboration to solve the gaps and main brakes (they include fiscal, administrative, financial and certification and monitoring measures, among others), to maximize the contribution of energy rehabilitation to economic recovery and to fight against climate change, with minimal impact on public accounts, and favouring self-financing schemes through energy savings. [29]

In this proposal to cover the identified gaps some measures are identified:

- The explicit recognition of the priority general interest nature of the energy efficiency of buildings and its clear expression in the Climate Change and Energy Transition Law.
- The creation of the energy passport, which streamlines administrative licenses for energy reforms, in line with the State Housing Plan 2018-2021.
- The introduction of tax credits and exemption that encourage the improvement of the energy efficiency of homes and, in particular, actions aimed at reducing their energy demand.
- The inclusion of energy efficiency within the conservation obligations of residential multifamily buildings and the priority of the credits derived to financing them.
- It is necessary for the creation of a legal framework that facilitates financial mechanisms for public-private collaboration for the rehabilitation of buildings. These can drive these actions without recourse to public

budgets or initial outlay for the owners, such as the Program for the Activation of Ecological Capital (PACE), which works efficiently in other countries.

- The promotion and support of initiatives that allow the aggregation of energy efficiency projects in project portfolios, thus converting these portfolios into more easily financed products thanks to their greater volume and standardization.
- Improve the regulation of the green mortgage for the financing of energy renovations in buildings
- The implementation of an energy efficiency audit system for buildings that includes regular conservation and improvement obligations.
- The creation of a National Energy Efficiency Fund as a facilitating vehicle for energy reforms in social housing, vulnerable sectors and those in energy poverty.
- The implementation of market mechanisms for the certification and monetization of Energy Efficiency Certificates and their use as an alternative to contribute in kind to the National Energy Efficiency Fund.
- Inclusion of the building sector in the trade of greenhouse gas emission rights, in such a way that the decisive contribution to the decarbonisation of energy efficiency in buildings is valued, and the registration of buildings in the Carbon Footprint Registry of the Spanish Office for Climate Change, which includes efforts in the calculation, reduction and compensation of greenhouse gas emissions.
- The creation of single municipal "green office" as SIRE, for the streamlining, promotion, communication and management of local energy renewal programs.
- Drive on the urgent job training and qualification programs and on the certification of companies trained to carry out energy efficiency projects, as well as the promotion of eco-labelling in the products to be used in energy rehabilitation projects, which indicate information on the environmental aspects of a construction product throughout its entire life cycle.
- The exemplary nature of the Public Administration when making effective the national commitment of annual renovation of 3% of its building stock and raising it to 6%.
- The creation of a Green Bank specialized in the efficient channelling of public funds and catalysis of private capital in financing energy efficiency projects and distributed energy assets. In parallel, or as an additional measure, the creation of a Guarantee Fund is proposed.
- The promotion and support of the proliferation of energy communities, the facilitation of the sale of demand and flexibility services, the aggregation of distributed energy assets in mini-grids and greater democratization of the energy system.
- The promotion of the implementation of Energy Management Systems as a fundamental vehicle to continuously improve energy efficiency in companies and their buildings and headquarters
- Strengthening of horizontal inter-ministry coordination, and between the different levels of the state, autonomous and municipal administration.
- Add of balancing financial mechanisms that facilitate that the ecological and economic transition is also a just transition, reducing energy poverty.
- The creation of a Monitoring Commission made up of sector associations, to support, advise and disseminating the measures embodied in the Climate Change and Just Transition Law related to the building.

All these actions aimed at the total decarbonisation of the real estate stock and the building sector until 2050 must be carried out in line with the evolution of the general sustainability framework (including social and environmental aspects that go beyond energy), circular economy and of energetic leadership of the citizen.

2.2 Local needs and actors in place

After carrying out the analysis of national and local markets to identify local actors, it has been necessary to identify the needs of these actors. For this purpose, LIGs have been created, formed by the main actors that are part of the value chain of the renovation / retrofitting in Spain in order to adapt the TR services to the local context.

Input from Local Implementation Group

From the proposal phase the members of the LIG were identified since they were the main actors in place in the renovation/ retrofitting value chain in Spain.

These actors in place are representatives of the public administration and financial sector, building company’s professionals, installers, construction sector products manufacturers, energetic services providers, technicians, architectural/engineering companies and building managers associations.

When then LIG was created new members were added and some of them changed due to different situations, but the profiles of the actors were kept. Among those added are the members of ANERR board and REFORMANERR board with technical profile and whose who manage REFORMANERR platform as it exists now.

When the Local Implementation Group was established, a series of meetings were held, on the one hand, to start creating a community and, on the other hand, to detect their needs and the main barriers that they can face participating as suppliers in S4R-REFORMANERR.

In total, a series of 5 sessions were held that allowed identifying, specifying and finding how to solve needs and barriers in the different parts of the process and / or services to be provided.

The profile of the members of the LIG who have attended the 5 workshops held are as follows:

LIG ATTENDANCE LIST	
TYPE OF COMPANY / SECTOR	Nº OF COMPANIES
ASSOCIATION OF ENERGY SERVICE COMPANIES	2
PROPERTY ADMINISTRATORS ASSOCIATION	1
QUANTITY SURVEYORS ASSOCIATION	1
ARCHITECTS ASSOCIATION	1
CONSTRUCTION COMPANY	2
SOCIETY FOR ECONOMIC DEVELOPMENT - REGIONAL AGENCY	1
BANKING AND FINANCIAL SERVICES COMPANY	1
ASSOCIATION OF COMPANIES SPECIALIZED IN ENERGY INSTALLATIONS	1
MATERIAL MANUFACTURERS	1
ELECTRIC SECTOR COMPANY	2

Table 6- List of Spanish LIG members

Initial LIG 22nd October 2019

In the initial LIG meeting - which was formed by construction companies, financial institutions, energy companies, colleges of architects and quantity surveyors, organization of property managers, state agencies and building materials companies - it was identified how the process of energy renovation is in Spain, pointing out the inefficiencies, problems and barriers it has.

D3.1. Conclusions of the identification of local needs and actors in place

After that analysis, it was jointly designed how the renovation process should be, from the customer's point of view, so that the experience is optimal and how to provide a one-stop service. After this first meeting, unfortunately, some companies were too busy to continue being part of the LIG and abandoned the project, however the company profile was replaced in the following LIG meetings.



Figure 7 - First LIG meeting Madrid October 2019, figuring out the retrofit process and customer journey

2nd LIG Meeting

Due to the Covid-19 situation and the impossibility to have face to face meetings, the next LIG meeting was replaced by 4 on line sessions between June and July, in which, among other things, the progress of the Turnkey Retrofit Project was presented, and the functioning of the S4R Platform and the role of each of the participants were discussed.

1st Virtual Session

In the first session, the progress of the Turnkey Retrofit project was shared with the LIG, and the evolution of the platform and the operation of the S4R website for France, Ireland and Spain was discussed. Also, the functionalities that are considered to respond to the ideal customer journey were defined and selected.



Figure 8 - First virtual LIG session meeting June 2020, Explaining the S4R web site.

2nd Virtual Session

In the second session, reflections from the previous meeting were shared, and the role and activities to be carried out by the different actors in the Turnkey Retrofit service were discussed. This session was also used to present promising experiences of integrated retrofit services in Europe. In this session, several group dynamics were carried out in which each identified assistant could define the contribution of their company to the TR service, and what advantages could they obtain from that participation in the TR service. These dynamics also served to identify the barriers that the Turnkey Retrofit service must resolve to ensure the success of the service.

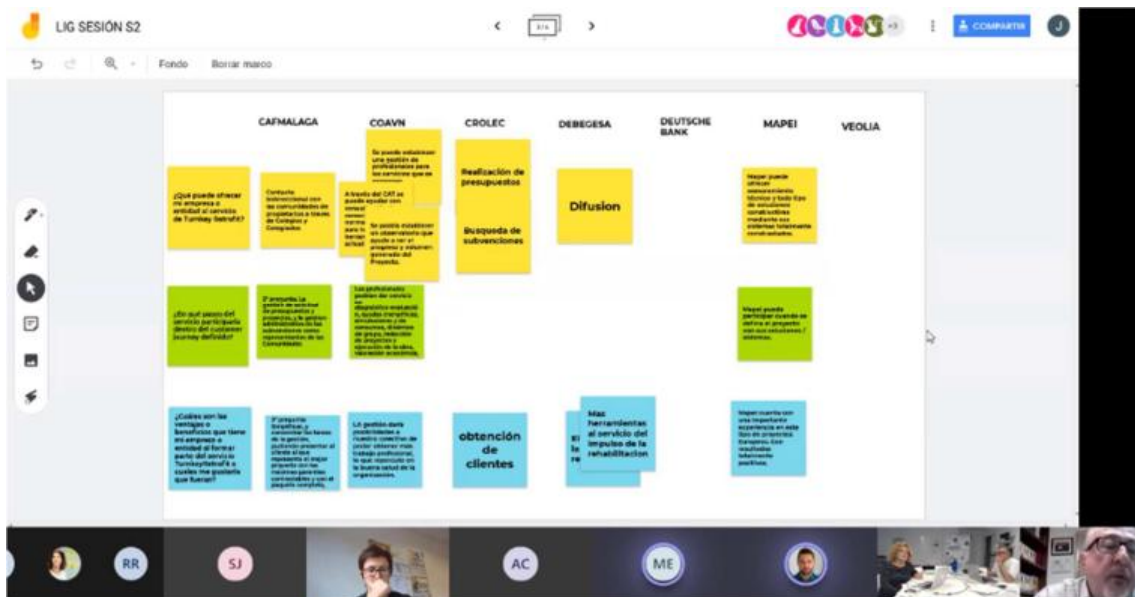


Figure 9 - Second virtual LIG session meeting June 2020, defining the role of each agent in the TR service.

3rd Virtual Session - Knowledge Transfer Meeting (KTM)

The KTM had the objective to present and explain the *Heroo* service already existing in France and to learn from that experience to define how TR should work in Spain. In this session we also presented the progress of the project and showed one of the developed new functionalities for the TR platform, the PUNCH DIAG. In addition, during the presentation, the participants presented their doubts and reflections on the following topics: relationship with the end user, agents involved in providing the service, the business model, etc.



Figure 10 - Third LIG session – Knowledge Transfer Meeting June 2020, defining the role of each agent in the TR service.

4th Virtual Session

In this last session, the progress of the project and the evolution of the S4R and REFORMANERR platform were presented, as well as the new functionalities and developments that the TR service will have in the future: Smartdiag, Aggregation Brick, cost of work, etc. It was also explained to the LIG the different types of OSS Business Models (One stop shop) that exist, and which one has been chosen for REFORMANERR.

Modelos de Negocio OSS

Modelos de Negocio	Roles & Responsabilidades	Ejemplo práctico de lo que la ventanilla única ofrece a los propietarios de Vivienda.
Modelo Facilitador 1	<ul style="list-style-type: none"> Sensibilizar sobre los beneficios de la renovación energética. Proporcionar información general sobre trabajos de renovación óptimos. Primer consejo en la "etapa de orientación" 	Te aconseja sobre cómo renovar tu casa y puede proporcionarte una lista de proveedores.
Modelo Coordinador 2	<ul style="list-style-type: none"> Coordinar los agentes existentes en el mercado (proveedores) Asegurarse de que se ofrezcan todos los servicios de la ventanilla única a los propietarios No se responsabiliza por el resultado de los trabajos de rehabilitación (solo sigue por encima todo el proceso) No hay responsabilidad por la experiencia del cliente (solo al principio) 	Te aconseja sobre cómo renovar tu casa y presionara a los proveedores para cumplir con sus Promesas. Los proveedores son los responsables del resultado final.
Modelo Todo incluido 3	<ul style="list-style-type: none"> Ofrece un paquete completo de rehabilitación a los propietarios. Se responsabilizan del resultado de las obras de rehabilitación. Tienen la responsabilidad la experiencia del cliente. 	La ventanilla única es un contratista que te vende todo el servicio como un paquete con lo...
Modelo ESCO 4	<ul style="list-style-type: none"> Ofrece un paquete de completo de rehabilitación a los propietarios con ahorro energético garantizado. Se responsabilizan del resultado de las obras de rehabilitación. Tienen la responsabilidad la experiencia del cliente. 	La ver rehab energ La ver ahorros energéticos conseguidos.

Figure 11 – Fourth LIG session, Explaining the different models of OSS.

The timeline of the LIG below shows how different stage of the platform proposal developed incrementally at each meeting, building capacity in terms of knowledge.



Figure 12 – Timeline of the interaction with the LIG and the KTM

The table below shows the recommendations from LIG for the successful scaling up of the platform and integrity of the retrofit process:

Spanish Context	Recommendation from the Spanish Local Implementation Group (LIG)	Proposal for Spanish Platform
<p>The process</p> <p>The complexity of renovation process does not fit with the digital one-stop-shop concept</p>	<p>Defining the ideal “customer journey”, milestones are identified.</p> <p>On this process it must be drawn the blueprint along the process defining the online task and the ones offline</p>	<p>Including all steps on the platform.</p> <p>The digital action through the platform, and a clear footprint for the ones offline (personalized contact, technical advice, etc.)</p>
<p>Initial suspicion from homeowners to digitalize this complex process</p> <p>Focus on the first point of contact to gain the customer's trust.</p>	<p>To get a friendly UX process for the initial diagnosis</p> <p>Homeowner do not need to investigate technical data to get an initial diagnosis</p>	<p>Develop a simulation or diagnosis tool that can be based on energy efficiency certification tools, which characterize the building and define the construction year and other construction data.</p> <p>Simple and clear dialog with the customer based on pictures, for simple an one clicks choices</p> <p>Guaranty Technical support along the process & Study of specific technical needs and solutions</p>
<p>Finance</p> <p>Easier and spread access to Public and private financing (also owners’ communities)</p>	<p>Aids from government should be more simple and agile, so they are main trigger lever</p> <p>Private finance improves the integrate renovation process</p> <p>Integration of both can be the key</p>	<p>All information in one click: available aids on the region and possible loans or financing from private entities.</p> <p>A clear diagnosis for the works to be done, let an estimation of works and timing. So, it facilitates the access for financing the entire project.</p>

<p>The complexity of managing a community of multi-family owners and the key role of building managers</p> <p>Access to communities of owners and managed rental buildings.</p> <p>Aggregation as a must</p>	<p>The Building managers college as a main partner for multifamily buildings</p> <p>Negotiate special condition for them as key part on the value chain.</p> <p>Aggregation open a clear and efficient way to manage renovation works</p>	<p>Create a special tool for them, to get all the projects on going. To make easier for them the renovation work process.</p> <p>Access to finance for the community on a simple click.</p> <p>Include an aggregation tool connected along the process.</p>
<p>Dissemination</p> <p>Lack of disclosure and understanding for the user</p> <p>Focus on the first point of contact to gain the customer's trust.</p> <p>Citizens have little knowledge of new technologies and the possibilities they offer</p>	<p>If we get a value delivery for customer, we can stimulate the word of mouth effect.</p> <p>Government support for dissemination process. Also, from all sectorial professional associations as architects and engineers</p> <p>Increase the citizen knowledge about the opportunities for their house and building, that are affordable and add energy saving, comfort and healthy environment.</p>	<p>Combine UX and true utility and accuracy in process.</p> <p>Get a real full process on the platform</p> <p>Publicity from the platform as a mainstream</p> <p>Develop a Q&A and “learn more” section on the platform with open and friendly information for citizens.</p>
<p>Legal and regulation</p> <p>Re-think the use the existing building book and the Building Passport</p> <p>The white certificate as the French one, it is valuated as very positive but not easy to develop in Spanish context due to de IDAE policy.</p>	<p>Improve the Lobby with government and institutions to standardize and digitalize technical information for buildings</p> <p>The energy efficiency certificate has a real cost for the client, to be real and reliable.</p>	<p>Foresee these options for next phase of the project</p> <p>Some companies are in the lobby to promote.</p>

Table 7- Recommendations from the LIG in Spain

As a result of the work carried out during the different workshops organized with the LIG mentioned in the previous point, it has been possible to define the specifications to adapt the TR services to the Spanish context. The inputs obtained have served to identify local needs, existing barriers and define how the ideal customer journey should be within the TR service.

The contributions of the LIG to adapt the TR service to the local context are key for the success of the implementation of the TURNKEY RETROFIT services. All these recommendations and observations made by the members of the LIG have been used as a guide to define the proposal for the Spanish Turnkey Retrofit Platform described in the following section.

2.3 Adapting the TR service to Spain

ANERR was focused, from the first steps of the association, on the necessary connection between citizens and renovation and technology companies. The actual technology wave and the digital revolution have created new opportunities for energy renovation and the improvement of the life quality. The complexity of the renovation process made it necessary to create physical and digital contact points.

ANERR being aware of this complexity has created two different services, SiRE [30] was created as a Green Point for citizens advocacy and the digital platform REFORMANERR as the point to as for personalizing technical information and estimate. Both work in the same way with different performance, SIRE as an informative point, and REFORMANERR as digital service platform. Also, REFORMANERR works as a national coverage tool, and SIRE's scope is Madrid, as a "case" to scale into other main cities in Spain.

The targets of these two tools are different: SiRE was citizen-centred, with personal contact, and REFORMANERR focuses on renovation companies' services to manage leads.

REFORMANERR arises as a management platform for the demands that come to the association, to distribute them among the partners as business opportunities. It's mainly focused on the companies associated with ANERR, giving them a platform where they can get construction works. To be a certified company by ANERR, (Companies with proven experience from previous work), provides a new dimension on the market as a guaranty for citizens. The strict requirements to get this certificate, gives the companies new business opportunities and makes them reliable companies.

The TR service in Spain will be an evolution of the current REFORMANERR platform.

Currently its main development is focused on the profiles of the associated companies and the monitoring of the projects being awarded. The follow-up with the client based on the initial form was carried out by REFORMANERR experts, with the entire process flow. The knowledge acquired by ANERR with the SIRE service, in the direct relation with the homeowners and the identification of their needs and preferences will also be reflected in the adaption of REFORMANERR and the evolution to S4R-REFORMANERR.

Below the user's journey that is transferred to the Solution4renovation.org core page, being a catalyst of contacts towards the web.

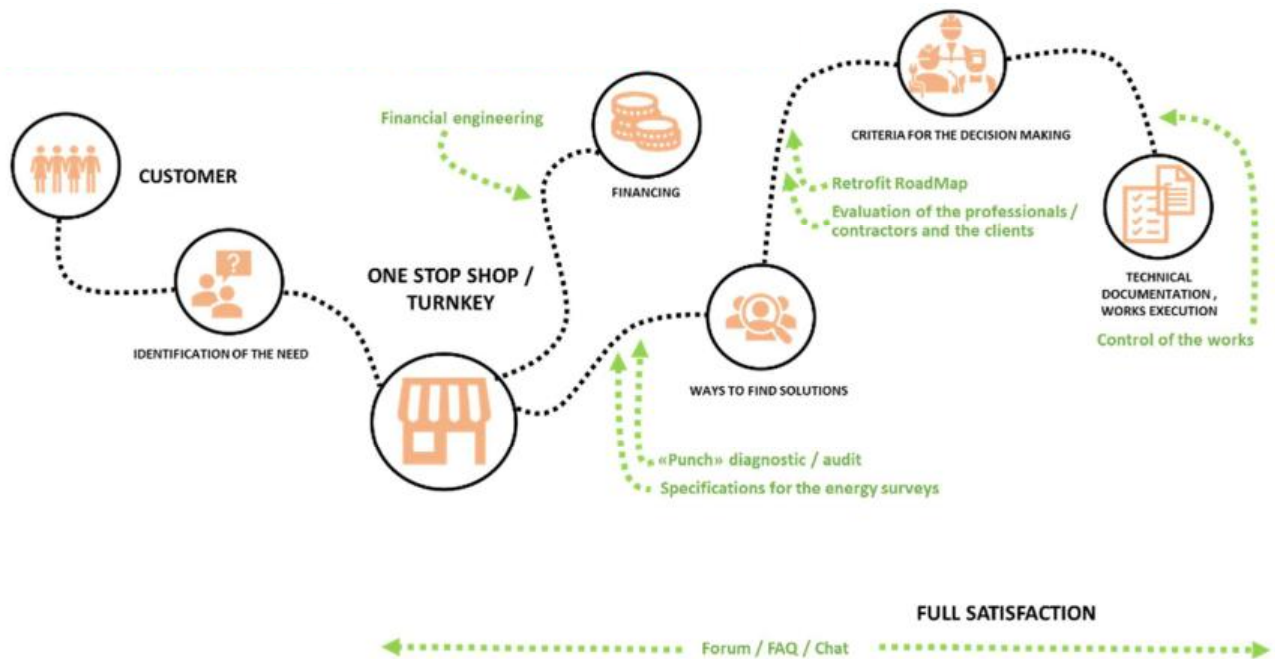


Figure 13 – Ideal customer journey in Spain

Service model

The OSS model applied for the Spanish case with the REFORMANERR Platform is the COORDINATION MODEL. As explained on section 1.3 of this document, this model advises on how to renovate your house and will push suppliers to comply with their promises. Suppliers remain responsible for the final result. But REFORMANERR aims to go further, giving all the tools to ensure the successful completion of the project for every partner involved.

