

ANALYSIS OF EXISTING ONE-STOP-SHOP INITIATIVES IN EU AND BEYOND, INCLUDING GOOD AND BAD PRACTICES

Task 2.1 Mapping of existing one-stop-shop initiatives in EU and beyond and underlying business models for integrated home energy renovation services



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D2.1. ANALYSIS OF EXISTING ONE-STOP-SHOP INITIATIVES IN EU AND BEYOND



INTRODUCTION

Cities play an important role in addressing global climate change and mitigating risk of more frequent and extreme weather events and their impact on the cities' residents. The energy used in cities' buildings accounts for approximately 40% of the city's total emission of carbon dioxide in the atmosphere, hence addressing building energy performance becomes fundamental to encourage the energy transition process and, at the same time, improve the comfort of the tenants.

PadovaFIT EXPANDED brings together a strong consortium of 8 partners coming from four EU member states. The consortium is coordinated by the Municipality of Padova supported by Università Commerciale Luigi Bocconi, SINLOC, SOGESCA, Forum per la Finanza Sostenibile and Climate Alliance, a European network of local authorities for sustainability. PadovaFIT EXPANDED starts from the knowledge and experience produced in the Padova area and aims at creating and piloting a one-stop-shop dedicated not only for condominiums but for all private residential buildings.

Another goal for the project is to expand the business model to the city of Timisoara, which will benefit from the work done in Italy and will adapt it to the Romanian conditions, launching and managing an OSS itself. Finally, the Bulgarian Energy Agency of Plovdiv will support the metropolitan area of Burgas and Plovdiv to take the example coming from Padova to prepare the conditions for the launching of sound one-stop-shop in Bulgaria.

The first deliverables of the project – namely D2.1, D3.1., D4.1. and D5.1 – are strictly interconnected. Their objective is to identify the enabling conditions and EU best practices of Project Promoters (Regional and Local Governments, Energy Agencies and private Businesses) that lead financially sustainable home renovation service schemes, based on public and/or private finance, supporting citizens to target ambitious energy savings. Each deliverable analyses these practices with a different perspective and focus: the OSS business model (D2.1.), engagement aspects (D3.1.), as well as technical (D4.1) and



financial engineering of the considered OSS (D5.1.).

The first part of the work regards the analysis of the JRC report “*One-stop-shop for energy renovations of buildings*” (Boza-Kiss, Bertoldi, 2018), which represents a review of case studies of past and current OSS, with primary focus on EU Member States. In the report, the JRC has identified the working models and the framework conditions in which OSS are successful and the benefits they offer to the client and/or the economy, pursuing the objective of improving the energy efficiency of buildings and, ultimately, taking actions on climate mitigation.

All of 23 OSS included in the report were evaluated and analyzed, trying to identify the most interesting aspects that could be useful for future implementation in the PadovaFIT EXPANDED project. The study of the single cases has been carried out in the following way: UB took care of the business model for the OSS, the Municipality of Padova of the engagements’ aspects, SOGESCA of the technical engineering and, finally, SINLOC of the financial engineering. At the end of this first review, a table was created in which the most interesting OSS initiatives have been reported and each project’s partner showed the most interesting findings relative to the respective area of interest. The analysis was focused on the key steps for the implementation process of an OSS for energy renovation: marketing, preliminary proposal, building inspections and energy analysis, quotation and financing planning, quality insurance, renovation works, financing, commissioning and follow-up. A great importance has been given to the assessment of how different choices on each previous element affect the cost incurred and the success of the initiative.

A further step of the analysis of existing OSS initiatives consisted in the creation of questionnaire to be sent to the contacts of the selected OSS, which contains question useful to conduct an in-depth analysis both in technical and financial aspects and to assess the subject regarding the engagement of all the possible stakeholders (private sector, local businesses, financial institutions, building managers and tenants). Every partner agrees that is fundamental to collect more information about the financial viability of such structures, the various form of interaction between the supply side and the demand side and the legal aspect regarding the set-up, the operation and the quality assurance of the OSS.

This deliverable is focused on the business models aspects of OSS. The purpose of Deliverable D2.1. is to carry out a critical review and analysis of existing business models adopted by One-Stop-Shops for home energy renovation services which are currently operative in Europe and beyond, in order to provide useful inputs to Padova FIT Expanded partners for the design of a suitable business model for the project’s OSS. The report is structured as follows:

- Chapter 1 identifies and describes the main typologies of business models adopted in OSS experiences, starting from grey and scientific literature;



- Chapter 2 presents the methodology adopted and the detailed analysis of case studies, carried out in collaboration and consistently with the other partners;
- Chapter 3 regards the evaluation of business models' replicability in the project target countries (Italy, Romania, Bulgaria), considering the key factors that can affect a model replication in other contexts.