Characteristics and Provided services:

- **Coordinate existing market actors:** As the place to find every option in every step of the process
- **Existing Option for grants & financing:** Reformanerr will unify opportunities from public grants & private banks to maximize projects financing.
- **Customer Journey – Renovation Map.** A real roadmap step by step to get a clear route for the final customer.
- **Energy improvement opportunities:** The “diagnosis” function give an initial “punch” to get an overview of option & cost.
- **Technical Information:** there are a lot of information on the Blog and Q&A section, when the final customer can learn about different technologies to get the best option in every case.
- **Independent professionals for the advising and diagnosis process.** On this service, it’s also offered an infographic about the potential project, a personalized energy efficiency analysis, and some other services at **low cost**.
- **Make sure all one-stop-shop services are offered to homeowners.** Even though Spanish contribution to the project is focused on multifamily homeowners, the whole services can be used easily by single-family houses. Some steps are adapted to the single house customer, making them easier, since they don’t depend on anyone to take the decisions. Also, there are included cases as detached and multi-detached houses established as a

community. In multifamily-owners case, the works can be applied to a flat with a single owner (indoor renovation or rehabilitation), or the whole community with an integrated retrofitting/renovation project.

Regarding the responsibilities assumed by the manager of the service:

- **No responsibility** for the result of the renovation works (just supervising the whole process): REFORMANERR platform works with companies and professionals certified by ANERR. So only trustworthy and upstanding companies are recommended by the platform. REFORMANERR brief the client needs, and the houseowner receive three estimated offers for the project. The connection with the client is guaranteed by client service. Any incident from any stakeholder is considered to improve the problem's solving process, and there is also a quality control. But the final legal responsibility comes from the contracted companies for works. Also, REFORMANERR provides and negotiates the best conditions with insurance companies in Spain. They give coverage for companies making the works and also for the house owners.
- No responsibility for the overall customer journey (just the first part): As we explained before, the responsibility goes to the company in charge of the works. But **ANERR** always **recommends** and can provide an **independent professional** who **controls and follow up the process**, end-to-end, to get the project control in terms of quality, financing, work to be done, timing and avoid any extra-cost. And give support for problems solving to all partners involved.

How will the TR platform work in Spain?

The first reflections around the replication in Spain of the services of TURNKEY RETROFIT services led the consortium to choose to integrate these services into the locally existing REFORMANERR service. In this way, the REFORMANERR platform will be digitized and improved thanks to the TURNKEY RETROFIT project and will host the new developed during the project. Therefore, there are two platforms, a core platform (Solutions4Renovations) and a Spanish platform (S4R-REFORMANERR) connected to each other.

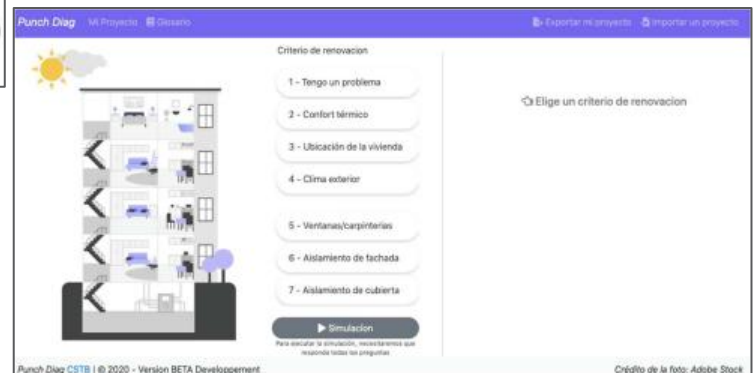
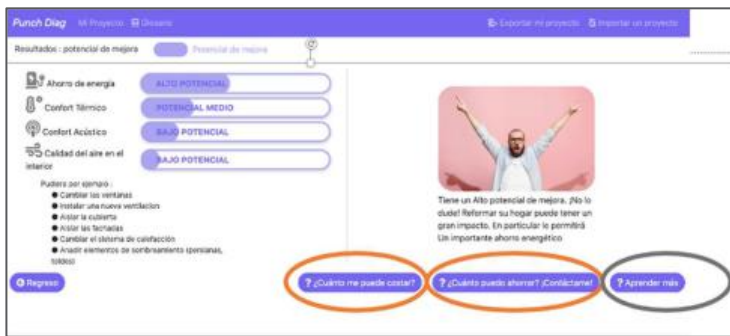
Having a common platform in the EU and a local one in Spain will attract new customers by providing generic information, it's a service designed to capture customers' attention and increase their awareness on building energy renovation and provide impartial advice with innovative ways to establish trust.

The future Spanish platform S4R-REFORMANERR, will be linked to the EU Solutions4Renovations platform. There will be two points of entry, one directly on the Spanish platform and the other from the S4R platform.

The route from S4R to REFORMANERR platform link at the end of the "punch" process of diagnosis.

The home S4R shows 3 routes: the orange circles "Vivo en una casa unifamiliar" and "Vivo en un bloque de viviendas" both drive to the Punch diag. Different routes should be developed on the S4R project for different building typologies, for the time being is just one.

D3.1. Conclusions of the identification of local needs and actors in place

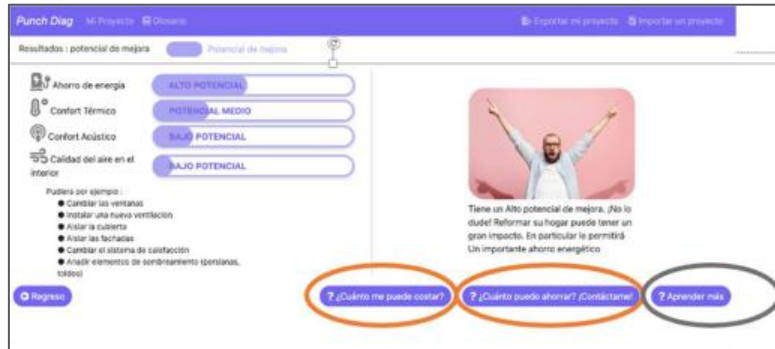


The blue circle “Soy un profesional” drives to REFORMANERR professionals’ section with a form to request to be part of the platform. Then the quality process begins to get certification from ANERR as qualified contractor.



D3.1. Conclusions of the identification of local needs and actors in place

The route from REFORMANERR to the S4R is shown below through the Punch diagnostic.



Orange circles are marking the selection buttons that send you back to REFORMANERR form to get information about cost of works and technical advises. The green circle around button “Aprender más” goes to the information section on S4R in Spanish.



The TR service will operate giving 3 estimated offers from contractors on the platform, for the final client. Other services offered are an Energy Certificate, and external advisor or managing for works, preview infographics with the final works on the building or inside house works. Also, the financing advisor for public Aids and private opportunities will be provided with general information or managing the process.



When the estimated cost of works is approved by the customer, the timing is also confirmed. REFORMANERR will improve its platform to connect all this processes.

Aggregation tool would be very interesting for the Spanish market. The possibility of adapting it to the Spanish market has been analysed.

An important functionality to provide at the end of the Diagnosis (punch) would be the inclusion of the Smart Diagnosis. To be effective the client needs a list of recommended works and the cost range, just to be clear if they move forward to the next step. The SMART diagnostic from HEROO (the S4R French platform) will be adapted for the Spanish platform and will be ready by December 2021.

Also, all media from ANERR, as Social Media, posters, magazines from ANERR will be used as a promotion vehicle to S4R platform.

Who are the needed stakeholders to make it work?

For the proper functioning and success of the service, it is necessary to have: the flow and accurate information, digital expertise on every connected stakeholder, dissemination and marketing, support from government, and new investors to update the platform REFORMANERR with the new needs.

To meet all these needs, in the first phase, the following stakeholders are needed to make TR service work:

- Digital experts to develop and integrate S4R and upcoming developments.
- A new investor with financial support (private ones)
- The Public entities or Administration for reliable information and process to Aids
- Financial sector: to be involved in the existing platforms for private financing
- All the professional and companies associated to ANERR as constructors, Building professionals, installers, Technicians, architectural/ engineering companies
- To get the most updated technical information for citizens: products manufacturers, Technology providers, Energetic services
- Building managers associations as driver to reach communities

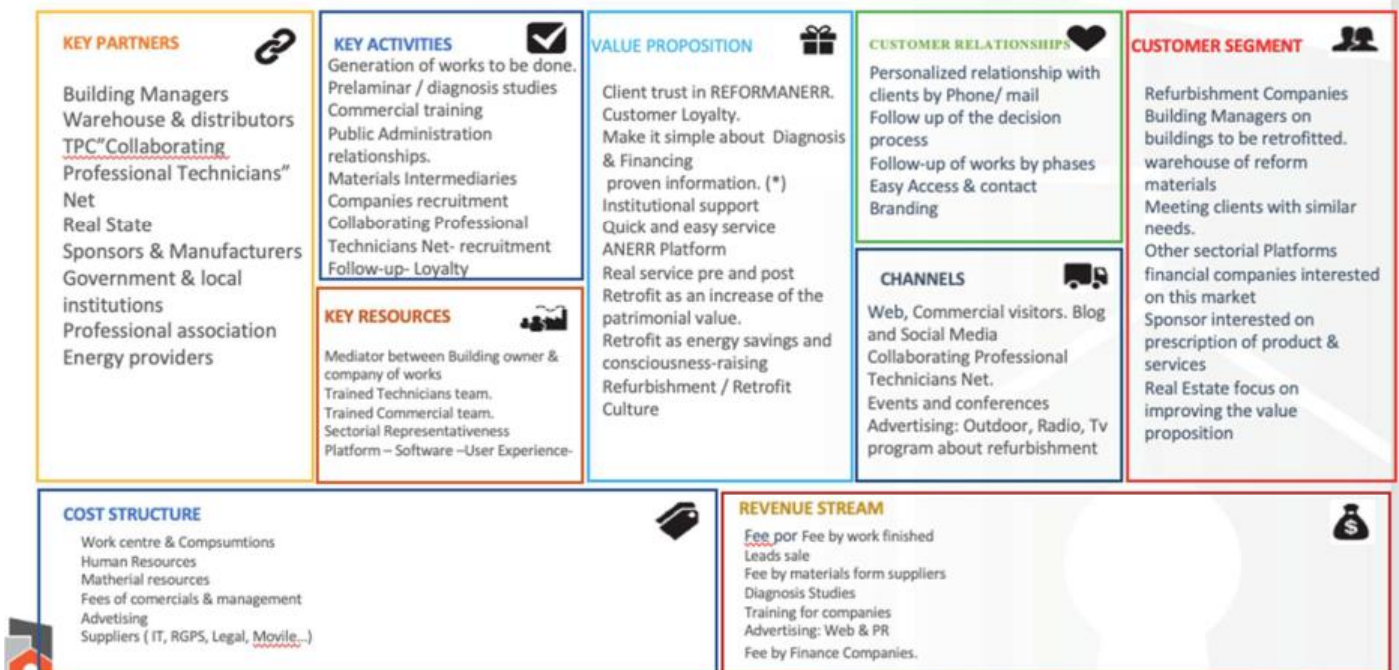
Business model

The Spanish Platform aims to be freemium platform which citizen can get a free diagnosis as a previous energy efficiency certificate and estimated cost; it can get institutional support for dissemination.

The final model it's not closed currently but the first approach is that stakeholders may pay for different use of the platform:

- Fee by work finished (renovation works & professional services)
- Leads sale (small indoor renovations)
- Fee by materials from suppliers
- Diagnosis Studies (personalized) and project preview infographic
- Training for companies/ Certification process
- Advertising: Web & PR
- Fee by Financing Companies

Business Model Canvas - REFORMANERR



(*) Public Administration (MITECOE <https://www.miteco.gob.es/es/>) , Professional Colleges (riggers, architects, engineers), Torroja Foundation, Manufacturers, etc. All this information it's accessible & free. Just the personal cost to get it from net.

Figure 14 – Exercise finding out about the Spanish platform through the business model canvas

Who must be involved to guarantee the success of the Turnkey Retrofit business model in Spain?

In the process of adapting the business model to the new context provided by the Turnkey-Retrofit project, it has been analysed who the key partners should be. On this stakeholder analysis, the following have been identified:

Stakeholders as part of the service:

- Rehabilitation/renovation Companies
- Professionals Technicians (network of freelance)
- Warehouse & distributors
- Technologies manufactures
- Finance companies

Stakeholders as interested in the service:

- Community Managers for multifamily building
- Local administrations & government
- Energy providers
- Energy service companies
- Real State
- Association of professional & consumers

3 THE IRISH case

3.1 Analysis of the national and local markets to identify local actors

Existing situation

Ireland has many existing One stop shop running end to end management for energy retrofit at different levels. They all report a strong demand for renovation works with components of energy retrofit.

Customers get their homes energy retrofitted by

- Directly contacting a one stop shop and going on a waiting list
- Joining a Better Energy Community Scheme (aggregation scheme) through a contractor or one stop shop – retrofits are then scheduled between April and October
- DIY approach where the customer employs single service contractors for single measures in a staged approach or may do some of the works themselves

There are opportunities to 'sell' energy retrofit to a latent market of customers carrying out general renovations and who have not considered improving their home through energy retrofit. However, the rigid timing of grants tends to be an obstacle.

Potential Demand

Five different types of works are potentially in demand

- global energy retrofit
- energy retrofit with other renovation work

D3.1. Conclusions of the identification of local needs and actors in place

- single service for a single measure
- DIY (Do It Yourself) where the customer is involved in the process

About 70% of customers who choose global retrofit also ask for another form of renovation such as an extension, kitchen or bathroom upgrade. Lead-in time for retrofit customers can be between 4 to 9 months. From the customer perspective the main barriers to retrofit uptake are the high upfront costs, long paybacks, grant availability and funding structures (McGinley 2020 [31]). Customers who need single service measures for example installing a heat pump are on long waiting lists. When customers get single service suppliers/installers for single measures, they (single service suppliers) seldom provide a holistic strategy of how one intervention impacts on the next. Finding the right contractors and knowing what to ask for is a challenge for most customers.

Supply

There is a marked low supply of labour of skilled energy retrofit construction workers. Although contractors have stated that if there was a certainty of government grant funding for a fixed amount of years (instead of new grants introduced annually) they would be able to plan their business more sustainably and employ more construction professionals and train them or add to their labour force by employing workers from other countries.

The value chain throughout renovation activity is directly influenced by the types of measures the government grants support. An example is that one of the measures most sought after in 2019 was the installation for PV panels due to both the grant value and the non-invasive nature of the installation works. At a Retrofit Workshop (February 2020) of over 200 stakeholders organised by the Department of Communication Climate Action and Environment the resounding message was that the government needs to provide certainty about subsidies and take a long term view so that stakeholders can invest and grow the energy retrofit market.

Grant / Subsidies

The government energy retrofit grants are organized by the Sustainable Energy Authority of Ireland. Due to the complexity of the grant application process, fast changing criteria and legibility, existing OSSs apply for the customer's grant on their behalf. Often the grant is deposited in the contractor's or retrofit advisor's account and the customer pays the balance of the cost of the works (minus the grant). There are also energy credit grants (like white certificates in France) that can be redeemed from utility suppliers. Payments are made to the customer for specific energy saving measures. There are also grants for aggregation of projects (commercial, community and residential) into bundles called Better Energy Community schemes. The grants are between 35-40% of the overall works. Getting these grants is highly competitive and works must be completed within very strict timing (April – October) which can be challenging for small contractors. These are also given out annually which means potential customers wanting to renovate outside these grant timings miss the chance to add energy retrofit measures and obtain a grant for them. In addition, small contractors must find sufficient work for their employees between November - February before applications are open for the next round of funding.

The gaps in the Irish energy retrofit market

- Information on energy retrofit - existing information is very useful but scattered. A customer would need to know the names of energy retrofit companies to find them
- Information on grants and energy credits (equivalent of white certificates) is not clear and changes rapidly
- Information on finance is time consuming as the customer has to go to each bank's website

D3.1. Conclusions of the identification of local needs and actors in place



- Contractors and Renovation Advisors spend a lot of time at first meetings without substantial conversion rates
- Customers hire contractors to do energy retrofit works without a road map or specialist advice which can result in lock-in effects or works that are not appropriate for the whole system of the house
- Customers deserve impartial professional advice before beginning the energy retrofit journey and are not clear who to get it from
- Customers have no record of what type of works have been completed on a house
- Banks would be more comfortable lending to customers who can show the energy retrofit has compliance certificates or that the works have a warranty from a renovation advisor with professional indemnity

In the Irish national and local market there are already a few self-defined One Stop Shops available already on the market. As shown in the table below, they operate as

- Renovation advisors who offer impartial professional advice, organise the grant application process and bring a contractor on board to do the works
- Main contractors that offer advice, grant application process and do the works
- Main contractor and renovation advisor as one organiser
- Partnership between energy company and a financial institution with the state agency Sustainable Authority assisting with a 35% subsidy ProEnergy Homes
- Partnership between energy company and State agency AnPost (Post Office) Green Hub

One stop shop	Assist SEAI Grant	Assist Energy Credits	Impartial Advice	Financing	Professional Indemnity	Online tools	Monitor works	End to end management	Digital platform
Community energy SuperHomes 3CEA RISEC	✓	✓	✓		✓		✓	✓	
Main Contractors House2Home;Kore; NCE Insulation; Lee Therm; Envirobead; DCIEnergy; Churchfield	✓	✓				✓	✓	✓	
Professional service & Main Contractor Green Watt Renova	✓	✓			✓		✓	✓	
Partnership ESCo + Financial Institution ProEnergy Homes (REIL + Credit Union)	✓	Energy credits used for services		✓			✓	✓	
Utility Company SSE Airtricity +An Post Green Hub Electric Ireland	✓	✓		✓			✓	✓	✓ August 2020
	✓	✓				✓			

Table 8- Existing One Stop Shops in Ireland

Existing One stop shops

They offer end to end management to varying degrees - from initial meeting with customers and talking through their plans, providing an estimate, applying on behalf of the customer for the sustainable energy grants, starting and completing the renovation work. Two examples in the Irish context provide financing, [ProEnergy Homes](#) [32] and [AnPost Green hub](#) [33]. The others do not provide finance directly but may signpost flexible finance options on their websites.

Single service suppliers

As stated earlier there are single service suppliers who provide single measures for energy retrofit. The piecemeal approach can create difficulties down the line when subsequent measures require the removal of earlier installations

Tier 1 contractors

In the Irish market tier 1 contractors have not been involved and this is a possible option for scaling up energy retrofit in Ireland and disrupting the market.

Finance for energy retrofit

Banks currently offer green renovation loans as top up mortgages, personal loans or home improvement loans which range from a minimum BER rating starting at B3 to A1. The BER is the Irish equivalent to the energy Performance Certificate in Europe [34]. In our interviews with three banks – they welcomed both the retrofit platform and impartial advice from a renovation advisor. The state agency AnPost offers finance on their platform as an intermediary to a European financial institution. ProEnergy Homes offers finance through the participating Credit Unions [35] in an area-based approach.

Government grants

The government support a community and area-based approach and One stop shop delivery model. One of the focuses for One stop shops and training for energy retrofit skills is the just transition in the Midland area where the peat power plants are winding down. Certainty of the grants and their timing, multiannual funding and clarity would encourage the energy retrofit market.

Financial Institutions

Financial Institutions have shown a keen interest to provide loan products as the market scales up however are slowed down by COVID and the challenges it has brought.

3.2 Local needs and actors in place

After carrying out the analysis of national and local markets to identify local actors, it has been necessary to identify the needs of these actors. For this purpose, Irish's LIG have been created, is made up of people from different sectors in order to adapt the TR services to the local context.

Input from Local Implementation Group

The local Implementation group in Ireland is made up of people from different sectors such as finance, start-up business, suppliers, government department (national level), semi state bodies, utility agencies, renovation advisors, contractors, technology and professional bodies. They steered the development of the platform to include the concept of “supporting the existing retrofit system in Ireland” and introduced the step for impartial advice. The importance of the impartial advisor in the whole process is vital if the country needs to scale up to 500,000 retrofit homes. Customers deserve to have retrofitted homes that are well constructed and leave a good legacy.

The profile of the members of the LIG who have attended the 2 workshops held are as follows:

LIG ATTENDANCE LIST	
TYPE OF COMPANY / SECTOR	Nº OF COMPANIES
Government department national	2
Government department local	1
Professional bodies	1
Renovation advisors	3
Financial sector	2
Building Industry sector	4
Energy Utility Companies	1
Academic institutions	1
Unusual suspects	2

Table 9- List of Ireland LIG members

Initial LIG 15th June 2019

The initial LIG was brought together through the Irish partner NUI Galway at project proposal stage. They were made up of a utility supplier, existing contractor and renovation advisor based one stop shops, many state agencies like the Sustainable Authority of Ireland and professional architectural companies, local authorities, technology company. Each group contributed their experiences, and three pathways were mapped to show the existing retrofit journey and obstacles faced. After this meeting 50% of the group were too busy to continue or a few felt that the One stop shop would be in competition with their own businesses.



Figure 15 - First LIG meeting Galway June 2019, figuring out the retrofit process and customer journey

D3.1. Conclusions of the identification of local needs and actors in place

2nd LIG Meeting 30th October 2019

The subsequent meeting used the collective intelligence of the available, remaining and new members of the LIG to brainstorm “What it would take for a One stop shop to support the existing retrofit ecosystem in Ireland in the context of government agenda”. This was workshoped using the 12-step process of existing One stop shops and participants raised and answered questions about each step.



Figure 16 - Second LIG meeting Dublin October 2019 – breaking down the process into discrete steps

Each step was further consolidated into diagrams to reflect what was discussed at the meeting.

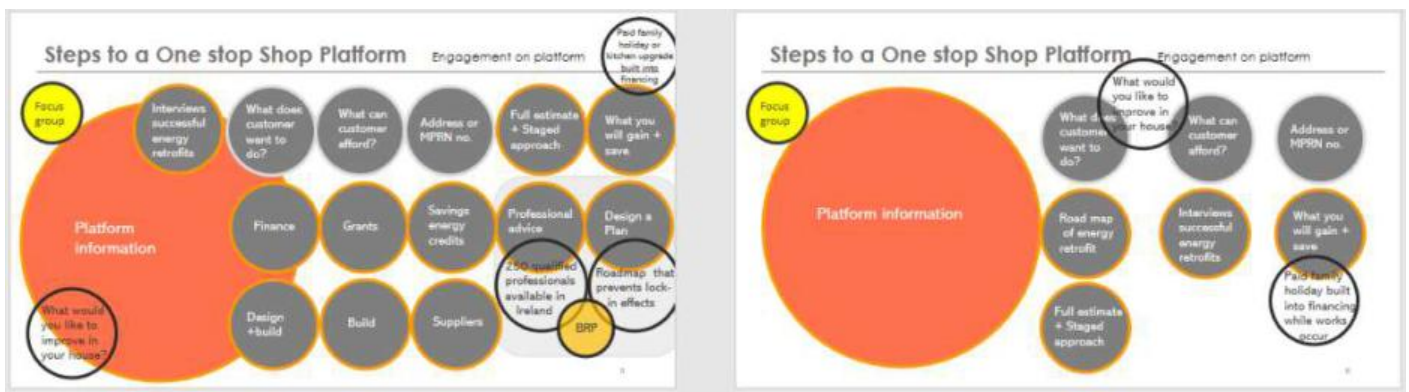


Figure 17 - Working through the steps for the flow on the Irish platform, adding to each step

D3.1. Conclusions of the identification of local needs and actors in place

And finally after much reworking with individual members (one to one meetings) the flow diagram emerged (as shown in Figure 19 - How the flow on the Irish platform works)

The Irish Turnkey Retrofit Platform was presented at the [MaREI Retrofitting Homes symposium \[37\]](#) (1:40:47) on 11th June 2020. This drew approximately 25 new attendees to the Knowledge Transfer meeting and added interested people to the LIG who also offered their assistance to support the platform.

Informal meetings between individual LIG members

Two key members of the LIG come from the Start up sector and Financial sector and they provide mentoring and direction for the implementation strategy. Renovation advisors and contractors on the LIG are also often consulted when quick surveys are required to find out what the market is like and what elements would be useful on the platform.

The timeline of the LIG below shows how different stage of the platform proposal developed incrementally at each meeting, building capacity in terms of knowledge and new members.

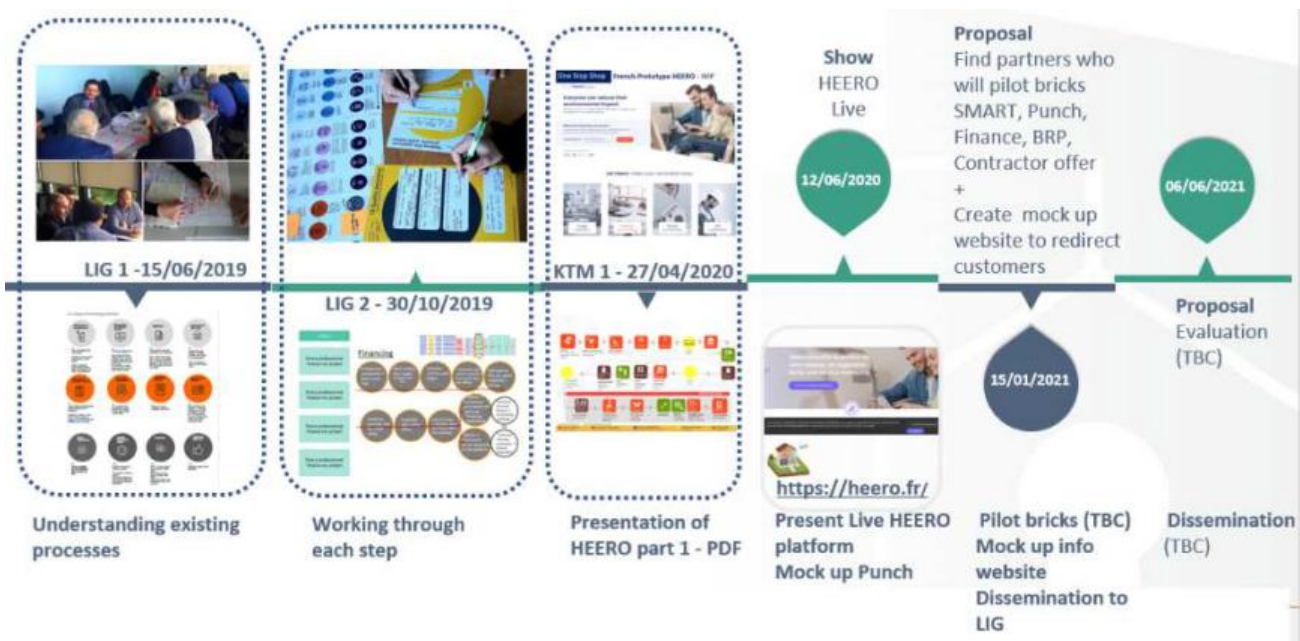


Figure 18 - Development of stages of the platform through the LIG and KTM

The table below shows the recommendations from LIG for the successful scaling up of the platform and integrity of the retrofit process.

Irish Context	Recommendation from the Irish Local Implementation Group (LIG)	Proposal for Irish platform
<p>Quality assurance in scaling up Government intention to accelerate energy retrofit to 500,000 homes in 2030 worth €50 billion</p>	<p>To ensure energy retrofits are done correctly and protect homeowners it is important that potential customers receive a retrofit roadmap before any work begins on site This will prevent lock-in effects, enable a step by step approach and save money in the long run</p>	<p>Include a step in the process for an independent retrofit advisor. This would uncouple retrofit advice from the retrofit work providing the homeowner with a tailor- made service. The renovation advisor would deliver a road map for the customer on what to do and the ideal sequence of works.</p>
<p>Finance The customer must go to each bank to find out what the retrofit offer is.</p>	<p>Provide a marketplace for banks on the platform to allow the customer to choose the best loan option for themselves. If the options are in one place it will be easier for the customer to consider an option.</p>	<p>Include relevant information of different banks offering and invite banks to be part of the platform through an API.</p>
<p>Virtual assessment Timesaving for the renovation advisor for initial assessment and advice.</p>	<p>The customer has a real person to ask questions about their retrofit and meeting the renovation advisor who knows about retrofit gives confidence to the customer and helps to sell the idea of the retrofit.</p>	<p>This component in the process would include a payment. The customer would pay for the service of a virtual assessment.</p>
<p>Aggregation 1 An important question for the government in Ireland is “How to scale up the retrofit to get to the target of 500,000 homes in 2030?”</p>	<p>Aggregating the houses that request a ‘renovation advisor visit’ (in the same locality) would save time and resources for the renovation advisor.</p>	<p>Include a brick for aggregating renovation advisor visits.</p>
<p>Aggregation 2 This is the same as above in answering the question from government in Ireland on “How to scale up the retrofit to get to the target of 500,000 homes in 2030?”</p>	<p>Bundle projects together so that contractors can bid on bundles rather than individual jobs which could help scale up and potentially bring the price down. Project bundling would also be useful for homes that apply for a single measure retrofit.</p>	<p>Include another aggregation brick for project bundles for contractors.</p>
<p>Logbook and building renovation passport With the ‘renovation wave’ there needs to be a way of recording what has been retrofitted in a home so that future homeowners know what exactly has been retrofitted, to what standard and what the next steps are.</p>	<p>Find a way to record retrofit works done to a house and identify the standard. Customers can return to consider their findings to help them make up their mind (the EU Innovate project stated that some customers can take up to 30 months between finding information, receiving a quote and proceeding with works).</p>	<p>Include a logbook in the first iteration of the platform to record the roadmap, advice and cost estimate of retrofit works and standards. The second iteration should consider the building renovation passport to record more than just energy efficiency criteria such as radon, water efficiency, embodied carbon and biodiversity.</p>

Table 10 - Recommendations from the Irish LIG

As a result of the work carried out during the different workshops organized with the Irish’s LIG, mentioned in the previous point, it has been possible to define the specifications to adapt the TR services to the Irish context. The inputs

obtained in the different workshops have served to identify local needs, existing barriers and define how the ideal customer journey should be within the TR service.

The contributions of the LIG to adapt the TR service to the local context are key to the success of the implementation of the TURNKEY RETROFIT services in Ireland. All these recommendations and observations made by the members of the LIG have been used as a guide to define the proposal for the Irish Turnkey Retrofit Platform described in the following section.

3.3 Adapting the TR service to Ireland

The TR service in Ireland is a combination of the ‘facilitation model’ and ‘coordination model’ with reference to definitions in the [EU Innovate \[6\]One Stop Shop](#) project. The Irish platform is a place for all the One Stop shops to be found. It will connect the customer to information and a renovation advisor. In this way the customer is assured expert advice and a holistic view. A road map will be provided to the customer so that if they do not have enough funds for a global retrofit, they can take a staged approach based on the tailor-made roadmap.

The Irish platform will serve the customer to become *Renovation Ready*. In this light, the Irish platform is a place that funnels potential customers into one place, shows them the best way to do a retrofit based on a generic road map and a tailor-made one, gives them choices of qualified retrofit advisors and banks.

Service model

The Irish Service model is to be a One Stop Shop for quality assured one stop shops. The platform in Ireland will offer value to customers, renovation advisors, contractors, and financial institutions, while supporting the existing qualified retrofit players in the existing system.

For the customer

It will provide one place for all information, estimates, grants energy credits financing online advice and a place to book a renovation advisor visit plus get a loan and become renovation ready. The customer gets options on the way they would like to retrofit and receives a retrofit that is quality assured with a renovation advisor to consult along the way. They also get a logbook where all the works or information they learn is recorded in one place.

For the renovation advisor

It allows customers to reach renovation advisors that are available and also aggregates the house visits by location so that it reduces time for the renovation advisor in getting to house visits for assessments.

For the contractor

It provides customers that are ready to renovate and aggregates the works into project bundles saving time for the contractor in the initial meeting phase. The aggregation means that contractors quote for a bundle of projects in a similar locality that increases the scale of their work and enables competitive pricing.

For the financial institution

It provides a marketplace for financial institutions to show case their products and reach interested customers who are ready to renovate.

The diagram below shows the components in the model

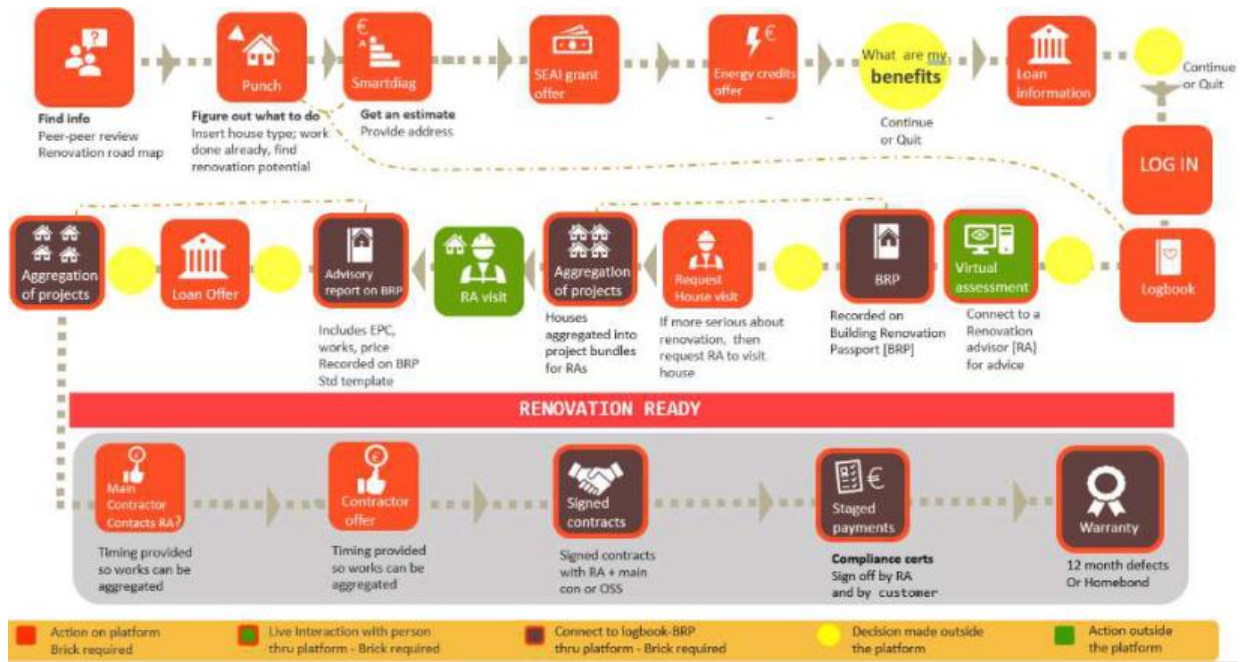


Figure 19 - How the flow on the Irish platform works

The first step on the Irish platform is a generic road map to help the customer get an idea of the process. A virtual assessment/ chat online is also added so that the renovation advisor can provide a retrofit road map for the customer and provide a more human touch on the platform. It also saves time for renovation advisors to provide paid advice virtually rather than visiting homes.

How will the TR platform work in Ireland?

The Irish platform will be linked to the EU Solutions4Renovations platform. There will be two points of entry one directly on the national platform and the other from the S4R platform. The route to the Irish platform from S4R is shown below through the Punch diagnostic.

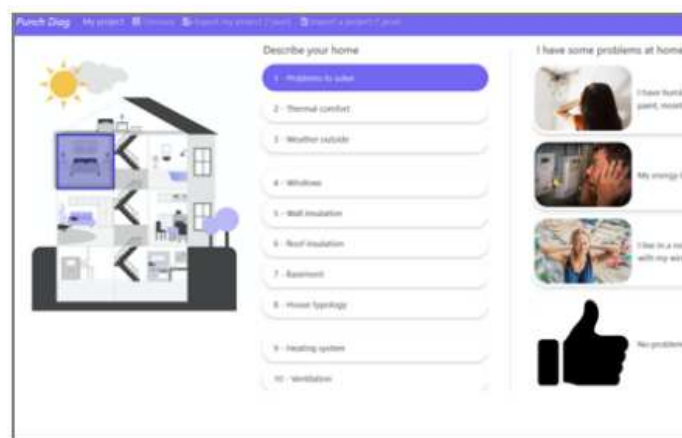


Figure 20 [clockwise top left] The EU Solutions4Renovations (Source: [36]) platform connects to the Irish section; on the Irish section click on ‘I do not know where to start’; it connects to the Punch diagnostics where the customer identifies what they feel in their home to get an idea of the renovation potential of their home

How it connects from Punch to the Irish platform and the quality assured OSS on the Irish market

An important step in the Irish platform is, customers must get a house assessment and road map from a renovation advisor before they can proceed to finding an OSS. The step to include the renovation advisor in the Irish process requires a register of renovation advisors for quality assurance. This would be like the Spanish and French platform except that on the Spanish platform, ANERR is the renovation advisor and therefore they require a register of qualified contractors. On the French platform there is no renovation advisor, there is a step for consultation with an advisor (non-technical) and a register of qualified contractors.

The next steps are not confirmed yet but could work out in the following way:

The OSSs will operate in the same way that contractors do on the Heero platform. Once they are registered on the Irish platform, the OSS can choose bundles of projects and make an offer to the customer including the timing when the works will be cheapest (similar to the model in discount airlines, if the customer agrees to the dates suggested by the contractor, the works could work out cheaper, due to economies of scale). This would work in a similar way for the renovation advisor site visit – the homes will be aggregated into bundles in the same locality and renovation advisors will choose which bundles they would go to (the price would be standard for each house assessment). The

customer is notified in the same way as in the Heero platform where the contractor's name pops up for the customer. On the Irish platform once the OSS chooses a bundle their name and offer will pop up for the customer.

The SMART diagnostic and logbook bricks and technology to connect contractors to customers will be adapted for the Irish platform and will be ready by December 2021.

Who are the needed stakeholders to make it work?

GBC regard the challenges that Ireland faces with the low number of energy retrofits as a systemic problem. The system includes qualifications and skills in retrofit, labour supply, grant certainty, financing, and financial offers, scaling up, flows of accurate information, digital expertise, marketing and connecting them together with sustainable partnerships and funding.

For the first phase the stakeholders that will make it work are

- a state or semi state entity interested to grow this domain and invest in it
- a digital expert and UX designer to help create the platform
- a financial institution willing to invest in the platform
- available renovation advisors ready to respond to customers
- quality assured contractors ready to schedule or begin retrofit works
- an entity willing to provide a physical centre for the one stop shop platform with knowledgeable advisors
- a training institute with accessible training programs to upskill and qualify renovation advisors and retrofit contractors
- an entity that provides the network and ensures the standards and vision are upheld

we see all these working in partnership with each other.

Business model

The Irish platform is not as straightforward as the Spanish or French models which are building a platform with a single service provider. Instead IGBC is looking for partners to develop Turnkey Retrofit model into a national platform that would be of service to the existing retrofit ecosystem and scale up to meet the national retrofit agenda of 500,000 retrofitted homes by 2030. This has evolved to become a One stop shop digital platform for one stop shops.

D3.1. Conclusions of the identification of local needs and actors in place



Figure 21 – Exercise finding out about the Irish platform through the business model canvas

IGBC is in discussion with different agencies with the aim of establishing partnerships to provide the service as a public good resource. It is not decided at this stage how the platform would pay for itself – potentially renovation advisors, financial institutions and customers may pay for some aspect of using the platform. An initial business model is shown above. At this stage, the aim is that the platform will be owned by a consortium each bringing its expertise that contributes to a smooth operation.

Who must be involved to guarantee the success of the Turnkey Retrofit model in Ireland?

As the Turnkey Retrofit platform in Ireland is not a single service provider it will require many more committed players for its execution, continuity, and success

- State or semi state agencies with funding and a strong interest in the long-term plan to develop the platform as a national one stop shop and marketplace for quality assured one stop shops.
- Renovation advisors
- Contractors
- Suppliers
- Financial institutions
- Sustainable Energy Authority of Ireland
- Training Institutes
- Marketing agency
- Communication agency
- Coordinating agency
- Digital development skills

CONCLUSIONS

THE SPANISH case

In the Spanish case, the existing OSS on the market manage small scale renovations. None of them include the complexity of the process and include all services that are required. REFOMANERR is currently the only OSS which adds more value to the customer journey of renovation process. It includes pre-diagnosis, finance options (aids and private) and certified constructors and professionals.

The coming changes on IDAE about the process from the Government to manage aids by regions, can be a barrier.

Standardization and simplicity will be the way.

The new diagnosis tool on the platform drives a great opportunity to engage citizens to the process of renovation.

REFOMANERR will be the service included on the Solution4Renovation.eu service. The value for the homeowners increases because they can get previous information free, about the potential improvement and works, that can be done on their buildings or houses. And, also the range of cost of the works. So, from this point they can look the potential finance opportunities coming for local government, private one's or combining both. As a consequence, it can improve the process and make it shorter and easier to be understood and managed by the homeowner and the Building Managers for communities.

Knowledge transfer meeting let us show the actual status of the project. It gave the opportunity to show to the stakeholders part of the LIG, the "Punch diagnosis" or Diagnosis brick, already on Spanish version. And get the compromise and interest to be part of the platform.

Some reflexions launched during the Knowledge Transfer Meeting in Spain:

- The LIG seems difficult to reach the 300.000 renovation per year established by governmental agenda 2030
- Coming regulation changes will help to improve the renovation process focus on energy efficiency in Spain
- Heroo model for "smart diagnosis" should be adapted to Spanish market
- Continuous testing of the processes it is necessary to adapt and optimize the procedure
- Certified constructors and professionals, it's key for citizens trust.
- Building managers are the milestone to reach multifamily buildings
- Great effort on dissemination will be required. All associated and stakeholders will contribute.
- Finance combining public Aids and private loans are essential on the process.
- Aggregation model can open great possibilities for multifamily buildings.

The success for the platform In Spain, comes from the participation of all the stakeholders. It will be a key point to define a clear role for everyone on the process and the way to be connected and updated on the platform. Dissemination process will be crucial to reach citizens quickly when development of the S4R-REFORMANERR Platform is finished.

THE IRISH case

In Ireland, the success of the many OSSs depend on government grants which change from year to year without warning. For example the SuperHomes [38] business model relied on a specific government grant called deep retrofit which provided 50% grant for three deep retrofit measures up to A3 BER performance. When this stopped abruptly in July 2019 the company was forced to shift to another business model that depended on a tendering grant scheme called Better Energy Communities. The scheme requires a company to aggregate different types of buildings suitable for energy retrofit.

ProEnergy Homes is a collaboration between an energy service provider and Credit Union (community bank) with grant provided by the state agency known as Sustainable Energy Authority Ireland. They had worked on successful energy retrofits for homes for 2 years. They closed in August 2019 and recently started up again. Customer receive free assessment and advice on measures to do. Customers have 30 days to decide after which the offer is invalid. The grant value is 35% of the works to an upgrade of a minimum B2 BER.