D2.1. ANALYSIS OF EXISTING ONE-STOP-SHOP INITIATIVES IN EU AND BEYOND



LIST OF ACRONYMS/ABBREVIATIONS

| | |
|-------|--|
| EED | Energy Efficiency Directive |
| ESCO | Energy Service Company |
| EU | European Union |
| IEE | Intelligent Energy Europe |
| NEEAP | National Energy Efficiency Action Plan |
| NZEB | Nearly Zero Energy Building |
| OSS | One-Stop-Shop |
| PPP | Public Private Partnership |



1. MAIN BUSINESS MODELS OF OSS

A business model is the framework at the core of any company, molding it and defining its scope of activity among other things. Innovations such as building retrofit and energy efficiency measures do require the development of innovative business models which are able to overcome some of the issues that hinder the implementation of such projects. An example is the lack of interest of homeowners in improving energy efficiency, given that energy costs are only a small share of their income. This lack of interest is exacerbated by the fact that they are unaware of and have no knowledge about the existing measures and the benefits they provide (Mahapatra et al, 2013).

OSS are able to overcome these barriers thanks to their structure involving an integrated supply chain and customer interface that provides a single point of contact for the customer. The supplier offers homeowners a comprehensive package of services, consisting of a more extensive modelling and design phase, the production of a comprehensive residential retrofit plan and finally the implementation of multiple complementary measures. Delivery of these can be coordinated through the OSS itself. Some business models also include financing support as part of the offer. A key emphasis in the OSS business model is the attention to the needs of the client and a simplification of the customer journey, hence the importance of providing advice, a key service offered by any OSS (Brown, 2018).



1.1. Business models based on the degree of support

A more general classification of OSS business models starts from the degree of support the energy point is willing to provide to its customers (INNOVATE, EU Horizon 2020).

The **“facilitation” model** entails light support in the form of free of charge advice, either at a physical office and/or online, which is set up and whose operational costs are covered by the program authority. This type of energy point aims at raising awareness of the benefits of energy retrofits and promoting services offered by the main stakeholders. If the customer is interested in undergoing such intervention, the OSS will render technical assistance by recommending the available energy saving measures and technologies, providing a list of the existing suppliers and also giving advice on ways for the client to access financing if needed.

This model is able to attract customers more easily thanks to its free of charge service, and the ease of access to such service. However, the services offered are very limited, and homeowners will find themselves having to contact and meet different people in different places, such as the bank and suppliers, and then make to coordinate them.

Among the advantages of this model, the main ones are the ease and relatively moderate costs to be set up, and its ability to raise awareness of different market actors. However, the nature of this model makes it difficult to reach ambitious energy and climate objectives, since customers can still decide not to implement energy retrofit despite requesting advice from the OSS. Moreover, low income households who have no way to get access to financial support are very unlikely to take advantage of this service.

In the **“coordination” model**, the OSS coordinates various market players such as energy consultants, suppliers and banks or other financial institutions, which act as contractor, guarantee and provide financing, respectively. These actors pay the OSS a fee for the publicity, new market potential and other benefits they get by being part of this scheme and are directly paid by the homeowner who requests their service. In addition to the services provided by the energy point of the facilitation model – although in this case the service is more tailor-made to satisfy the needs of the customer -, the main key point of this type of shop is to coordinate a chain of suppliers or contractors by training them so that the quality of the intervention is guaranteed. Indeed, quality guarantee is crucial in order to attract customers. Long-term and affordable financing is also provided thanks to agreement with partner banks or public authorities which set up a revolving loan, with even the possibility to get the upfront payment of the works in case the homeowner cannot overcome high upfront investment costs.

This OSS is able to offer a wide array of services to homeowners who seek technical and financial support for their renovation project, while also ensuring high quality work due to certification schemes of suppliers. Financing is easier to obtain for medium- and high-income households, but it is still very difficult to access for low-income ones. However,



even though the energy point helps coordinate all the works, the homeowner has still to manage contracts and get in touch with several actors. Finally, although high-quality work is guaranteed, achieving estimated energy savings are not.

This model offers existing actors new opportunities and the chance to build relations between each other. However, given the heterogeneity of the actors, coordination might be difficult to achieve at times. It is more flexible and less risky, but it needs very high political consensus to set up a fund for those homeowners who demand energy retrofit projects with public funds. Just like the previous model, it is still unable to reach low-income households who struggle to obtain commercial loans.