The Knowledge Transfer Meeting (KTM) was used as a platform to publicize the project, introduce the PUNCH diagnosis and share the French platform with a wide number of interested stakeholders over and above the LIG members. A few questions that arose at the meetings

- Would an average homeowner be able to fill in the information? is it too detailed to put in area and thickness of insulation?
- Can it be adapted from detailed to overall area of home and number of rooms plus floors including photographs?
- How will the SMART diag be adapted to the Irish platform's focus on renovation advisor and road map?
- What data is available in Ireland to input into the SMART diag?
- Can the same mechanism be used for the 'contractor pop up' in HEERO for the renovation advisor pop up on the Irish platform?

The knowledge from the Irish KTM potentially contributes to the future development of the French model by introducing the concept of one stop shop as market place, impartial advice, aggregation, virtual assessment, connectivity to banks for financing options (already used by Spanish platform) and building renovation passport.

IGBC and NUI Galway Irish partners of the project understand that the success of the Turnkey Retrofit platform in Ireland depend on building partnerships to create a One stop shop platform that supports the existing retrofit ecosystem, show cases existing quality assured retrofit businesses and contractors, provides a retrofit roadmap, connects the customer to an available and impartial renovation advisor and aggregates projects to improve economies of scale. Partners are currently sought to collaborate and invest in a national platform that will provide choices for the customer improving their options and customer journey.

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ACRONYMS AND ABBREVIATIONS

ANDIMAC	Asociación Nacional de Distribuidores de Cerámica y Materiales de Construcción
ANERR	Asociación Nacional de Empresas de Rehabilitación y Reformas
ANESE	Asociación Nacional de Empresas de Servicios Energéticos
BER	Building Energy Rating
BPIE	Buildings Performance Institute Europe
CSI	Customer Sentiment Index
CSTB	Centre Scientifique et Technique du Batiment
DB-HE	Documento Básico de Ahorro de Energía
DIY	Did It Yourself
EMVS	Empresa Municipal de la Vivienda y Suelo de Madrid
EU	European Union
EU	European Union
FEDER	Fondo Europeo Desarrollo Regional
GBCe	Green Building Council España
GDP	Gross Domestic Product
H2020	Horizon 2020
IDAE	Instituto para la Diversificación y Ahorro de la Energía
IGBC	Irish Green Building Council
ITE	Inspección Técnica Edificios
KTM	Knowledge transfer meeting
LIG	Local Implementation Group
NUIG	National University of Ireland, Galway
OSS	One Stop Shop
PREE	Programa de Rehabilitación Energetica de Edificios
PV	Photovoltaic
Q&A	Question and Answer
R2M	R2M Solution SRL
S4R	Solution4Renovation
SATE	Sistema de Aislamiento Térmico por el Exterior
SIRE	Servicio de Información Rehabilitación Eficiente
TECNALIA	Fundación TECNALIA Research & Innovation
TR	Turkey Retrofit

D3.1. Conclusions of the identification of local needs and actors in place



TURNKEY RETROFIT	TURNKEY solution for home RETROFITting
WP	Work Package

ANNEXES

ANNEX I - TURNKEY RETROFIT Irish LIG Meeting

Date: 14/06/2019

Venue: Room 2052, Alice Perry Engineering Building, NUI Galway.

21 Attendees

Purpose of Meeting

The first TURNKEY RETROFIT Irish meeting introduced the objectives of the TURNKEY RETROFIT project to key stakeholders in the Irish building retrofit sector. The group of stakeholders had an open discussion on some of the benefits and challenges they could foresee arising in the project which aims to introduce an integrated home renovation service on a digital platform in Ireland. In addition, the stakeholders were asked to map out the current “customer journey” in Ireland for renovating Irish housing.

Notes from Open Discussion

- First aspect missing from our map is how do you get the consumer to knock on the door? i.e. how to get people aware of the service, building renovation and the benefits associated with building renovation
- Is the advice given to consumers independent and trustworthy?
- How many touchpoints to have with a customer? Too many touchpoints can cause customers to feel overwhelmed resulting in them leaving the process. Too few touchpoints can cause customers to not feel part of the process resulting in them leaving the process.
- Branding of the message we deliver people is extremely important to entice people to renovate. People also need to be able to relate to the message.
- We are all messaging it in the wrong way. People want to know about well-being, not climate change.
- Even when the message is well sold, people are still hesitant to spend 30-60K.
- 40000 homes retrofitted each year to a B2 is the ministerial objective.
- Does it make economic sense for people to retrofit their homes? People don't think about payback when put in kitchen, buying car, etc.
- Need some incentives such as green mortgages. Could learn from the car industry in way they sell finance to get people to buy new cars. One stop shop retrofit can help with this with government backing of the platform.
- Need a big entity to back up this service.
- Portugal have a system in place with is open, transparent and financially regulated platform.
- Need to show this service is effective in a set of houses, community or town for it to breakthrough.

Mapping of the “Customer Journey” in Ireland for Renovating Irish Housing

The group of stakeholders were split into three groups to map out the “customer journey” in Ireland for renovating Irish housing units. Two groups mapped out the journey between a retrofit company and a homeowner. The other group mapped out the journey that local authorities go through when renovating their housing stock.

Retrofit Company and Homeowner Group 1

Figure 22 shows the mapped journey between an Irish retrofit company and a homeowner to complete the renovation process. This workflow is based on House2home which is a company that provides retrofit solutions for houses in Ireland. The process involves identifying and pricing retrofit solutions for houses, applying for retrofit grants available to householders, organising and carrying out the retrofit works and handover and commissioning.

This workflow is used on houses that aim to achieve a BER Rating of A3 following the retrofit works. The company generally deals with one-off single-family houses using this workflow. For a group of households living in terraced or semi-detached housing, the company provides the same solution for each house. Each household is not contacted for individual retrofit packages.

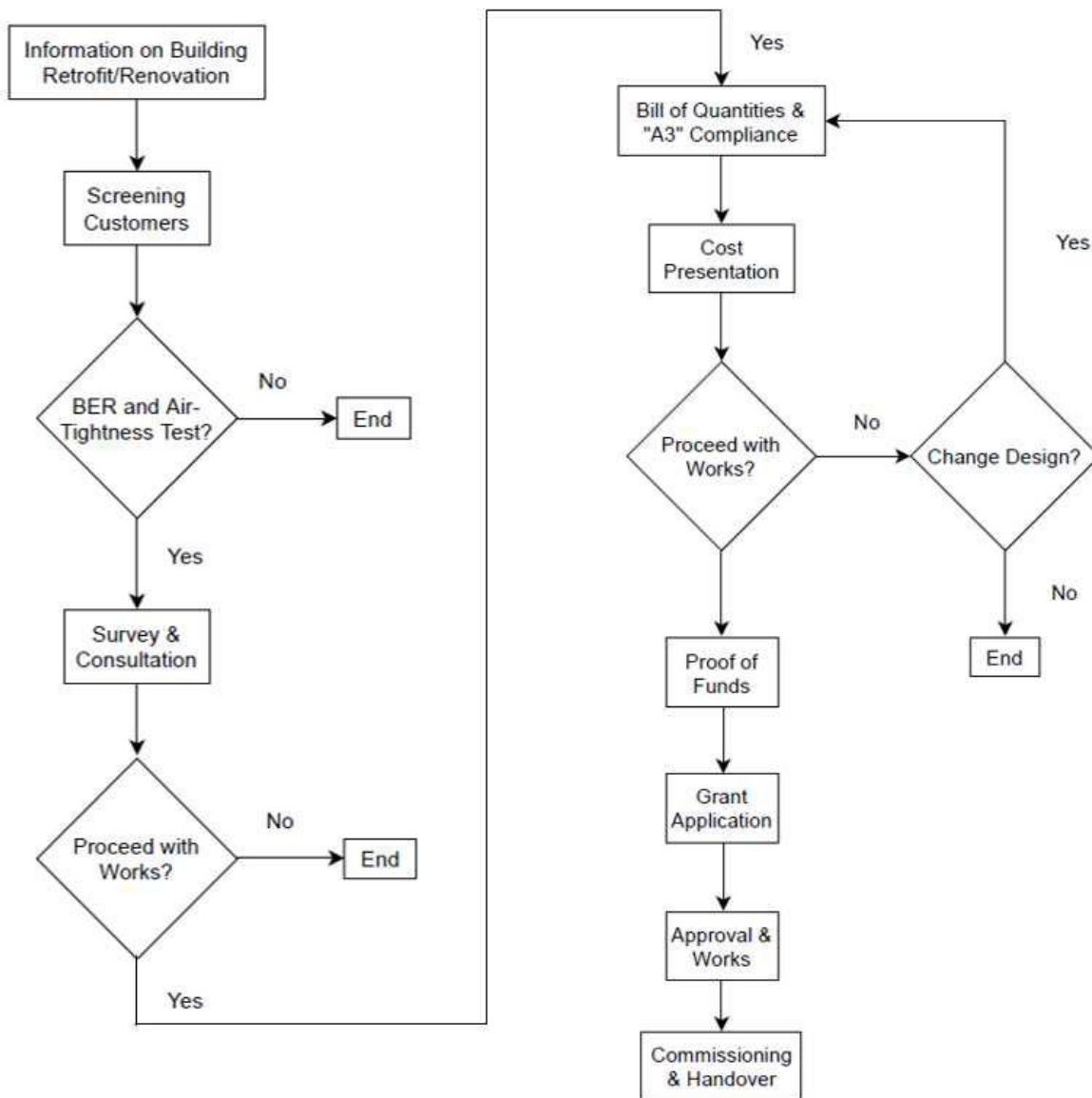


Figure 22: Map of retrofit journey between an Irish retrofit company and a homeowner

Information on building retrofits

Before a householder (customer) contacts House2home about potentially carrying out retrofit works on their house, a householder learns of the potential benefits of retrofitting from various sources. In no particular order, these sources can include but not limited to (i) the House2Home website, (ii) a referral from another person, (iii) experience of construction or retrofit works, (iv) internet research, (v) SEAI or (vi) financial providers.

Screening Customers

The initial consultation is an over the phone questionnaire with House2Home. This gather information such as customer wants/needs, house type, age and applicable energy upgrades. Due to the number of customers contacting the company regarding the retrofit works, an initial screening process is used for identifying the customers who are serious about completing the retrofit works on their house. The customer is asked to provide €500 upfront to carry out a BER assessment and air-tightness test of their home. This screening process removes 45% of the customers who initially contact House2Home.

Additionally, House2Home do not process applicants who are seeking a 90% grant (fuel poor) from SEAI for carrying out the retrofit works. This is due to cash flow issues as the company would have to pay up front for all the retrofit works on the house before receiving the grant money from SEAI. The customers are also informed that House2Home will be dearer than others for the retrofit works by around 10%.

Survey and Consultation

An on-site survey of the house is carried out by House2Home to examine the existing condition of the house. Based on the 55% of the customers who proceed to this stage of the workflow, only 5% continue past this stage of the process.

People can also plan to renovate their house at the same time as the retrofit works with architects also becoming involved in the design process. At times, there can be design issues between the engineers of House2Home and architects involved in the design of the retrofit works. This can include the architect including building element designs such as an oversized window that make it difficult for the house to achieve a BER Rating of A3.

Bill of Quantities and A3 Compliance

House2Home develops a detailed Bill of Quantities for the proposed retrofit works and checks that the proposed solution can meet the BER A3 compliance requirements.

Cost Presentation

House2Home presents the cost of the proposed solution to the householder. The presentation focuses on the overall cost of the retrofit works, the BER assessment and air-tightness results. House2Home do not specify details on the expected annual fuel savings, payback period of the proposed solution, or details on potential health benefits or warmth improvements.

Only one detailed retrofit solution is presented to the householder. Householders are given a detailed Bill of Quantities of the proposed solution. This can cause issues with House2Home as the customer can get outside contractors or 'man in the van' to quote them for the specified works.

Re-Costing

Householders generally make changes to the proposed solution before making a final decision on the works package for their house. The proposed solution generally takes three to four iterations before the design solution is finalised. The changes to the retrofit works result in additional resources for the BOQ and A3 compliance stage.

Proof of Funds

Before the application is made to SEAI for grant support, the customer is asked to provide proof of funds before House2Home proceeds with the work. This causes hesitation with some householders. Some are unable to show they have the required funds but generally this step does not cause many dropouts.

Application

The homeowner is asked to sign a document that they are committed to carrying out the works. The document is not legally binding though. The application process to SEAI to secure grant funds is managed by House2Home.

Approval & Works

Once the grant application is approved, House2Home move forward with the works

Commissioning and Handover

House2Homes carry out commissioning works on the retrofit solution. Outside contractors are used for carrying out air-tightness tests. For the houses to achieve the grant from SEAI, the house has to achieve a specific air-tightness result. SEAI send out their own independent assessors to evaluate the works.

Retrofit Company and Homeowner Group 2

- It is necessary to have an initial fee. In the case of Tipperary Energy Agency is less than the real worth of the work. They say that is important that the service cannot be for free to avoid people not really interested in.
- Most of the people that send a request and pay the fee go ahead with the retrofit.
- Superhomes requirement is to achieve an A-rated post-retrofit, so this is a deep retrofitting. One of the most important points for achieving this is the insulation of the ground floor. This means that people need to move out, remove all the furniture, etc. so for them this is not affordable, and finally decide not to participate.
- Sometimes, some companies offer the same price that if the client applies for the SEAI grants for insulation, etc.
- For make the surveys Tipperary Energy Agency sometimes they use his team and sometimes subcontractors.
- A lot of times the people arrive at contractors because they want to do an extension or change the kitchen and finally decides to do the retrofit.
- The problem of including an extension in this process is problems with the licences that means more time to finish all.
- People want a short deadline. If they decide to do the retrofit, they want to start as soon as possible.
- Tipperary Energy Agency and other contractors think that it would be better to not have an annual call for the grants, because sometimes people decide very near to the deadline.
- The owners do not sign any document until having all the project ready.

D3.1. Conclusions of the identification of local needs and actors in place



- Some owners decide very quick and the have the application ready in three weeks and others return three months later to have the first contact.
- If they decide that they want to go ahead with the application, they must pay another fee. Sometimes at this point, people think that it is a lot of money and they say no. Because if they do not get the grant that it is 50% they must pay all the money.
- Sometimes if they do not get the grant, because they do not achieve the A rated level, they can change the project and make fewer things.
- Sometimes when the people get the grant, decide to do the extension. This is a problem because this decision disturbs the plan, so sometimes they decide to have another contract only for the extension.
- All the process of application is very long. In the case of the Tipperary Energy Agency, the case quicker was 10 weeks and the slower four months. During this time they cannot start with the works in the houses.
- Because of the problem of the time, sometimes they have problems with the subcontractors because when they can start the works, the subcontractors do not have availability. So they must go looking for another company and this has repercussion in the budget.
- During all the process the Tipperary Energy Agency they have inspections in the houses and they have a final inspection before the SEAI inspection.
- They must to monitoring the houses during three years post retrofitting.

Local Authority Group

Figure 23 shows the mapped retrofit journey between a local authority and a tenant to complete the renovation process. This workflow is based on Local Authority Groups providing retrofit solutions for the housing units they manage. The process involves identifying housing units suitable for the government funding available for retrofitting, making a project proposal for the available funding, notifying tenants of the works, organising and carrying out the retrofit works, handover and commissioning, and claiming of the funds.

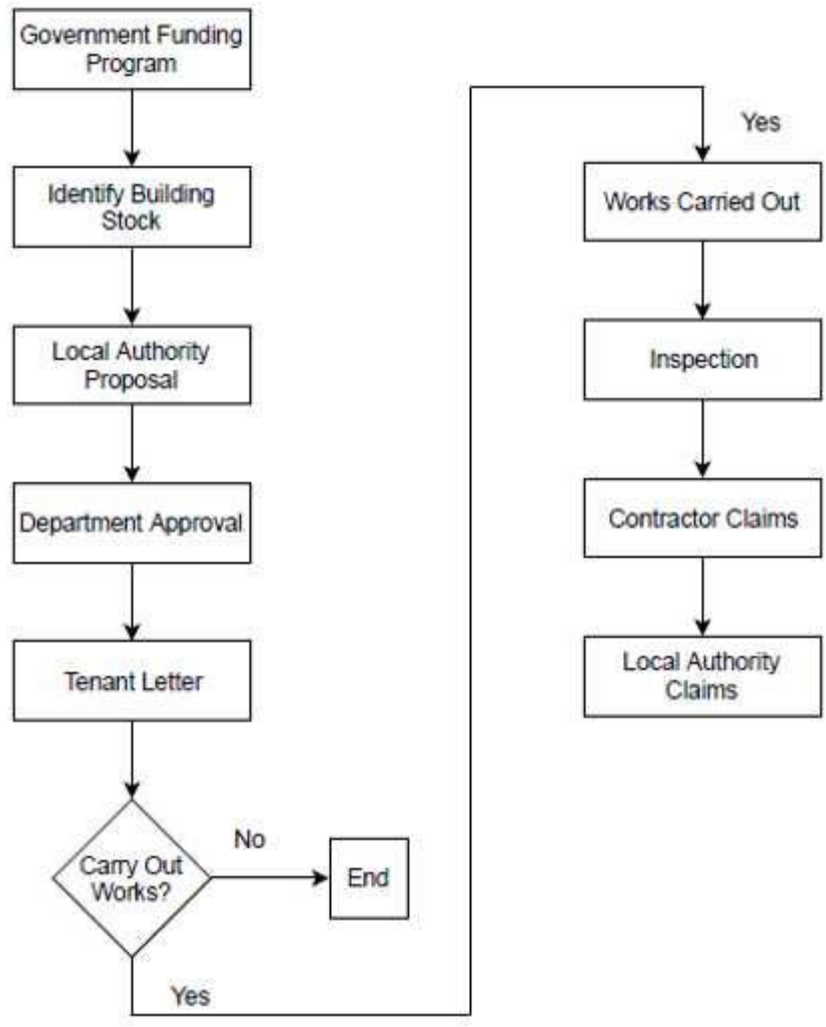


Figure 23: Map of retrofit journey between a local authority and a tenant

Government Funding Program

The local authorities can claim funding for a fabric upgrade for their housing stock or for an apartment deep retrofit. The fabric upgrade program is funded under two phases. The first phase of funding focuses on installing cavity wall insulation, attic insulation, windows, doors and heating controls. The second phase focuses on more technical works including external insulation and replacing boilers with heat pumps. 6000 to 7000 thousand retrofits have been carried out thus far by Dublin City Council, who own approx. 13000 housing units.

Circulate to Local Authorities

The government inform local authorities of funding available for retrofitting housing stock and invite local authorities to submit proposals for drawing down funding.

D3.1. Conclusions of the identification of local needs and actors in place



Local Authority Proposal

To get the available funding, a local authority has to create a project proposal detailing the works they plan on carrying out and to how many housing units. Cork City Council have a different approach in applying for funds compared to Dublin City Council. Cork City Council identify the homes they plan on retrofitting in their application. Dublin City Council do not specify any homes in particular. They provide numbers based on estimated cost (basically try to get as much money as they can), and then retrofit as many homes as possible for this amount.

Department Approval

The applications are sent to the department for approval. Applications are generally approved but maybe for a different amount than requested.

Tenant Letter

The tenants of the housing units are sent a letter informing them of the works. In a few instances, the householders refuse that the works go ahead despite no rent increase for the energy measure improvements.

Works Carried Out

The local authority organises the contractors to carry out the works. Local authorities have a framework contract with local contractors. For Dublin City Council, the city is divided into five areas. They may have up to five contractors working in each area. Dublin City Council have 20 contractors as part of the contract. The contract between the contractors and Dublin City Council requires a contractor to have a maximum number of housing units allocated at a given time. This is to ensure that one contractor does not monopolise the available work.

Inspection

The works carried out are inspected by the local authority and a BER is completed. No airtightness testing is carried out on the Dublin City Council housing units.

Contractor Claims

After the completion of the works, the contractor claims money for the works from the local authority. The contractor can only submit a claim for completed work, and only one claim per month.

Local Authority Claims

After the completion of the works, the local authority claims money for the works from the government.

The group of stakeholders noted issues with the current process in place. The issues raised included:

- Social housing tenants are different to private energy users. This cohort are generally from a lower socio-economic demographic than the average population, have less disposable income, higher levels of energy poverty, and are therefore sensitive to pricing. They also are less likely to have third level education than the national average, which is around 40%.
- There is no plan to move the housing units towards a zero-carbon standard
- The energy saving measures are defined by central government and do not allow for flexibility.

D3.1. Conclusions of the identification of local needs and actors in place



- There are issues with knowledge/expertise gaps with the contractors installing the measures in phase two retrofits, as these are more technical than phase one works (i.e. heat pumps; external insulation, etc.).
- The housing units are not monitored to evaluate how effective the energy measures are for saving energy. Air tightness testing is also not carried out.
- Tenants might not be reducing their energy use but may be experiencing other benefits.
- The householder is only involved in the process at one point. Deciding whether to proceed with the work.
- Private sector building regulations do not apply. The housing units do not have to achieve a specific energy standard.