The last model – the “**development**” **model** – provides the strongest support to customers. Indeed, it is the OSS itself that signs contracts with homeowners, as they offer them an integrated energy efficiency service package under their own name and responsibility. In this case, the energy point can also be set up independently without the support from any local authority. Compared to the previous model, this one is more tailor-made, as it is able to address customers’ needs, not only in terms of financial advice and marketing, like the coordination model, but also with respect to the products offered. House extensions or adaptations to specific situations or even type of housing are among the home renovation products available. Since the OSS takes on a central role, it is held responsible for the quality of the works, and sometimes also for the achievement of estimated energy savings. Furthermore, besides offering existing financial and fiscal instruments of partner banks or authorities, it can also develop its own financing scheme, and then the energy point gets paid back by the homeowner via a service fee or loan installments.

Homeowners benefit from the fact that they have to interact with a single entity for any aspect of the project, including financing unless the loan is offered by a partner bank. It is the OSS that deals with suppliers and contractors and guarantees good quality service and achievement of estimated energy savings. Follow-up is taken care of by the energy point in case works weren’t done properly. Moreover, this is the only model that allows all homeowners to have access to financing instruments, including low-income households. However, the service is not free of charge. If the OSS doesn’t offer any financial support, the homeowner will have to ask for a bank loan, which may not be available at conditions favorable to the homeowner, despite the guarantee that energy savings will be achieved.

The main advantage of this model is its ability to have complete control over the process and therefore it can affect customer experience. Moreover, it stands out for the fact that, thanks to its own financing support, it is able to attract low-income households who wouldn’t be able to afford the house renovation. However, setting up such a complex structure is time consuming, also from a legal standpoint, and since it directly competes with other market actors, it is subject to all the regulations in force.

This last model resembles the structure of an Energy Service Company (**ESCO**), which also offers the energy renovation project to homeowners. However, the two models differ



with respect to the product they sell and to their revenue source: the OSS of the development model signs contracts with the supplier and sells the supplier's product, whereas the ESCO offer its own product; ESCO's revenues depend on the achieved energy savings of the homeowner during contracted number of years, not from the sale of their product – as instead happens for the OSS of the development model.

From this first classification, we can see that the three models are centered around five elements which are at the foundation of an OSS, and whose combination of their different options give rise to a different OSS: the services offered, the users, the provider, the actors involved, and the revenue stream, as shown in Figure 1.

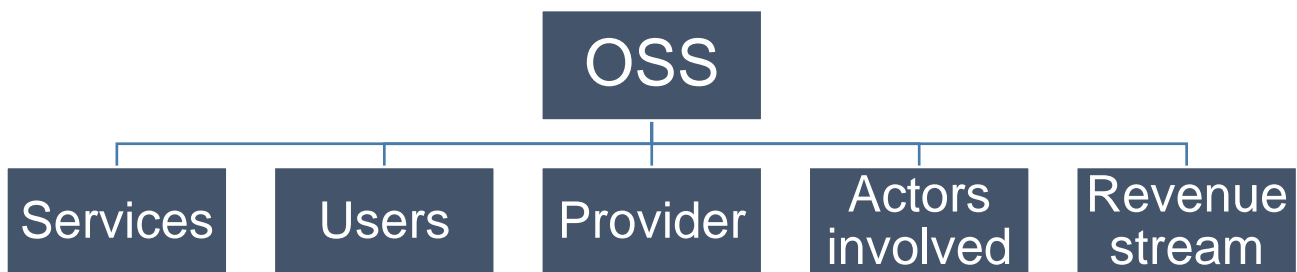


Figure 1 - Five main elements constituting the OSS business model (Source: own elaboration)

When it comes to services offered, the OSS has a wide array that can provide to its customers. Depending on the level of support and the complexity of the energy point, the same service can be either general or more tailor-made to satisfy customers' needs.

First of all, service packages offered by any kind of OSS include **marketing and communication activities**. On one hand, the most simple forms of OSS, which do not carry out renovation works, focus on raising general awareness of the benefits of energy retrofits and on promoting serviced offered by local authority or other stakeholder, both of which might be unknown to homeowners. On the other, more supporting forms launch tailor-made campaigns aimed at targeting specific homeowners with the goal of creating a demand for energy renovation projects. They also involve other actors who are available for the homeowners at times of need – that is when a new house is being purchased or when the owner is considering some kind of intervention such as a building extension.

Another service which is common to all OSS is the provision of **advice, both technical and financial**. Also in this case, a distinction has to be made depending on the type of OSS. The most basic ones recommend relevant energy saving measures and a list of suppliers who can carry out such interventions, whereas those OSS that also offer to carry out the intervention by itself step forward to assist clients with energy analysis or even energy audit. Concerning financial advice, the service ranges from explaining the existing financial tool for which the homeowner is eligible, to developing a financial plan, to helping



prepare documents necessary in order to access the financial instrument.

Whereas the aforementioned services are almost always present in the package, the following are limited to those OSS that coordinate other market actors or directly sign contracts with homeowners.

These kinds of OSS act as **coordinators of suppliers or contractors**. First of all they help with the coordination of suppliers and renovation works on behalf of the homeowner. They can also train them in order to be able to respond to the created demand. Finally, they can develop a certification scheme for quality suppliers.

Related to the last activity, OSS can also **ensure high quality** of the renovation works. They can develop a selection process and requirements for quotes so that only high quality suppliers are contacted to carry out the intervention. Guarantee of achieved estimated energy savings or of quality of products can be also be included at discretion of the OSS. If the energy point offers an integrated energy efficiency package under their own name, then the OSS bears responsibility of the works. As further guarantee, services of monitoring of the results and after-work follow up are usually included.

One of the most importance OSS services is that of **financing**. Considered the high costs of the intervention, unless being offered a loan or another kind of financial support, many households aren't able to afford the energy retrofit, hence, the role of the OSS in providing the funds necessary is paramount. The energy point has several options at its disposal: they can offer either existing financing instruments; low interest loans from partner banks or local authorities; an upfront payment thanks to an advance payment fund; or lower price on products negotiated with partner suppliers. Those OSS that carry out the intervention themselves also develop their own financing offer.

Finally, one last service provided only by the energy points that offers the most integrated service package and undertakes renovation works under its own name is **product supply**. Without relying on external suppliers, the OSS sells products for a specific type of housing stock and also home renovation products such as building extensions, flat adaptations, new appliances etc.



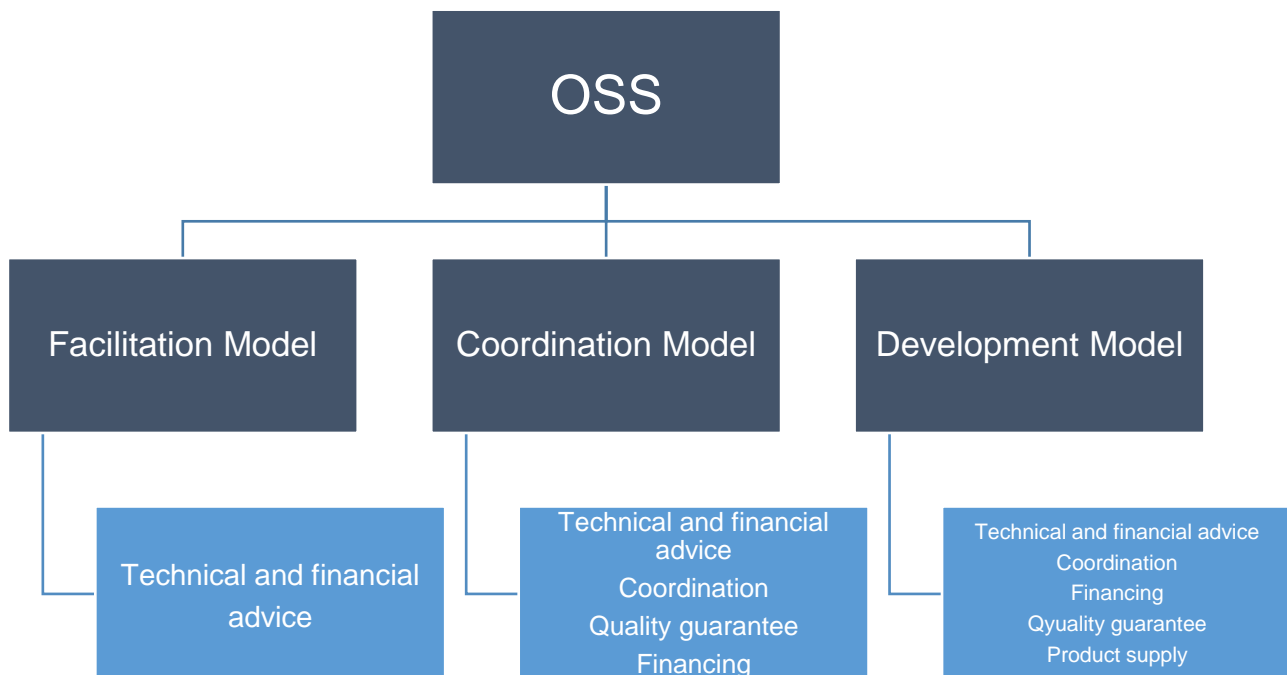


Figure 2 - Classification of OSS based on the degree of support to the customer along with the services each model provides. (Source: Re-elaboration by UB based on the work of INNOVATE project)