ANNEX II - TURNKEY RETROFIT Irish LIG meeting 2 Working group

10 participants

1 Awareness + Engagement	
Ways to engage potential customers	Local Libraries; Home Energy Kits; Webinars; Podcasts
	<p>The platform must support a wider ecosystem (all agencies involved in energy retrofit)</p> <p>Getting the message out there at a early stage The platform should have a section for information Testimonials A plan for your home – steps and stages , like a road map for making your home better Staged retrofit and options Referrals to it from a trusted advisor Energy retrofit with an offer of a free/ discounted kitchen or bathroom upgrade ‘Paid family holiday’ built into the financing while works take place</p>
What do we need to know more of?	Segmentation of customer base
	Finance State Supports → What are they? Find out about grants Building renovation Passports
Expertise required	Awareness and engagement, Architects and surveyors need to be part of it, SMART systems
	L.A. Energy agencies Different solutions – proven experience Suppliers – obligated parties Consumer focus groups – is it worth showing them Izigloo interface?
Other ideas	SMART Home and controls
	Branding – One stop shop What does it mean? What terms would appeal to people? (could find out in focus group)
2 Expression of Interest Online	
Alternative ways	Call centre; webchat; Hard copy form; Chat box

	<p>Through companies like Ecological Building Systems We need</p> <ul style="list-style-type: none"> - People who can SELL! Charisma - Someone who tells a good story well <p>Commission and subcontract to professional Sales people You could start with asking if there is anything wrong with their property that they know of – this could indicate something that's defective</p>
What knowledge required or gaps	<p>Keep it simple – don't put customer off; Simple diagnostics, pick a house that looks like yours, use ordinary house types from locality – based on postcode</p>
	<p>Is there enough data available to pick icons? Focus group – housing types Test 12 Izigloo questions "What do you know about your own home?"</p>
What expertise is required; who needs to be brought in to make this work better	<p>Soft ware engineer? To code this; Techie person to webchat etc to call back; Technical person to give typical house types and what needs to be done e.g. EPISCOPE/ TABULA</p>
	<p>Talk to people who have already submitted expression of interest on the existing on line programmes available</p>
Other ideas	<p>At this point database should prepopulate the data on the customer home based on photo of house types chosen Capture customer contact details Provide online report – gold silver bronze options for home and costings</p>
	<p>iBRoad renob=vation passports – asking the homeowner what they think their house needs – a way to convert people straight away</p>

3 Eligibility

What is essential information required from customer?	<p>Keep it simple (prepopulate) (age of home) Postcode/ picture; customer details More diagnostics → confirm property → ownership</p>
	<p>Eligibility for grants You should be eligible with the following criteria Have you got a grant before [every grant given out by SEAI has an NPRN number]</p>
What other steps does it need – gaps / know;edge missing?	<p>Refine and explain potential package options Arrange site visit Email/post Offer to proceed with assessment</p>
	<p>Security What are the bank's criteria for eligibility Step no. 6 below should/could be step no. 3</p>
What expertise is required – who needs	<p>Technical expertise background ideally to make the call – fundamental training and education</p>
	<p>Banks</p>

to be brought in to make it better?	Data NPRN? First meter installation? Use for stipulation for grants
-------------------------------------	--

4 Assessment Site visit

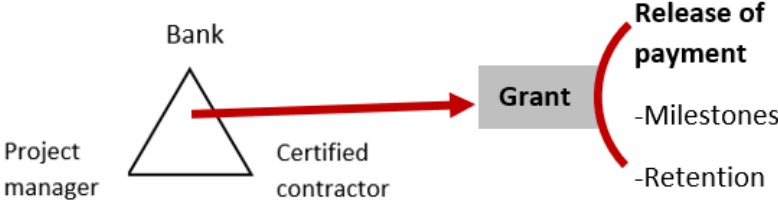
Is this step essential?	YES. It must be BER assessor or equivalent. (architect Engineer, QS FETAC in Construction related) ALL need further training
	YES – very much so It should also be used as a sales pitch
What could make this easier?	Energy Specialist Training There should be a charge for the assessment site visit
What expertise is required – who needs to be brought in to make it better?	Energy Specialist Training

5 Advisory Report based on assessment

What could make this step better?	Give options – Gold Silver bronze etc packages with costing technical solution and timing to complete works (& impact of retrofit on energy savings, comfort) Quotes from contractors may be obtained at this stage or left until the step after initial financial pre-approval (just cost estimate at this stage from consultant)
	Customer focus Does the customer have to move ut when work is done? How is this financed?
What are the gaps/ knowledge missing?	Knowledge and quantification of broader impact of retrofit – comfort, health, well-being & carbon saving Move away from just energy savings Should develop into a full schedule of works that main contract is based on
	Expertise
What expertise is required – who needs to be brought in to make it better?	Energy Specialist Training Focus group

6 Financing Credit assessment Loan offer

How would this work on a digital platform? A payment on line? Options choices on types of financing for customers?	Approval ⇔ Stress test ⇔ green special rates ⇔ 1.personal loan, 2. top up mortgage or 3. lump sum
	Could it be as simple as switching energy provider – direct debit payments? Customer wants to borrow 30K – tenders out to banks
What are the gaps/ knowledge missing?	Pre-approval and final stress tested approved based on detailed approved contractors quotes once contractors chosen
	Do you need a trusted intermediary to certify the works?

<p>What expertise is required – who needs to be brought in to make it better?</p>	<p>- Talk to bankers Bank doesn't pay till job is complete Fund pays contractor to pay his cashflow (Govt derisks) e.g. is KfW state bank in Germany examples. KfW is deployed by other banks</p>
<p>Other ideas or questions</p>	<p>Are contractors (one stop shops) linked up with particular financing institution or are they all set up separately on the platform?</p> <div data-bbox="443 629 1225 831" data-label="Diagram">  <pre> graph LR PM[Project manager] --- Bank[Bank] Bank --- CC[Certified contractor] CC --- Grant[Grant] Grant --- ROP[Release of payment] ROP --- Milestones[-Milestones] ROP --- Retention[-Retention] </pre> </div> <p>The bank, project manager and certified contractor form a 'partnership' for each project (aggregated project). Grant is sought. Release of payments due on specific milestones in the projects (performance certificates or completion and commissioning of a component) and after retention period.</p>

7 Contracts signed

Applicant signs contract with...

<p>On the platform whom would the contracts be signed between Would it be online?</p>	<p>Contractors with ratings in my locality, special knowledge... All contractors must be general / master contractors who can do everything Standard contract form - name changed depending on contractor. Keep them on the platform</p>
<p>What are the gaps/knowledge missing?</p>	<p>Need standardised contracts for use. All contractors must be Master Contractors. Online Contract Templates Issue with independent advisor. Who is taking the burden for the warranty? For e.g. in a normal house extension the client has contracts with both the contractor and architect</p>
<p>What expertise is required – who needs to be brought in to make this work?</p>	<p>Depends on 'legalese' whether the contractor can be signed online -</p>
<p>Other ideas or questions</p>	<p>Original site visit assessor needs to stay with project to sign off at the end. Acts as the construction manager & QA control during the project There should be 2 contracts – 1. with the assessor / project manager, 2. with the contractor -</p>

8 Schedule of Works

List of accredited contractors...

What is essential in this step? What does the customer need to know?	Master contractor takes care of this and acts as construction manager and manages all subcontractor and schedules work Time frames need to be defined by the owners Is it feasible to live in the house? Cost potential?
What other steps does it need- are there gaps/ knowledge missing?	Does site visit assessor develop this initially? -
What expertise is required – who needs to be brought in to make it better?	Heat pump design needs to be done separately from Master contractor Perhaps the site visit advisor does this or at least reviews it
Other ideas or questions	Needs to be standard construction detailed design SR54 guide el... -

9 Work completed

Customer experience during works...

Is the customer informed throughout and what feedback recorded after works completed?	Refurbify as an example All subcontractors take photos when doing works and write short reports online so that PM can manage / highlight any issues etc Take measurements, photos etc Give this to assessor to review (online platform manages this) Customer to be informed throughout. Logbook / building renovation passports could include feedback from customer Contractor to come back after 12 months for snags
What other steps does it need- are there gaps/ knowledge missing?	Assessor review the works management when in train -
What expertise is required – who needs to be brought in to make it better?	- -
Other ideas or questions	- -

10 Quality Assurance

Sample checks, BER assessment HPI

Which QA is essential? Does the customer understand this process?	BER for grants but doesn't really provide QA other than measures were done Possibly sample check throughout report HPI – not really relevant here Approved renovation advisor – 3 assessments
---	--

	Customer to be informed at these touch-points Compliance certificates e.g. Windows, Air tightness blow test
Are there gaps/ knowledge missing?	Sign off at the end by site visit assessor based on final visit and all file photos reports and evidence The tests to validate performance is in the advisory report Monitoring will be fed back into the information section of the platform – people may get a discount for monitoring
What expertise is required – who needs to be brought in to make it better?	- Acoustic testing; Air tightness; Ventilation – would these be done by companies installing it?
Other ideas or questions	- QA input form Exchequer point of view People want to know “ How do we know the performance has improved?” (this can be put onto the information section of platform)

11 Payment

How would it work

What could make it work better? Could payment be arranged online?	Ideally payment on platform. Could the banks pay directly to Master contractor based on customer sign off through the platform? Refer to step no6 and 7 Sign a contract to give authority e.g, “CU (financing institution) to pay directly to REIL (project manager / contractor)”
Are there gaps/ knowledge missing?	Customer may be paying some of cost themselves and only getting loan for a portion of the cost – do it through the platform also Is there retention? Do you use the grant as retention? Important for the customer to know that retention and recourse for non-performance of work
What expertise is required – who needs to be brought in to make this work?	Who pays for assessor’s site visit? Customer bank etc pay into platform and then platform pays out to contractor/assessor based on process signed off by assessor/customer Would the banks require work completion compliance The customer gets reassurance from the testing Non visible, latent defects – Insurance to be built into the cost (speak to MARSH Insurance and RIAI practice director Joe Miller
Other ideas or questions	- Reducing the risk of non- performance is important Quality regime: -has to give confidence to the state -retention for non-performance and non-payment

12 Applicant signs off

What is the right time to sign off? What about snags?	Before payment (sheet no.11) Maybe some retention monies (e.g.10%)
	Sign off - tied to all compliance certs Understands how to use the home Home user manual
Are there gaps/knowledge missing?	Would master contractor agree to retention?
	More online information Library of "How to" Youtube videos on the platform e.g. Daikin heatpump or sign in to user forums
What expertise is required – who needs to be brought in to make this work?	Formal sign off with site visit / assessor
	-
Other ideas or questions	-
	Send out a questionnaire - do you understand the systems in your house?

Any other thoughts on Making the Platform-process work better

An idea for	Partnering customer with obligated party and energy credits [10cent perkW/h]
	Obligated party customer signs part of the credits to the contractor [Deep Retrofit may save you €4000 in energy credits]
	Needs to support the ecosystem that exists – service providers T&C around those who are on it
Works or supports which step? A new step?	Works to consolidate existing service providers
What expertise is required – who needs to be brought in to make this work?	-
	-
Other ideas or questions	-
	Take the model of ' Halo ' from ESB. Or more recently Electric Ireland moved into Energy efficient partners Energy Efficiency Incentive Scheme Or Bord Gais platform Local Heros

ANNEX III - TURNKEY RETROFIT Spanish LIG Meeting 1

SESIÓN LIG 22 DE OCTUBRE DE 2020



Acta de reunión LIG – 22 de octubre 2019



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Acta de reunión LIG – 22 de octubre 2019

Gracias por formar parte del LIG SPAIN



TE CONTAMOS EL RESUMEN



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LIG SPAIN - Contexto

Objetivo

El servicio TURNKEY RETROFIT se desarrolla como un proceso de renovación centrado en el propietario, y busca transformar el actual proceso de renovación, complejo y fragmentado, en un proceso simple, directo y atractivo. Con ello persigue:

- Mayor conciencia de los propietarios/as y facilitar el acceso a esquemas de apoyo financiero locales y regionales.
- Una oferta mejorada por operadores de mercado fiables y el desarrollo de estándares y prácticas optimizados en procesos consistentes y transparentes en los que los inversores pueden confiar.
- Disminución de los costos totales de implementación de renovación y minimización de los costos inesperados.
- La provisión de servicios adicionales que van más allá de la rehabilitación energética (mejoras y arreglos para el hogar, soluciones para el hogar para mejorar la comodidad, la seguridad y la calidad de vida).

El proyecto se extiende desde Junio 2019 a lo largo de 30 meses. Este proyecto está financiado con fondos de la Unión Europea Horizonte 2020 en el marco del programa para la investigación e innovación bajo el convenio N° 839134.





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LIG SPAIN - Contexto

¿Qué es?

Un servicio integrado de rehabilitación de vivienda – basado en una plataforma digital amigable con el usuario– una ventanilla única (**Solutions4Renovation**) que ofrezca a los propietarios/as:

- Información sobre su hogar (diagnóstico inicial técnico y social / de comportamiento)
- Trabajos potenciales (ofertas técnicas y económicas)
- Contactos con proveedores/instaladores, contratación de trabajos
- Estructuración y provisión de incentivos fiscales
- Monitoreo / coordinación in situ de trabajos y control de calidad
- Puesta en marcha
- Evaluación posterior de las obras y del rendimiento del edificio.





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LIG SPAIN - Contexto

Principales conceptos de base

- Construye redes sólidas con actores locales en las regiones donde se implementará.
- Ser el único punto de contacto para el propietario y el director de proyecto de las obras de renovación. (colabora con los contratistas, establece los criterios de calidad)
- El proceso debe ser transparente y minimizar cualquier sorpresa desagradable para el cliente, como un sobrecosto sobre el presupuesto inicial o retrasos en el proceso de renovación.
- El sitio web debe presentar una función que permita al cliente tener una primera idea del potencial de renovación y seguir el proceso.
- Identifica el segmento de clientes más probable para casas unifamiliares y edificios multifamiliares.
- Turnkey Retrofit debe combinar diferentes fuentes de ingresos, incluidos los honorarios y cargas de gestión del proyecto, para conectar a un cliente potencial con los profesionales adecuados.



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LIG SPAIN – Objetivos del Taller

- ✓ Identificar cómo es el proceso de rehabilitación energética en España: actividades clave, quiénes participan, principales barreras y dificultades, etc.
- ✓ Diseñar conjuntamente cómo debería ser el proceso de rehabilitación, desde el punto de vista del cliente, para que la experiencia sea óptima.





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LIG SPAIN – Dinámicas del Taller

Aproximación desde dos perspectivas:

1. Desde el punto de vista del usuario/a final “Customer Journey”
2. Desde el punto de vista de un agente/empresa que da servicio a la rehabilitación en alguno de los pasos del “Journey del usuario/a” con el objetivo de analizar cómo mejorar su oferta de valor.

Se trabaja en dos grupos.

DINÁMICA 1:

1. En cada uno de los bloques se reflexiona:
 - ¿Cuáles son las actividades clave?
 - ¿Qué hay que hacer?
 - ¿Quien interviene?

Trabajo en grupo; puesta en común de las conclusiones alcanzadas.

2. Barreras, problemas e ineficiencias que aparecen en cada bloque. Se parte de la reflexión individual y se comparte después.

DINÁMICA 2:

3. Se dibuja el proceso de rehabilitación ideal. Cada grupo el suyo y se pone en común.
4. Se construye la experiencia ideal (*Customer journey*) identificando soluciones.



Alumnos y Grupos + Decanos	Asesoración	Ejecución de obra	Coste



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LIG SPAIN – Resumen dinámica 1

BÚSQUEDA + OFERTA + DECISIÓN



Usuario/a

¿POR QUÉ?: ¿Por qué pienso en rehabilitar?

- Desperfectos
- Estética
- Necesidad
- Mejora de la calidad de la vivienda
- Ahorro
- Oportunidad por ayudas
- Obligación por ITE
- Envidia porque he visto la del vecino
- Patologías. ITE
- Accesibilidad
- Ampliación
- Ahorro
- Estética
- Revalorización de la vivienda
- Confort
- Preocupación ambiental
- Reducción del consumo

BÚSQUEDA: ¿Dónde me informo/busco empresa constructora?

- Amigo/Familiar
- Internet
- Pregunto en el Ayuntamiento
- Conocidos del sector de la construcción
- Pepe "El Albañil" el que le hizo a un conocido
- Administrador de finca
- Banco
- Empresas Sector
- Administración Pública
- Edificios obras hechas
- Colegios profesionales
- Vídeos soluciones Internet





Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Resumen dinámica 1

BÚSQUEDA + OFERTA + DECISIÓN



Usuario/a

DECISIÓN: ¿Por qué elijo una empresa u otra?

- Porque genera confianza
- Prestigio
- Rapidez/Eficacia
- Cómo me asesoran
- Relación Calidad-Precio
- Garantías post-trabajos por escrito
- Referencias vecino obra similar
- Presupuesto
- Presencia local
- Tiempo ejecución
- Financiación
- Referencias
- Trabajadores profesionales
- Calidad otras obras de referencia
- Obras llave en mano
- Soluciones concretas
- Trato amable
- Asesoramiento
- Estética
- Marketing (ej. 3D)
- Responsabilidad social



¿Cómo selecciono la mejor opción?

Costes mantenimiento. Plazo ejecución. Materiales calidad. Marcas fabricantes. Profesionales cualificados. Reparaciones futuras. Garantía. Opciones estéticas. Durabilidad. Condiciones de pago. Ahorro energético. Cumplimiento normativo. Explicación técnica suficiente. Soluciones técnicas. Gestión Integral. Variación de la calificación energética.

Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Resumen dinámica 1

BÚSQUEDA + OFERTA + DECISIÓN



Agente/empresa

¿Cómo nos damos a conocer?

- Presentación a agentes (Administraciones, colegios)
- ANERR
- Reuniones comunidades
- Visibilidad casos de éxito
- Visitas a los Administradores de fincas
- Marketing sectorial
- Boca a boca
- Web
- Eventos y ferias
- Publicidad local

¿Cómo logro que seleccione mi oferta/diferenciación?

- Plazos de ejecución concretos y claros
- Compromiso de finalización
- Presupuesto cerrado
- El presupuesto contiene la solución que responde al problema del edificio
- Explicación técnica suficiente
- Relación calidad/precio
- Acuerdos con empresas de servicios energéticos
- Ajustar precios según el n.º de rehabilitaciones
- Gestión de las subvenciones





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LIG SPAIN – Resumen dinámica 1

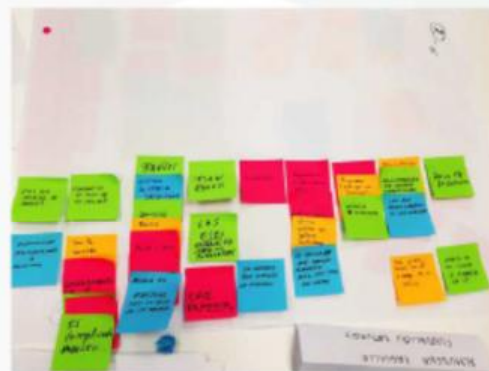
FINANCIACIÓN



Usuario/a

FINANCIACIÓN: ¿Dónde me informo?

- Internet
- Bancos
- Inmobiliaria
- Administración pública
- Administrador de fincas
- Empresa instaladora o constructora contratada
- Empresas de Servicios Energéticos
- IDEA. Plan Renove





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LIG SPAIN – Resumen dinámica 1

EJECUCIÓN DE LA OBRA



Usuario/a

Control Ejecución: ¿Quién lo realiza/debe realizarlo?

- Dirección Facultativa
- Arquitecto
- Empresa constructora
- Administrador + el técnico independiente
- Comisión de obras
- Revisión y aprobación técnicos municipales
- Mediador externo
- Empresas con antigüedad y prestigio





Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Resumen dinámica 1

CIERRE



Usuario/a

¿Qué garantías tengo del trabajo ejecutado?

- La empresa me lo garantiza por escrito
- Certificado de fin de obra
- Control de calidad externo
- Acta de recepción con la Comunidad

Agente/empresa

¿Cómo garantizo el resultado de la obra?