Moving on to the users, most OSS target homeowners or building owners. However, attracting customers is not an easy task for energy desks. Indeed, individuals tend to neglect these kinds of interventions due to the big investment necessary and also to the benefits that aren't reaped immediately but only after several years. Moreover, customers may lack awareness or confidence towards certain technologies and their benefits or lack technical information provided about them (UB, 2015). This, along with other cultural factors, might hinder the effectiveness of the OSS.

1.2. Business models based on the provider and actors involved

Two other elements defining the structure of an energy point are the OSS provider and the actors being involved in it. In the following paragraphs, OSS are classified according to their provider, and each model lists the players that take part in the OSS services. (EU



Horizon 2020 project STUNNING).

The OSS can be provided by a **multi-disciplinary team** in a cooperative manner, where several market actors with complementary competences join together to plan and execute the renovation project along with the homeowner in a holistic approach. This model is very similar to that provided by a **contractors' cluster cooperation**, where usually small and medium enterprises act as a single, big company with a very informal structure. Both models ensure control over costs and guaranteed performance, given that each actor specializes on a specific aspect of the project, and also lowers the vulnerability compared to isolated actors. In these models, the whole value chain of players of the renovation sector is involved in a collaborative manner – from architects and designers to material and equipment suppliers, from capital providers to engineers and developers.

The OSS can be provided by **Public Private Partnerships (PPP) or semi-public entities**. In the former case, a public sector authority, the homeowner and a private contractor in charge of the management and the development of the renovation project work together, whereas in the latter case, it is local authorities which join forces with private companies in order to provide OSS structures - the so-called renovation platforms. This model entails a holistic and owner-centric approach, where the customer is supported during every step of the project and coordination is facilitated by the renovation platforms, which can even become the general contractor if the homeowner requests so. These models include the participation of architects, designers, banks and contractors which are reached out by the private company and public authority which provide the OSS.

The OSS can be provided by a **company**, for example utilities, **as a complementary business**. The company decides to include also renovation into the scope of its services. Given the plurality of businesses it operates, the energy provider is able to offer homeowners qualified advice with energy audit, products at competitive prices, and its own financing support via loans. The company is very likely to attract customers due to them being clients of their main business, hence leveraging on customer loyalty.

Finally, the OSS can be provided by a **joint venture of retailers with industry and contractors**. The retailer is responsible for the sale of all the products needed for the home renovation as well as most of the services requested. The homeowner pays for the products and the services purchased, plus a commission fee for the retailer. The customer benefits from easy access to building refurbishment services from a single market actor, the retailer.

OSS assists customers with their renovation project, which usually entails a complete building retrofit all at once, but which can be also carried out through a **step-by-step approach**, which consists in the replacement of different building components according to their life duration. In the former case, it may occur that components that are still intact are replaced with newer ones despite still being intact. One of the main benefits therefore is that it gets the most out of each component before replacing it so that the initial investment is optimized in the best way possible. In order to achieve this, a plan needs to



be made for all measures, including those that will occur in the future, before beginning with the renovation. An advantage for the homeowner is that it allows to spread the costs over a longer time period, thus reducing the need for third party financing. In this case the designer is in charge of the whole renovation plan alongside the homeowner who involves all the contractors in successive phases.

The OSS can also be supported by **digital tools** which guide both homeowners and contractors during the initial phase of the renovation work. The tool can for example collect data about the building in order to recommend the best measures to be implemented for the renovation, while taking into account the customer's needs and preferences. However, the reliability of the digital tool highly depends on the quality of the information collected. If the information is accurate, this approach will ensure an effective process management allows for a comprehensive renovation intervention to be carried out. Here the tool supports the key players, that is the designer and the contractor by listing the main objectives and suggesting the best renovation measures. This is a first example of a service offered not only to homeowners but also to other actors involved in the renovation project.