- Control de cumplimiento de condiciones del contrato
- Informes de seguimiento
- Monitorización de plazos
- Debe haber comunicación con la Comunidad
- Certificado de fin de obra





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LIG SPAIN – Resumen dinámica 1

PRINCIPALES BARRERAS, PROBLEMAS, INEFICIENCIAS

BÚSQUEDA + OFERTA + DECISIÓN

- Desconocimiento
- Desconfianza
- Engaños anteriores
- Rebote de responsabilidades entre los agentes que intervienen en la obra

FINANCIACIÓN

- ¿Quién me lo gestiona?
- No quiero correr el riesgo de mi vecino
- ¿Tengo que cambiar de banco?
- Impacto en mis cuotas
- Desconocimiento de cómo se accede a una subvención
- No sé qué entidades tienen convenio para este tipo de obras

EJECUCIÓN DE LA OBRA

CIERRE



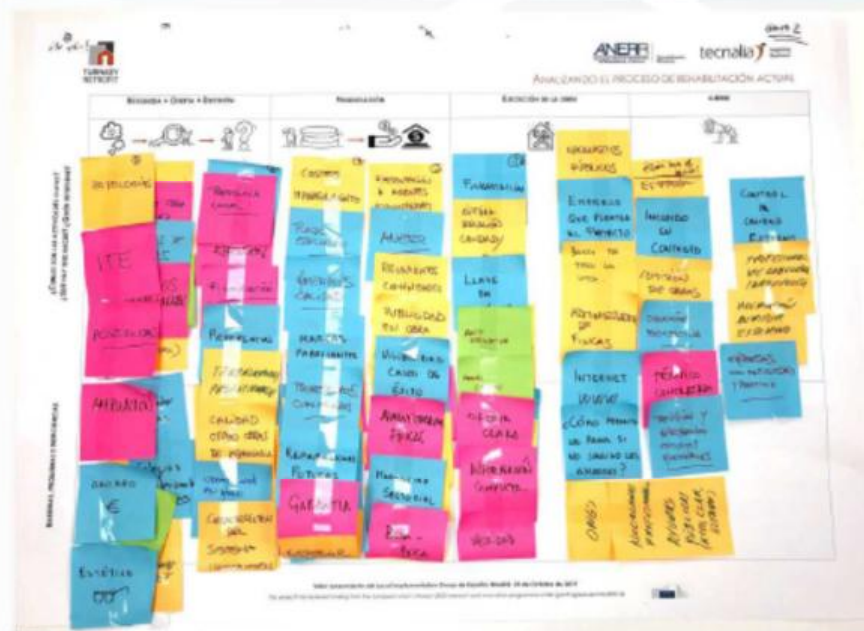
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LIG SPAIN – Resumen dinámica 1

GRUPO 1



GRUPO 2

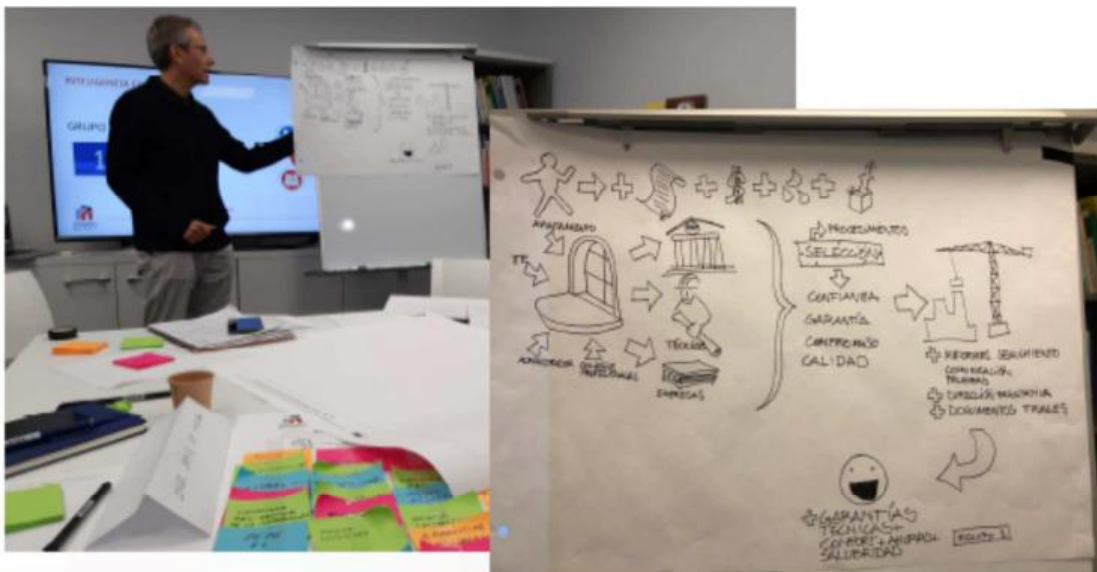




Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Resumen dinámica 2

Conclusiones y Customer Journey propuesto por GRUPO 1



GRUPO 1

Cuando llega el ciudadano, la personas de a pie propietaria de bienes inmuebles, normalmente por una serie de obligaciones, ahorro o economía, patologías o algún principio estético, busca mejorar su propiedad. De esta manera el usuario lo que hace es buscar distintas vías para saber como tiene que operar a partir de ese momento. Bien a través de Ayuntamientos, del ITE de la administración, de colegios profesionales, deben encauzarle a una ventanilla única desde la que se gestione su trámite y resuelva toda la situación, ya sea con entidades financieras, con los técnicos o con las empresas asociadas en el proceso.

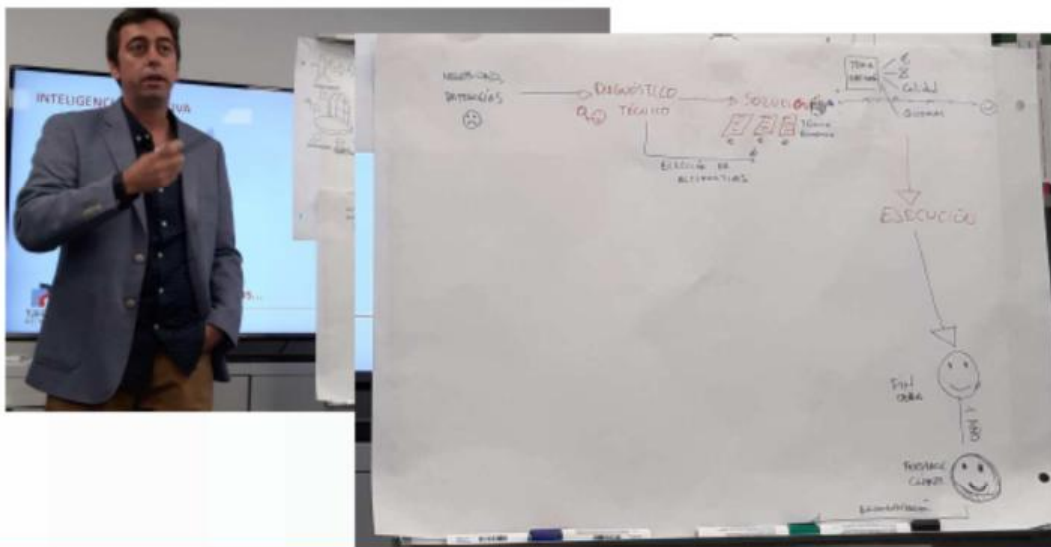
El proceso debe estar cimentado en un procedimientos. Se realiza una selección que se basa en la confianza, la garantía el compromiso y la calidad. Con esta situación se consigue ya tener una perfecta documentación técnica, y de la ejecución de la obra con informes de seguimiento, comunicación efectiva con el cliente o usuario, con pruebas de funcionamiento, con la utilización deformativa de la dirección facultativa y de los técnicos correspondientes, y de la realización de los documentos finales. Todo esto nos lleva a la plena satisfacción por parte del usuario y sumada a las garantías necesarias para que sepa que siempre habrá alguien que responda ante todo este proceso.



Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Resumen dinámica 2

Conclusiones y Customer Journey propuesto por GRUPO 2



GRUPO 2

Su propuesta parte de la sonrisa del final, cuando llega el final de obra, todo ha terminado y el usuario esta contento, que es el objetivo perseguido. Hay que poner un periodo de tiempo porque es relevante para todos los actores. Pero han hecho el ejercicio de irse un año antes. Se considera el final de obra un año después de que haya acabado el trabajo.

Partimos de necesidad o patologías como lugares de donde surge. Todos de acuerdo en que es necesario un diagnóstico técnico. Ese técnico es el que nos proporciona las distintas soluciones. Previamente habrá hecho un filtro con la elección de alternativas en las que entrará el cliente o no. Le damos al cliente para que tome las decisiones criterios económicos de tiempo, calidad que haya quorum en la comunidad de propietarios. Para luego llegar a poner en marcha una ejecución y alcanzar el final de obra. Faltan muchos agujeros por rellenar en este esquema. Surgen preguntas como ¿quien es ese técnico? Se considera que un aparejador. El lugar de búsqueda hoy en día parece que lo primero debe ser internet, también preguntamos a conocidos. Se ha debatido sobre si el técnico puede ser de la empresa o tiene que ser independiente.

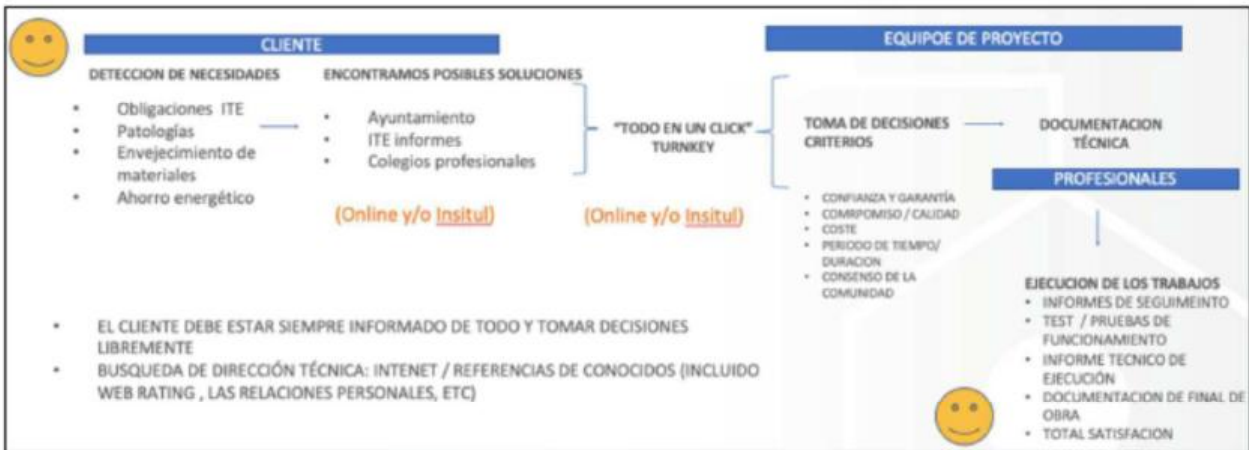
Durante todo el proceso el cliente debe estar 100% implicado y necesita asesoramiento. El punto de fricción es como tomas la decisión.



Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Nuestro “Viaje del usuario”

Conclusiones. Visión única





Acta de reunión LIG – 22 de octubre 2019

Gracias por formar parte del LIG SPAIN

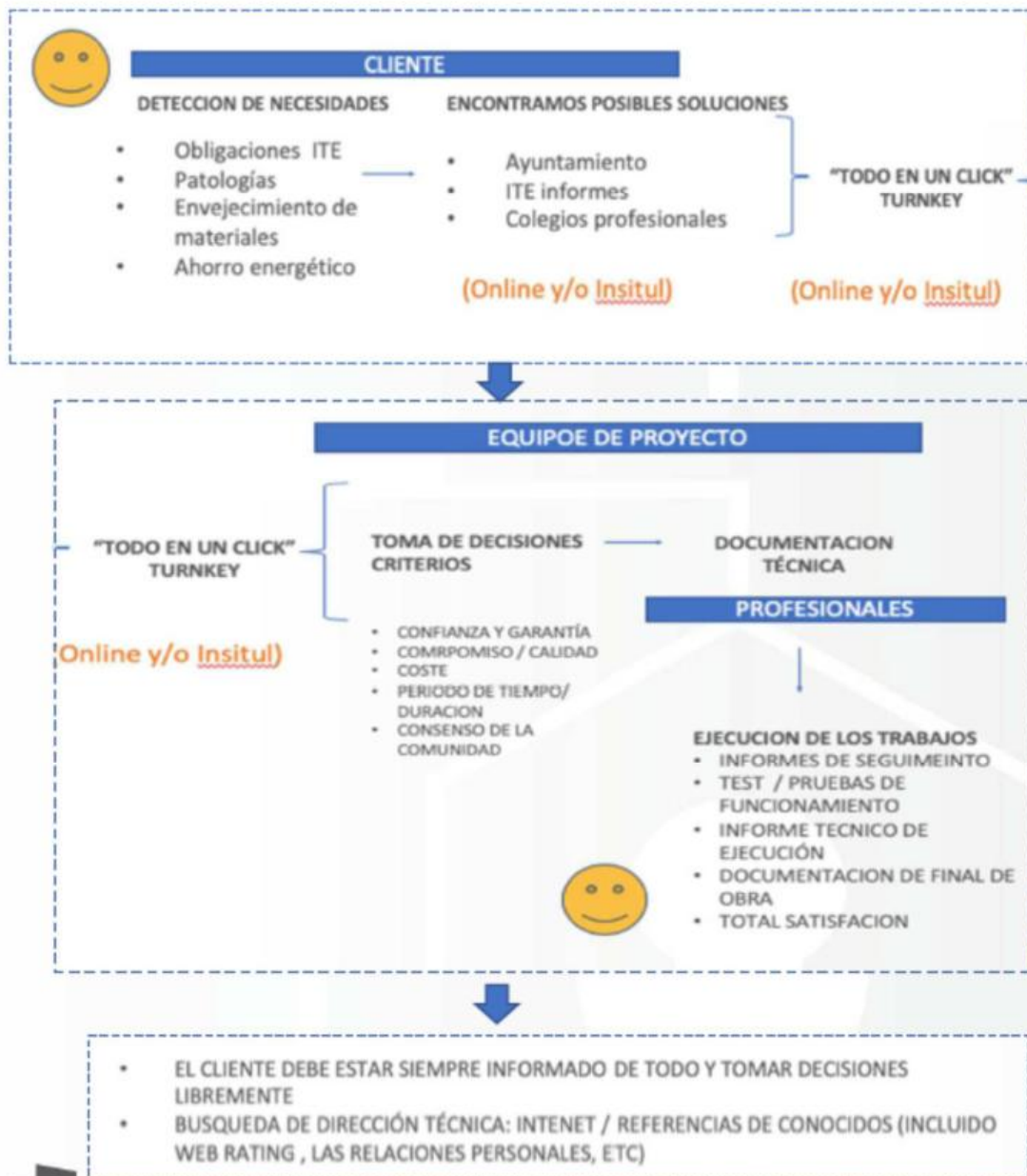


SAVE THE DATE
Próxima convocatoria 31 marzo o 1 abril 2020



Acta de reunión LIG – 22 de octubre 2019

LIG SPAIN – Nuestro "Viaje del usuario" Detalle

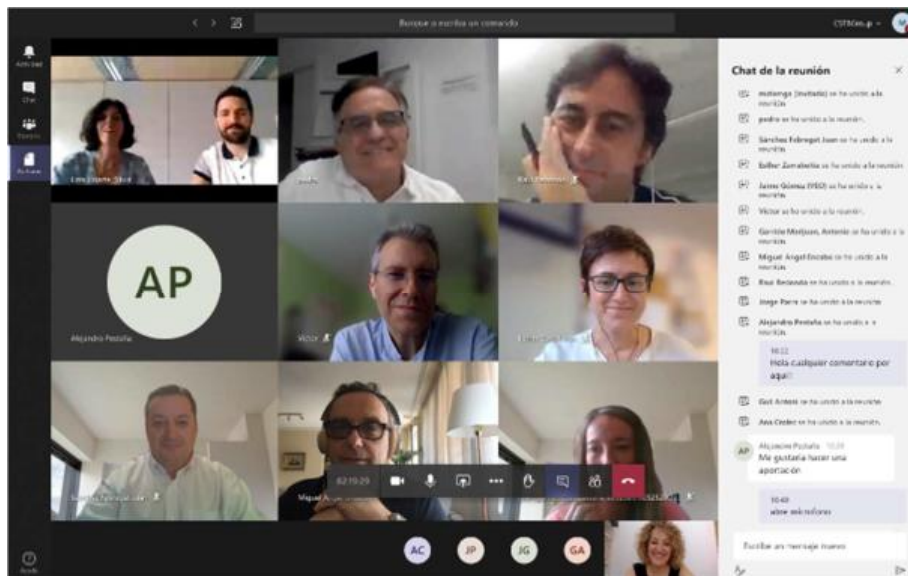


ANNEX IV - TURNKEY RETROFIT Spanish LIG Meeting 2: Session 1

SESIÓN LIG 3 DE JUNIO DE 2020

Objetivos:

- Compartir los avances del proyecto Turnkey Retrofit
- Describir la evolución deseada para la plataforma REFORMANERR

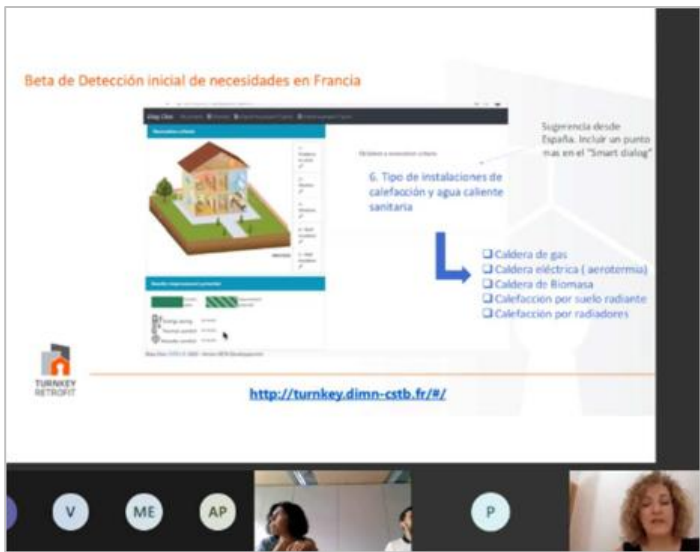


Resumen de los puntos abordados en la sesión y principales comentarios:

- ▶ Evolución del proyecto Turnkey Retrofit:
 - Cuáles han sido los avances realizados desde la sesión de lanzamiento del LIG celebrada en Madrid el 22/10/2019



- Cómo los resultados de dicha sesión han ayudado a seleccionar las nuevas funcionalidades del servicio



► Primeras impresiones:

- A las empresas que participen dando el servicio a través de la plataforma se les podría pedir un certificado tipo COVID-free. Empresas que garanticen que cumplen con los protocolos sanitarios. Sería un plus y muy actual.
- La parece que la plataforma está muy bien, es sencilla, visual, y que puede enganchar a las comunidades, pero para una primera etapa: la de concienciación/información. Le cuesta imaginar si, a la hora de la verdad, alguien contrataría un proyecto de esta envergadura únicamente a través de la plataforma sin tener contacto con nadie con quien no exista una confianza previa. Como puerta de entrada muy bien; para los demás pasos, insuficiente. No ve como queda reflejado el trabajo que hay detrás por los agentes intervinientes en el proceso de diseño y ejecución del proyecto. Comenta que, según su experiencia es necesario establecer confianza con la empresa/organización que va a ejecutar este tipo de obras que son de envergadura. ¿En qué momento entra la parte experta/empieza la interacción personal con el cliente?
- Cuidado con generar expectativas con la plataforma que no se van a poder cumplir. Que todo lo que se exponga/proponga en la plataforma (diseño y ejecución de la obra) cumpla con los requisitos normativos, legales, etc. Documentación profesional válida.
- La idea planteada como puerta de entrada para de motivar inicialmente a posibles clientes le parece que está muy bien. Le parece relevante que, cuando un potencial cliente utilice la plataforma y realice la visualización previa, quede muy claro que se trata de una aproximación; después, en una fase posterior ya entrará un técnico quien elaborará el proyecto con el detalle requerido.
- Comenta si se puede valorar una situación como la del pasaporte del edificio para proponer un conjunto de intervenciones/obras en un cronograma prolongado en el tiempo (visión a medio-largo plazo). También la posibilidad de incorporar aspectos de huella de carbono y economía circular. Priorización de diversas actuaciones según las políticas que vayan surgiendo.
- Sería de interés que la herramienta permitiera visualizar la relación entre lo que va a costar la obra y el ahorro que va a suponer, además de la mejora del confort. Serviría para concienciar.
- El tema del ahorro energético está bien darlo como dato (para concienciar) pero según su experiencia no es el principal indicador para tomar la decisión de ejecutar una obra de rehabilitación, ya que los periodos de retorno son muy largos. Las rehabilitaciones se inician por problemas que surgen en la vivienda/edificios (humedades) o porque aparece una oportunidad (subvención). El confort es lo que

vende (intervenciones tipo SATE). Comenta que en la plataforma se pueden incorporar buenas experiencias contadas por vecinos. Eso sí que engancha.

- Ve dificultad en que la plataforma pueda informar sobre posibles subvenciones a las comunidades, ya que este tema es complejo y varía entre comunidades autónomas.
- Comenta que en muchas ocasiones después de aprobarse las subvenciones las comunidades tienen que rechazarlas por las dificultades de los trámites.
- Comentan que ellos pueden aportar soluciones concretas según las patologías detectadas en el edificio (no sólo SATE).
- Es fundamental la ayuda pública para poder abordar este tipo de proyectos y que actúe como palanca dinamizadora. No es suficiente con poder financiar las obras.
- Le parece un proyecto interesante y que puede ampliarse. Valora positivamente la plataforma, visual y sencilla que puede ayudar a entender lo que se va a hacer, los beneficios que le puede reportar una obra de rehabilitación, etc. Para concienciar fenomenal. Eso sí, tiene dudas:
 - ¿Cómo se puede hacer un presupuesto aproximado sin hacer un estudio en concreto de las instalaciones? ([Miriam]: el objetivo de la plataforma es de orientar el rango de precios; una vez que se tiene claro de qué presupuesto se está hablando, se elabora el estudio en detalle.
 - ¿La aplicación entonces se acota sólo a esta primera parte? ([Miriam: no; con el servicio que se ofrece en la plataforma se puede captar también el interés para que se hagan más intervenciones en la vivienda; y además también te dice cómo financiarlo, elaboración del estudio técnico, etc.)
- Le parece que es un instrumento con un gran valor. Cuanta más información disponga y sea accesible, el vecino/a podrá tomar una decisión de una forma más rápida. También cree que sería una buena idea difundir desde la perspectiva del vecino/a las buenas prácticas en este tipo de proyectos.

ANNEX V - TURNKEY RETROFIT Spanish LIG Meeting 2: Session 2

SESIÓN LIG 17 DE JUNIO DE 2020

Objetivos:

- Compartir reflexiones y profundizar en el papel de los diferentes actores en el servicio Turnkey Retrofit
- Presentar experiencias prometedoras de servicios de rehabilitación integral en Europa



Resumen de los puntos abordados en la sesión y principales comentarios:

- Se comentan las respuestas y comentarios que se han recibido a través de los formularios.

Compartiendo reflexiones y resultados de la sesión anterior



1. ¿Que te parece el hecho de que el Proyecto haya decidido separar la plataforma de servicio Turnkey Retrofit en cada uno de los países?