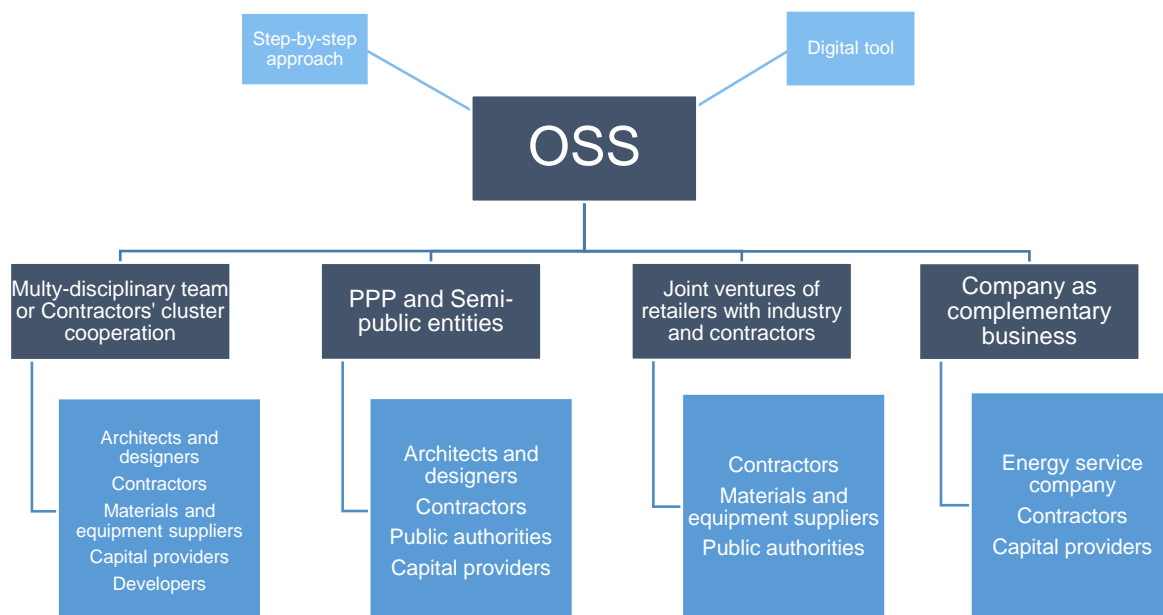


Figure 3 - Classification of OSS based on the provider along with the actors involved in each model (light blue), and the types of support (lighter blue) (Source: Re-elaboration by UB based on the work of STUNNING project)



As shown above, the importance of being able to provide financing to homeowners has been highlighted. Since energy retrofit projects often encompass the whole building and are therefore expensive to carry out, customers often have to take out a loan from banks or other institutions, but sometimes they are offered loans at conditions which aren't very convenient for them, and therefore they could end up renouncing the energy renovation intervention. Therefore, it is paramount that other financial schemes are offered to customers so that even low-income households can afford to undertake energy renovation projects. Although the following schemes don't require the presence of an OSS but are just alternative financing options for homeowners, the OSS can offer advice to them and make them aware that there are - if available at the local or wider level – less-known alternatives other than taking out a loan.

A first example is **home-based financing**, where property owners finance energy renovation measures via an additional tax on their property over a certain period of time. Moreover, if the property were to change ownership, the increased tax would also be transferred to the new owner. The local government issues bonds in order to pay for the renovation project, thus resulting in 100% upfront financing. Hence, this model involves the participation of a public authority which trains and coordinates the contractors, and capital providers which purchase the bonds issued by the authority, thus financing the project.

Through **on-bill financing**, the homeowner obtains the installation of energy efficiency measures with no up-front cost. The loan is paid back through the homeowner energy bill with two options: a personal loan – the on-bill loan - is issued to the homeowner and is repaid as an additional item on the homeowner's utility bill; otherwise, obligations of repayments is attached to the property and is transferred to the new owner in case the propriety is sold. This method is convenient to utility companies, which have enough equity capital to be able to pay for the whole investment.

Another financing scheme consists in the **leasing of renewable energy equipment** instead of purchasing it. The installation is owned by another party, usually a bank which invests in it. The homeowner pays a periodic lease payment to that party, which is more convenient than a loan due to more flexible terms and can make optimal use of subsidies and tax deductions. This model is attractive for companies which are introducing a new product into the market and need to push it, as leasing is cheaper than selling it.

Energy saving obligations are a policy tool that obliges energy companies to implement energy savings at the level of end users. Therefore, such companies are encouraged to stimulate energy efficiency services, but above all they have to offer attractive financing schemes to homeowners so that they implement the energy retrofit interventions.

Finally, in the **crowdfunding model**, the capital required for the investment is raised by a large number of individuals, local authorities and companies. The money given can be either a donation with or without reward, a loan with or without interest or investment with the acquisition of shares of the project.



Another issue that may hinder the decision of building owners to undertake the project or not concerns the benefits that they would reap from the energy retrofit, and if these outweigh the investment costs. The OSS can offer them advice not only in terms of innovative financing schemes, as shown before, but also with regards to revenue models.

The first revenue model hinges around **properties certified with green building label**. After the renovation, the value of the property increases thanks to a green label and an improved energy performance certificate, which guarantees the building performance. This model includes also another market actor, that is certification providers, which inspect the building and assess its energy performance before approving the release of the certificate. Hence, homeowners benefit from both the guaranteed energy savings and can also partially recover the investment costs by selling their property at higher price.

In the case of renter-occupied residential building or social housing association, the building owner can finance the renovation project and then recover the investment through **rent increase** and lower operational costs.

Finally, the **add-on** or **vertical extension** model is a renovation strategy entailing the construction on additional building units - façade additions, rooftop extensions, new side buildings etc. – that are added to the existing building. This kind of intervention immediately produces added value to the property through the creation of new dwelling areas, which can be sold or rented in order to recover the investment costs. For this reason, these projects are very attractive for the private sector, and are usually financed by a third-party who offers loans to cover the high upfront costs. Architects and designers play a crucial role here since the building must be able to support the extension. Because of that, they are also aided by engineers.

This last model is not meant to be used by homeowners but by the energy supplier. With a **feed-in remuneration scheme**, the producer of renewable energy obtains a direct payment based on the amount of energy produced, thus ensuring a reliable long-term source of income. This way the energy company can cover the increased costs of producing renewable energy compared to conventional energy. As said at the beginning, advice can also be provided not only to the end user, but also to other players in the renovation sectors.



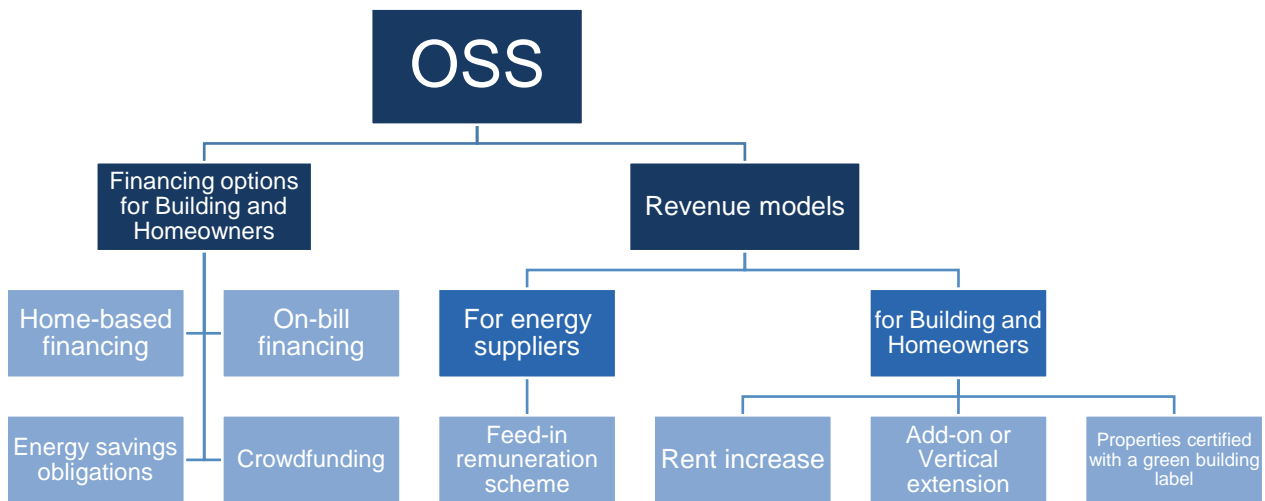


Figure 4 - The OSS can provide advice to building and homeowners on innovative financing options and revenue schemes available to them. (Source: Re-elaboration by UB based on the work of STUNNING project)

Finally, the OSS revenues can come either from the suppliers – in the form of a commission fee -, which undertake the contract for carrying out the implementation of the renovation project; from the homeowners, who pay for the work. It can either be a fee, or a share of the achieved energy savings; or from the provider, usually when public authorities promote energy retrofits. If the OSS offers financial support, he can make a profit from the interest on the loans.

1.3. Further OSS contribution to the value chain of the building sector

As said above, homeowners and building owners are the main targets of these proposed business models. However, there are other actors involved in the renovation works: architects, designers, material suppliers, contractors, real estate agencies, construction companies and many others. These actors also need proper training in order to be able to produce a high-quality outcome. OSS could expand the scope of their users so to encompass these actors as well or even completely switch their focus on them.