Y se considera lógico (100%)

- Es una ventaja que el servicio Turnkey Retrofit tenga una plataforma ad-hoc en cada país, dado que así se adapta y adecua a las características, condicionantes de la rehabilitación de los edificios de viviendas y en general, el mercado de cada país.
- Inconvenientes: que será necesario un mayor esfuerzo para realizar esa adecuación y que no habrá un servicio único para la UE.
- La maniobrabilidad desde la Comunidad de Propietarios, ader definido: no es igual un vecino (propietario) que administrador, e Las subvenciones deben estar presentes de una manera inicial y oferta, ya que actualmente son una verdadera palanca para imp.
- Definición de hitos del proceso (firmas de contratos, etc.), así c online y cuando es personal.
- El libro del edificio existente y el Pasaporte del Edificio.
- Información inicial sobre las mejoras generales a modo de invent del contacto.

2. ¿Echas en falta o añadirías alguna utilidad para completar el customer journey?




3. ¿Cuál es el actor que podría ser la entidad que representas en el servicio: llave en mano asociado con RETO/MANITO?

Facilitadora

- Difunde de mensajes positivos relacionados con la rehabilitación
- El acceso a las comunidades de propietarios y edificios en alquiler administrados
- Catálogo de necesidades técnicas concretas y de soluciones
- Apoyación de profesionales a consultas de toda índole
- Mayor y más sencillo acceso a la financiación privada

4. ¿Teniendo en cuenta las nuevas utilidades a implementar, ¿Qué bases de datos crees que deberían alimentar la herramienta?

Además de la información que aporten los socios, proveedores y expertos que asisten al servicio, y aquella que se tendrá que recoger de forma manual, se identifica el Catastro, ficheros municipales como bases de datos.

¿Qué es una pregunta que nos hayamos más adelante cuando se consiga la información que será necesario para alimentar la plataforma?

5. Con este nuevo planteamiento, ¿cuál crees que pueden ser las barreras que va a tener que superar la puesta en marcha de este servicio?

- Difícil para que se conozca y el desarrollo completo
- Falta de diligencia y comprensión, para el usuario final
- Coordinar disponibilidad con el usuario con utilidad sencilla y rigor
- Desconocimiento de la existencia de la herramienta a por parte del usuario
- Desconfianza inicial del usuario en la utilidad de la herramienta
- La falta de seguridad y confianza que puede generar una plataforma online frente al acompañamiento personal
- Habrá que cuidar la primera impresión del usuario cuando entra en la plataforma

- Se desarrolla una dinámica de trabajo para profundizar en algunos aspectos, tales como el rol de los participantes en el servicio Turnkey Retrofit o cómo solventar las barreras que se intuyen en la implantación del servicio.

Dinámica de trabajo



Para profundizar principalmente en la pregunta: ¿Cuál crees que podría ser vuestra **aportación** en el servicio llave en mano apoyado por REFORMANERR?



Y reflexionar sobre **cómo se podrían solventar las barreras ya identificadas** relacionadas con la puesta en marcha del servicio



¿Cómo lo vamos a hacer?

Google Jamboard

Instrucciones:

- Abrir enlace facilitado en el chat de la sesión
- Cada participante deberá responder y completar las diferentes cuestiones planteadas mediante *Notas Adhesivas*
- Duración: 30 min



Local Implementation Group - Sesión 12

let's play!



<https://jamboard.google.com/d/1tiRfkKy4VpyrHlpDwtMIRSuXBefBe1tBh5v-4fDsic/edit?usp=sharing>

▶ Trabajando en el jamboard. Primera pregunta.

Algunos comentarios:

- Su rol fundamental sería el de prescriptores
- Ventajas: simplificar las tareas, ahorro de tiempo, seguridad de que lo estamos haciendo bien porque está todo integrado
- Su rol: Facilitar listado de proveedores de servicios técnicos, Conocimiento normativa técnica, Disponer de herramientas actualizadas; sería estupendo tener un Observatorio para visualizar el volumen generado (nº de proyectos) desarrollados en el ámbito de este servicio

D3.1. Conclusions of the identification of local needs and actors in place

- Ventajas: Más trabajo profesional. Volumen de trabajo organizado y estructurado
- Comentan que desde su empresa están haciendo trabajos “llave en mano” por lo tanto podrían realizar varios roles y en varios puntos del proceso (por ejemplo, gestionan ayudas)
- Ventajas: Obtención de clientes
- De momento, difusión de la plataforma
- Ventajas: disponibilidad de más herramientas para poder realizar proyectos de rehabilitación
- Asesoramiento técnico
- Una vez identificadas las patologías a tratar: tienen mucha experiencia tecnológica (soluciones). Tienen sistemas contrastados para acometer dichas patologías. Pueden llevar cualquier obra en el edificio.
- Acceso a la financiación privada
- Mediante acuerdos de colaboración con las empresas constructoras que participan en la obra. Tienen un producto transparente

Resultado del ejercicio:



► Trabajando en el jamboard. Segunda pregunta.

Reflexionan sobre la posibilidad de incorporar los siguientes perfiles:

- Entidades de control y Laboratorios de calidad: control de calidad de los materiales
- Mediadores profesionales por si surgen conflictos, sobre todo en comunidades de vecinos
- Consejo general de aparejadores (soporte técnico, gestión de licencias)
- MITMA: Ministerio de Transportes, Movilidad y Agenda Urbana (tiene un fondo de 2 mil millones para la rehabilitación de la UE). Público-privada. GESTIÓN DE AYUDAS en la plataforma.
- Aseguradoras: cobertura al cierre del contrato

- Representantes de entidades o gestoras de subvenciones : grupos privados de gestión de subvenciones (avisan, planifican, información actualizada, etc.).



- Trabajando en el jamboard. Tercera pregunta.

BARRERAS QUE SE INTUYEN EN LA IMPLANTACIÓN DEL SERVICIO



- Presentación de experiencias prometedoras de servicios de rehabilitación integral/llave en mano

Presentación de experiencias prometedoras de servicios de rehabilitación integral/llave en mano que hay en Europa



¿Qué es lo que más os ha llamado la atención de los servicios de rehabilitación llave en mano presentados?

¿Conocíais la existencia de este tipo de servicios?

¿Cuál crees que son los Aspectos clave para el éxito de este tipo de servicio en España?



1. La cantidad de modelos distintos que hay
2. No
3. Empatizar con el usuario

1. La cantidad que hay, además soportados en plataformas. Le ha sorprendido mucho
2. Conocía la existencia, pero superficial, por otro proyecto europeo en el que están participando
3. La relación de confianza con el cliente. Una plataforma no puede sustituir a la relación personal.

1. Que haya tantos servicios y diversos. Se ha dado cuenta de la envergadura de este proyecto
2. No
3. Que sea fácil de utilizar, que ahorre tiempo al usuario/a

1. Le llama la atención la complejidad de los servicios, diferentes enfoques (incluso en un mismo país, Francia)
2. No
3. Financiación. Aun funcionando muy bien el servicio, necesitará inversión. Se va a necesitar mucho volumen para que este servicio sea sostenible

1. Llama la atención el número de servicios que ya hay en Europa
2. No
3. Va a ser complejo pero viable

ANNEX VI - TURNKEY RETROFIT Spanish LIG Meeting 2: Session 3 KTM

KNOWLEDGE TRANSFER MEETING. 26/06/2020

Resumen de los puntos abordados en la sesión y principales comentarios:

- ▶ El KTM se encuadra dentro de un itinerario de sesiones que se han planificado y que se están celebrando con el Local Implementation Group en España, con el objetivo de involucrarles en el proyecto de forma que participen con su conocimiento y experiencia en el ámbito de la rehabilitación en la definición del servicio Turnkey Retrofit en España. En concreto, el objetivo de esta sesión es que puedan conocer de primera mano la experiencia de un servicio similar ya existente en Francia (Heero).

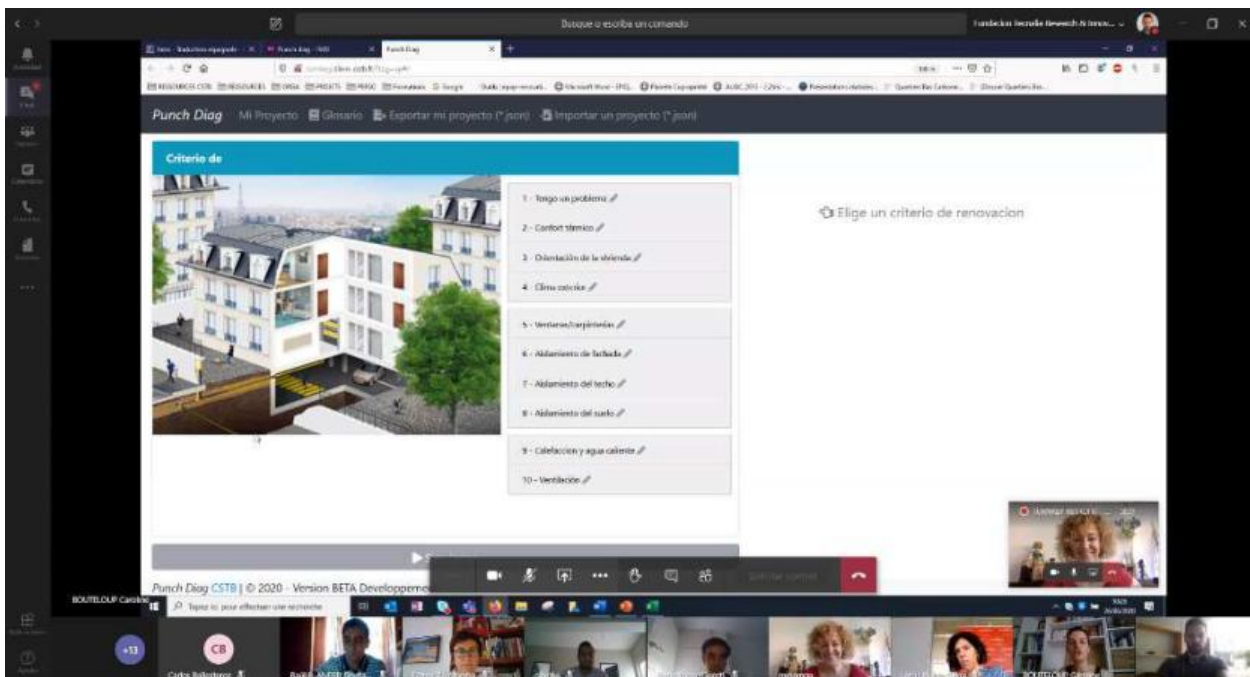


- ▶ Se comienza presentando la página web principal del proyecto:
<https://www.turnkey-retrofit.eu/solutions4renovation/>

Página principal - Propuesta

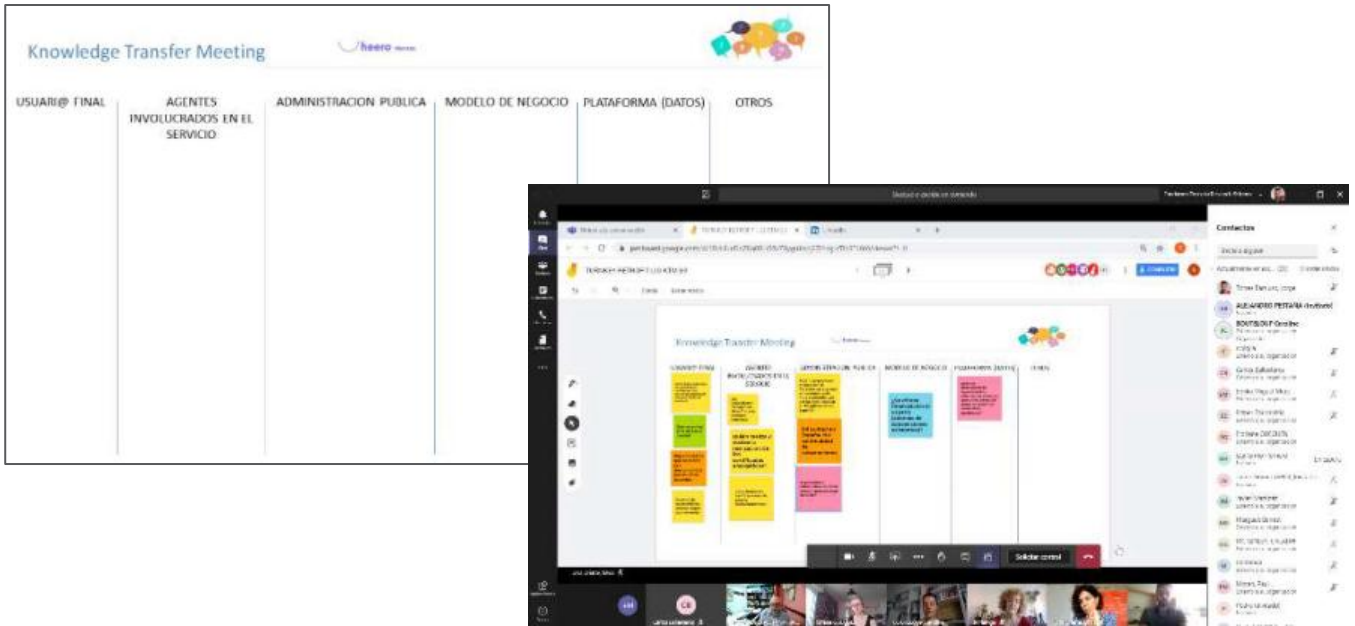


- ▶ Punch Diag y Heero (<https://heero.fr/>)

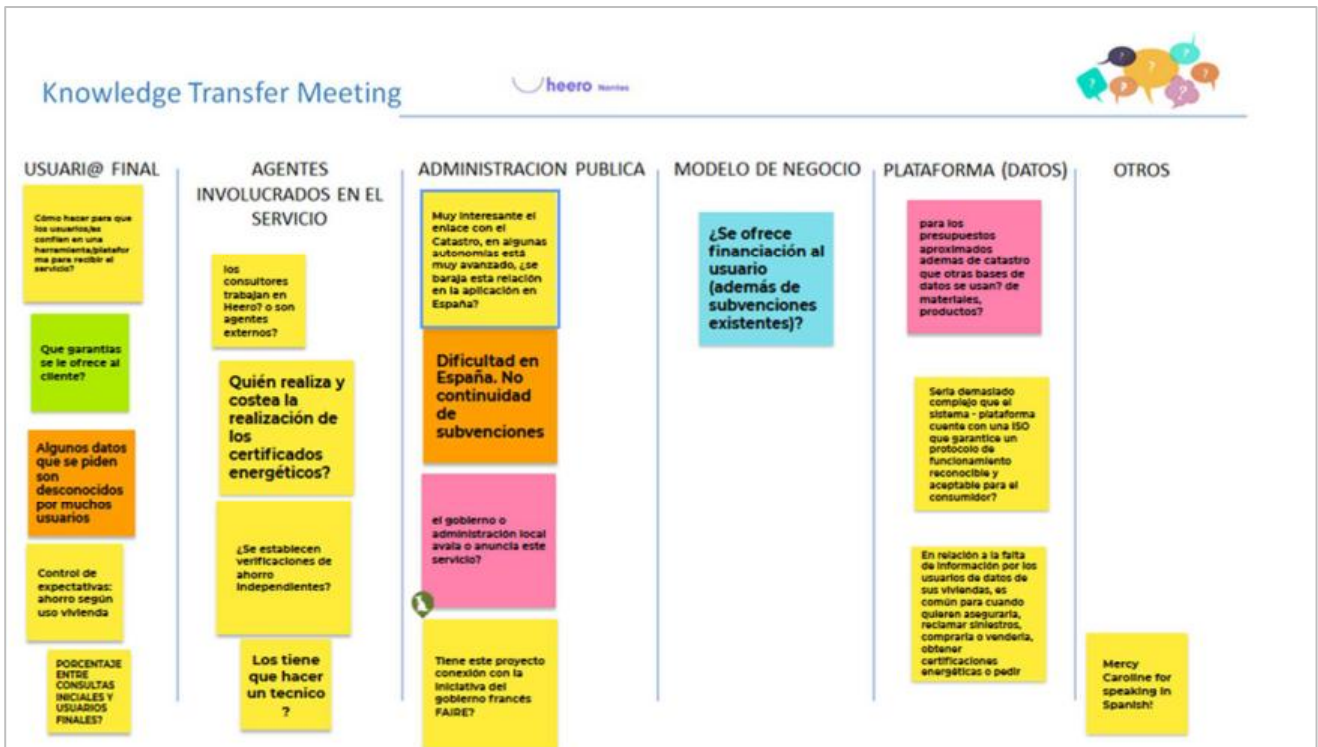


- ▶ Durante la exposición, los participantes van escribiendo sus preguntas en un jamboard que se diseñó para tal fin. A medida que escuchan la experiencia de HEERO, escriben sus dudas, reflexiones, etc. **agrupadas por diferentes temas**: las que tienen relación con el usuario/a final, aquellas que tienen que ver con los agentes que participan en la prestación del servicio, sobre el modelo de negocio, etc.

D3.1. Conclusions of the identification of local needs and actors in place



- ▶ Este es el Panel completo con las preguntas que suscitaron mayor interés



- ▶ Este es un resumen de las respuestas y puntos sobre los que se reflexionaron

Usuario/a final:

- Uno de los puntos fuertes de HEERO es que a través de la plataforma pueden conocer y acceder a las ayudas/subvenciones que, a nivel nacional tiene Francia para financiar los proyectos de rehabilitación. Es un buen enganche para que la plataforma sea utilizada por los interesados. Además se les ayuda con el proceso administrativo de solicitud.
- El gobierno francés no participa en su difusión, dado que es un servicio privado propiedad de EP.
- La difusión la realiza EP a través de campañas de publicidad; también funciona el “boca a boca”.
- Comenta que a nivel regional, la administración pública sí habla de la existencia del servicio. Pero esto depende de las regiones.
- HEERO ejerce el papel de intermediario entre el usuario/a y el “artesano”. Son las empresas que ejecutan el proyecto quienes se responsabilizan de que la obra se lleve a cabo con éxito. HEERO no ofrece ninguna garantía adicional al cliente.
- Siempre hay contacto telefónico con alguien de HERO para confirmar con el usuario/a la información de la plataforma; además, si sigue con el proceso, se organiza una visita para profundizar y ajustar presupuesto.
- Para poder solventar la barrera de que el usuario/a no sepa responder datos que se solicitan, se ha diseñado una página de inicio sencilla utilizando fotos. De todas formas, después hay seguimiento telefónico. El segmento de clientes de HEERO son los propietarios de viviendas unifamiliares; por eso no tienen adaptadas esta página para personas que viven edificios (usuario/a: administrador de fincas).
- Relacionado con el control de las expectativas de ahorro, comentan que utilizan el modelo térmico para el diagnóstico energético. Hacen un cálculo teniendo en cuenta las personas que habitan en la vivienda (adultos, niños, etc.), la Tª en invierno, y otros datos. Con todos los casos estudiados en Francia, y según la localización pueden estimar una media de ahorro energético. Después, la corrigen con las facturas.
- Y en cuanto al % de personas que finalmente realiza la obra, de los que utilizan la plataforma (consultas, etc.), les es difícil estimar. Ellos perciben que hay dos tipos de usuarios/as: a) unos que sólo utilizan el diagnóstico para conocer la puntuación de su vivienda y b) otros que realmente sí quieren hacer el trabajo y siguen todo el proceso. Aproximadamente, **estima que un 30%**, lo cual es muy alto para un servicio de este tipo. En este caso, no sé si refiere al 30% del total de usuarios de la plataforma o del grupo b.

Agentes involucrados en el servicio:

- ¿Quién costea la realización de certificados energéticos? HEERO es un intermediario. Sirve para recopilar toda la información que se necesita para solicitar el certificado energético, y después se la remiten a la empresa energética. El usuario/a a través de HEERO contacta con el artesano/profesional que le hace la valoración.
- El técnico de HEERO verifica la información aportada por el usuario/a en la plataforma (la que ha cargado en el diagnóstico) y se asegura de que ha entendido bien el proceso, que quiere llevar a cabo de una obra de rehabilitación, qué presupuesto tiene y qué plazos maneja. Sólo después de esta verificación, es cuando poner en contacto al usuario/a con el artesano/profesional.
- HEERO no tiene responsabilidad sobre los datos que el usuario/a introduce en la plataforma, ya que es éste quien lo hace. Es una empresa facilitadora que lo que quieren es que el usuario/a se anime a hacer la obra a través de los ahorros energéticos que va a conseguir.
- Los artesanos no pagan nada por estar en HEERO. Sólo se seleccionan profesionales con “certificación de calidad” (existente en Francia, que es pública) y verifica que los usuarios/as están contentos con la labor

desarrollada por los artesanos en el desarrollo de la obra (satisfacción). Si hay problemas con algún artesano (quejas usuarias) HEERO les invita a abandonar la plataforma/servicio.

- HEERO no tiene ninguna relación contractual con los artesanos. La relación se establece entre el usuario/a y el artesano.

Administración pública:

- Comentan que es muy interesante lo que han descrito sobre el enlace con el catastro.
- En España, por ejemplo, no hay continuidad en las subvenciones nacionales como en Francia, y esto es una barrera para incluirlas dentro de la plataforma.
- Desde ANERR contactarán con el IDEA que es quien maneja el fondo energético.
- Este servicio no tiene conexión con el proyecto FAIRE (<https://www.faire.gouv.fr/>).
- Comentan que en Francia, a nivel regional, las subvenciones también cambian continuamente. Están pensando en añadir en la página solution4renovation una lista de subvenciones a nivel regional; no para el cálculo, sólo informativa.

Modelo de negocio:

- El usuario/a paga la obra pero la plataforma le conecta con la subvención pública.
- HEERO gana dinero de la empresa energética que da parte de su crédito energético.
- Recursos: HEERO forma parte de EP (40 personas). Los técnicos asociados a esta plataforma (5 o 6 personas)- no queda claro si trabajan a full-time.

Plataforma:

- Bases de datos que utilizan: Catastro, datos sobre el clima, tipologías de casas en Francia para el modelo térmico (hay unas 15), precios para las obras. **Base de datos propia.**
- Smart Diag para simular el ahorro energético. Es una herramienta privada del CSTB.

Otros:

- Se va a publicitar el proyecto europeo y como HEERO forma parte de él, la idea es aprovechar para aumentar su difusión.
- ¿Cómo se hace para cumplir con la Ley de Protección de Datos? Cuando el usuario/a se da de alta en el servicio, acepta las condiciones generales (“click”), sabiendo lo que se va a hacer con cada dato. Los datos para los créditos se anonimizan.
- ¿Qué tiene que hacer un artesano si quiere participar en el servicio? Comentan que en EP tienen otro servicio (MAXIM), sólo para los profesionales/artesanos en que pueden inscribirse. Después, desde EP se verifican los datos (calidad, calificación, etc.) y los añade a la plataforma de HEERO.

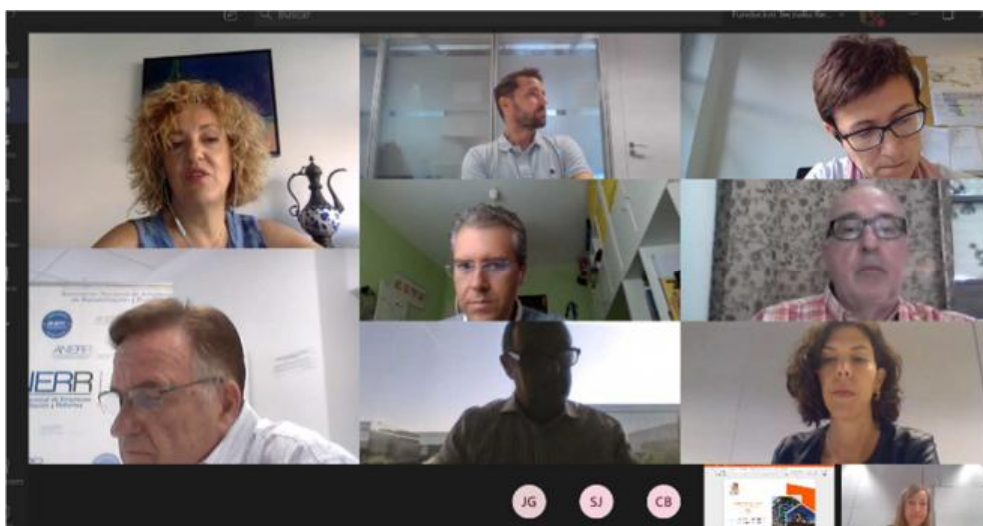
ANNEX VII - TURNKEY RETROFIT Spanish LIG Meeting 2: Session 4

NOTAS SESIÓN LIG 24 DE JULIO DE 2020

Objetivos:

- Describir los avances del proyecto: evolución plataforma REFORMANERR.
- Explicar los diferentes tipos de Modelos de Negocio OSS (Servicios llave en mano) y el que se ha elegido para REFORMANERR
- La Oportunidad: El mercado de rehabilitación

Listado asistentes en la sesión:



Resumen de los puntos abordados en la sesión y principales comentarios:

- ▶ Se describen los avances del proyecto Turnkey Retrofit

1- Avances del proyecto

- 1.«Punch» diagnóstico / evaluación
2. Repositorio de actuaciones
- 3.Smartdiag
4. Especificaciones para la simulación energética
- 5+6. Controlar, definir y experimentar con la simulación de energía
7. Apoyo social (dinámica de grupo)
8. Control de la ejecución de las obras
9. Valoración económica
10. RoadMap
11. Evaluación de los Profesionales y los Usuarios
12. Anticipar los impactos e imprevistos de las obras
13. Ingeniería financiera
- 14.Forum / FAQ / chat



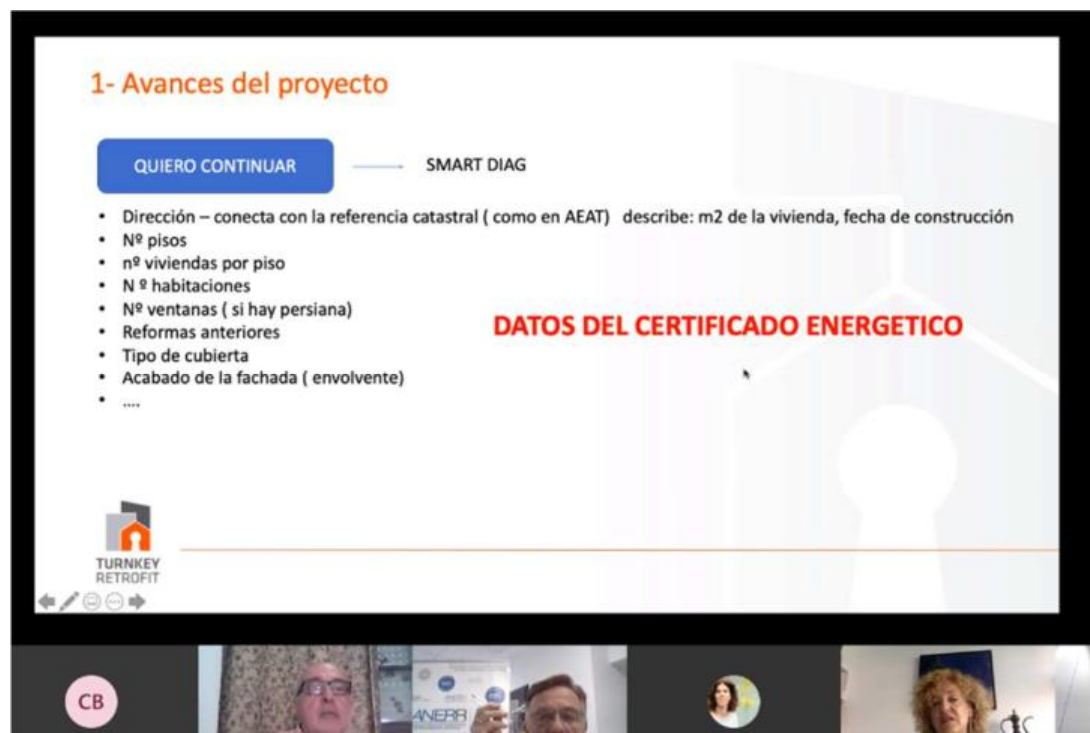
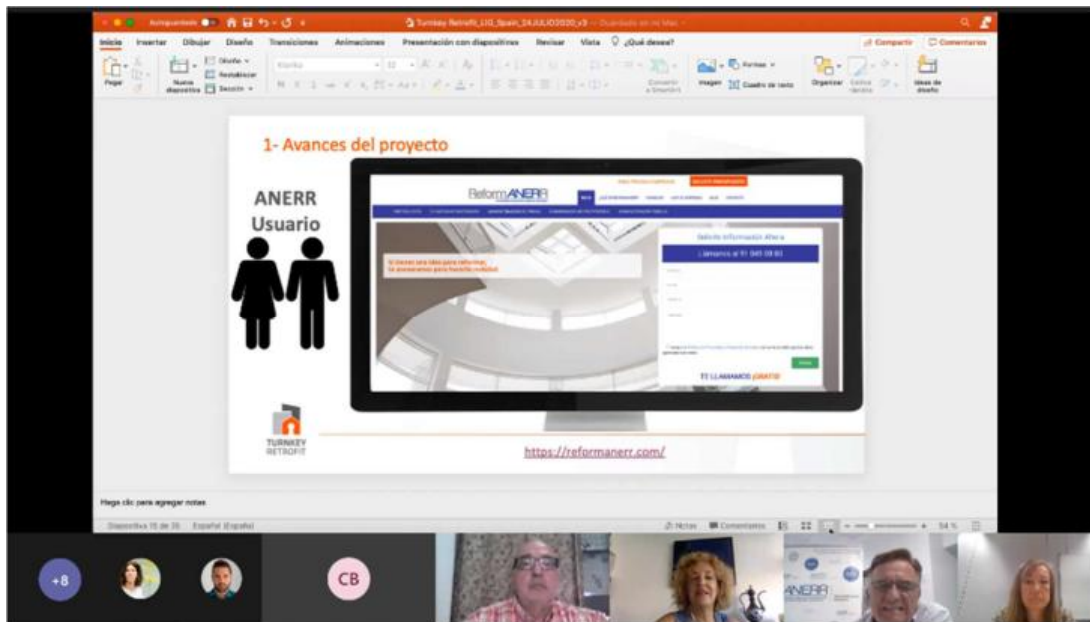
BRICKS - nuevas funcionalidades

- 1.«Punch» diagnóstico <http://turnkey.dimo-cstb.fr/?tag=sp#>
 - 1.1 estimación económica
2. Q&A (preguntas mas frecuentes)
3. RoadMap
4. Smartdiag
5. Agregación



- Comentario: Las entidades urbanísticas podrían ser las entidades que traccionen la agregación.
- Avances en la página web de REFORMANERR:



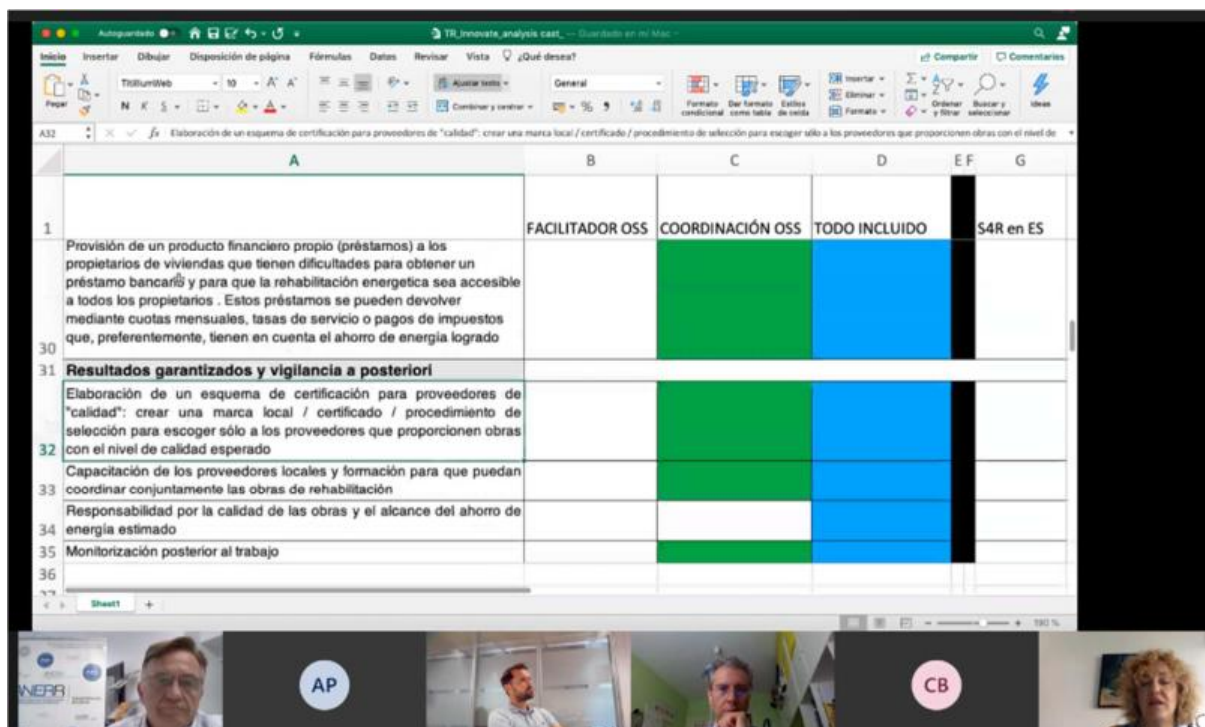


- Comentarios:
 - [Alejandro]: Ve sentido al Bricks de Agregación, ya que en Andalucía existen intereses comunes de actuación en las edificaciones.
 - [Alejandro]: Cuestionario: Cree que existe desconocimiento de la realidad constructiva por parte de los propietarios.
 - [Raúl]: Las herramientas de certificación caracterizan el edificio definiendolos en base a la zona y año de construcción relacionando la realidad constructiva con los datos de simulación.

D3.1. Conclusions of the identification of local needs and actors in place

- [Carlos]: Cree que disponer de un certificado blanco es mas importante que disponer de calificación energética. Pero el certificado blanco conlleva un coste asociado a la realización del certificado.
El IDAE va a desarrollar el Certificado Blanco a nivel nacional, ¿es similar a lo que tienen en Francia? ¿Sería interesante incorporarlo al proyecto?
- [Pedro]: Ha hablado con IDEA y ven difícil poder sacar adelante el Certificado Blanco en España en un futuro cercano.
- SmartDiag y Agregación: les parecen dos bricks interesantes
- [Carlos]: Ve una ventaja poder disponer del Brick de Agregación para obtener Certificados Blancos.
- [Raúl]: Certificado Blanco: es interesante por el ahorro directo, y cree que es relativamente fácil obtenerlo a partir de la información obtenida dentro de la aplicación de Turkey-REFORMANERR.
- [Almudena]: Certificado Blanco: Naturgy está interesada en que se reconozca el certificado Blanco en España, están persiguiéndolo a nivel europeo ya que ayuda a las energéticas a tener acceso a esos ahorros energéticos.
- Ayudas basadas en ahorro energético – Certificado Blanco
- [Víctor]: Actualmente existen certificados independientes de verificación de ahorro. Es una opción real pero a veces no coincide su resultado con el ahorro energético declarado. Tiene un coste.

- ▶ Se explican los diferentes tipos de Modelos de Negocio OSS (Servicios llave en mano) y el que se ha elegido para REFORMANERR



	A	B	C	D	E	F	G
1		FACILITADOR OSS	COORDINACIÓN OSS	TODO INCLUIDO		S4R en ES	
30	Provisión de un producto financiero propio (préstamos) a los propietarios de viviendas que tienen dificultades para obtener un préstamo bancario y para que la rehabilitación energética sea accesible a todos los propietarios. Estos préstamos se pueden devolver mediante cuotas mensuales, tasas de servicio o pagos de impuestos que, preferentemente, tienen en cuenta el ahorro de energía logrado						
31	Resultados garantizados y vigilancia a posteriori						
32	Elaboración de un esquema de certificación para proveedores de "calidad": crear una marca local / certificado / procedimiento de selección para escoger sólo a los proveedores que proporcionen obras con el nivel de calidad esperado						
33	Capacitación de los proveedores locales y formación para que puedan coordinar conjuntamente las obras de rehabilitación						
34	Responsabilidad por la calidad de las obras y el alcance del ahorro de energía estimado						
35	Monitorización posterior al trabajo						
36							

- Decisión para REFORMANERR:

Modelos de Negocio OSS

Modelos de Negocio	Roles & Responsabilidades	Ejemplo práctico de lo que la ventanilla única ofrece a los propietarios de Vivienda.
Modelo Facilitador 1	<ul style="list-style-type: none"> Sensibilizar sobre los beneficios de la renovación energética. Proporcionar información general sobre trabajos de renovación óptimos. Primer consejo en la "etapa de orientación" 	Te aconseja sobre cómo renovar tu casa y puede proporcionarte una lista de proveedores.
Modelo Coordinador 2	<ul style="list-style-type: none"> Coordinar los agentes existentes en el mercado (proveedores) Asegurarse de que se ofrezcan todos los servicios de la ventanilla única a los propietarios No se responsabiliza por el resultado de los trabajos de rehabilitación (solo sigue por encima todo el proceso) No hay responsabilidad por la experiencia del cliente (solo al principio) 	Te aconseja sobre cómo renovar tu casa y presionara a los proveedores para cumplir con sus Promesas. Los proveedores son los responsables del resultado final.
Modelo Todo incluido 3	<ul style="list-style-type: none"> Ofrece un paquete completo de rehabilitación a los propietarios. Se responsabilizan del resultado de las obras de rehabilitación. Tienen la responsabilidad la experiencia del cliente. 	La ventanilla única es un contratista que te vende todo el servicio como un paquete con lo
Modelo ESCO 4	<ul style="list-style-type: none"> Ofrece un paquete de completo de rehabilitación a los propietarios con ahorro energético garantizado. Se responsabilizan del resultado de las obras de rehabilitación. Tienen la responsabilidad la experiencia del cliente. 	La ver reha... La ver... ahorros energéticos conseguidos.

ReformANERR



Nuestro Canvas - Borrador ReformANERR

Socios Clave 1-Adminis. Fincas. 2- Almacenes y distribuidores 3- TPC Técnicos profesionales Colaboradores. Red de profesionales 4- Real State 5-Asociaciones 6- Fabricantes & Patrociandores	Actividades Clave 1. Generación de proyectos de rehabilitación y reforma 2. Preliminares: diagnósticos técnicos 3. Actividad y formación comercial 4. Relaciones Institucionales con Administraciones locales, autonómicas y Nacionales 5. Gestión de compras integradas 6. Recrutamiento de personal especializado 7. Recrutar nuevos profesionales técnicos colaboradores 8. Seguimiento y fidelización	Propuesta de VALOR 1. El cliente confía en ReformANERR. 2. Fidelidad de clientes 3. Hacemos sencillo el diagnóstico y las opciones de financiación 4. Información veraz y fiable. (*) 5. Apoyo Institucional – Lobby sectorial 6. Servicio fácil y rápido 7. La red de socios de ANERR 8. Servicio real en fase pre y post trabajos 9. La reforma y la rehabilitación mejoras el valor patrimonial 10. La conciencia del Ahorro energético a nivel social es un valor en alza. 11. Crece la cultura de la Rehabilitación Eficiente	Relación con Clientes 1. Contacto personalizado con los clientes via móvil / email 2. Seguimiento del proceso de decision 3. Seguimiento de las diferentes fases del proyecto 4. Acceso & contacto muy 5. Branding	Segmentos de Clientes 1. Administradores de fincas que necesitan ser rehabilitadas 2. Propietarios de Edificios 3. Usuarios propietarios de una Vivienda en comunidad o individual 4. Empresas de rehabilitación y reforma 5. Profesionales técnicos del sector 6. Fabricantes que quieran trabajar la prescripción o den servicios complementarios
Estructura de Costes 1. Oficina y consumibles 2. Estructura de RRHH – Equipo 3. Recursos materiales 4. Fees de dto comercial y gerencia 5. Publicidad 6. Proveedores (IT, RGPS, Legal, Mobile, Internet...)	Fuentes de ingresos 1. Fee por trabajo realizado (obras y servicios profesionales) 2. Venta de Leads 3. Fee de distribuidores de materiales 4. Estudios de Eficiencia Energética 5. Formación a empresas 6. Publicidad: WEB , Newsletter & PR 7. Fee de empresas financieras y aseguradoras			

TURNKEY RETROFIT

► La Oportunidad: El mercado de rehabilitación

3- La Oportunidad

Datos sobre el mercado de rehabilitación

- Contexto: Los Edificios Españoles

2,9 millones + 50 años

2,5 millones entre 30 y 49 años

9,1 millones antes de 2006 (primer código técnico) tienen deficiencias térmicas graves y seguirán habitados en 2050 (objetivo de descarbonización)

- Objetivo

- ✓ 300.000 viviendas al año
- ✓ España crece mas que el resto de la unión europea (1,9 % mas)
- ✓ La actividad se extiende al sector terciario que debe mejorar la calidad de los servicios
- ✓ Foco en regeneración urbana para cubrir necesidades de “barrios” y “agregaciones” no solo para servicios energéticos sino para planificación y rehabilitación integral
- ✓ La crisis sanitaria COVID-19 ha puesto de manifiesto necesidades básicas. Es una palanca impulsora



- Comentarios:

- [Alejandro]: le preocupa el tema de las garantías. Cuando se contrata un proyecto/obra es fundamental. Ofrecer proveedores que trabajen con calidad, cumplan plazos, etc.
- [Esther]: mucha información con muy buena pinta. Necesidad de estudiar la documentación para poder realizar aportaciones.
- [Jaime]: necesita tiempo para asimilar los contenidos presentados y después podrá realizar aportaciones.
- [Juan]: en Mapei, al ser fabricantes de soluciones, están en un “estadio verde” en este proyecto. Es importante sentar las bases. Tienen un catálogo de 2.500 soluciones que pueden proponer a la plataforma/proyecto.
- [Miguel Ángel]: ellos siguen con su línea de apoyo a los proyectos de rehabilitación.
- [Víctor]: cuanto más se avance en el proyecto mejor para tratar de identificar dónde puede aportar mayor valor cada uno de los participantes.
- [Carlos]: que no sólo se quede en un proyecto de I+D. Cree que el Punch es la clave, y recomienda el Smartdiag.
- [Almudena]: les interesa proyectos en relación con la disminución con la pobreza energética. ¿Cómo podemos incorporarnos en el servicio REFORMANERR?
- [Raúl]: es importante que todos los agentes se involucren en el proyecto para poder incluir sus aportaciones, que son cercanas a la realidad.