As stated in a report by the EU BUILD UP Skills program, “one important barrier that hampers the development of nearly zero-energy building and effective renovations is the lack of adequate construction skills. [...] Upskilling towards energy efficiency and sustainable energy should be done throughout the entire value chain of the building



sector.”.

As of now, these actors receive training from business associations, which target a specific industry and foster the creation of networks of companies within the same sector. However, there is little interaction between companies offering a different service. The OSS could fill this gap by being the common reference point from which companies seek technical training and advice. Additional training in this respect will benefit both the homeowner and the actor involved in the renovation project, which will be able to guide the customer in his choice with better knowledge of the measures available. Indeed, the OSS could provide advice also on the incentives and environmental regulations (e.g. energy class) which will come into effect in the near future, thus becoming the leading figure to the whole supply chain of the renovation sector. The EU is already promoting training programs on energy efficiency aimed at improving workers skill. For example, the PROF/TRAC (PROFessional multi-disciplinary TRAINing and Continuing development in skills for NZEB principles) program offers an adaptable training and qualification scheme and tools for professionals to self-assess their skills through an open, free to use, and constantly updated platform; the BUStoB (BUILD UP Skills to Business) program aims at developing training modules on various topics related to green skills for the building and installation workforce in the Netherlands. However, these programs are not available in every country, and might fail to include every actor involved in the value chain, whereas the presence of several OSS that are not centralized at the EU level but at a smaller scale (i.e. regional) could reach out even to those professionals who work in a very restricted area and have limited access to such opportunities. In Italy, the energy sector is extremely fragmented, and the single players have different levels of knowledge in the field of energy efficiency. A more inclusive and holistic view of projects that takes into account concepts such as sustainability is often lacking. Construction companies have low sensitivity to such concepts; architects are unaware and do not take full advantage of green incentives; banks, instead of promoting them, are reluctant to give loans to individuals who are investing in an energy retrofit project or a mortgage to purchase a “greener” house; suppliers could focus their range of products on those which will comply to such regulations.

The existing literature on energy points aimed at these actors is non-existent, and it definitely needs to be addressed, given the importance of this matter. Especially the most basic types of OSS could shift their focus from providing advice to homeowners to instructing the players in the renovation sectors. There are, however, a couple of models that include these actors as their main users, namely the use of digital tools and the feed-in remuneration scheme.



2. GENERAL OVERVIEW OF OSS/EXISTING INITIATIVES

As anticipated in the introduction, this report aims at analysing the business models of main OSS experiences on home renovation in Europe and beyond identified by partners, with the aim to learn from previous experiences and provide useful information for the development of the OSS in Padova FIT Expanded.

2.1. Methodological approach

Starting from JRC report (Boza-Kiss, Bertoldi, 2018) and integrating it with additional relevant cases selected from desk research, project partners developed a list of 26 OSS initiatives, planned or already implemented, to be analysed with a shared methodological approach. The analysis consisted in two steps presented below.

Step 1: Development of a common matrix

Each partner involved (Sinloc, Sogesca, FFS, CPD, UB) contributed to the development of a common matrix, according to their expertise and responsibilities in the project (see table below). The matrix aims to provide a comprehensive overview of the main elements and issues characterizing the activation, management and functioning of an OSS.



| <i>Issue</i> | <i>Partner involved</i> |
|---|-------------------------|
| General information | All |
| Business Model for OSS | UB |
| Engagement and Confidence Building | CPD |
| Technical Engineering | Sogesca |
| Financial Engineering | Sinloc, FFS |

Table 1 – Development of common matrix – involvement of partners in each section

A complete version of the matrix is available in Annex 1.

UB in particular suggested the inclusion of the following indicators, based on the relevant literature on business models (see table below):

| <i>Indicator</i> | <i>Description</i> |
|-------------------------------------|--|
| Initial investment/Funding | amount in € and origin of funding (e.g. private investment, public investment, etc.) |
| Revenue streams of the OSS | typologies of revenue streams (e.g. customer payment, fee, commission from suppliers, etc.); average annual amount; duration of revenues |
| Operational costs of the OSS | typologies of costs; amount of costs per typology in € (e.g. personnel, equipment, utilities, etc.) |

Table 2 – Business model indicators included the common matrix

These elements should be read in conjunction with the other dimensions of the matrix, which explore general, technical and financial aspects of the OSS which are also relevant to the business model (i.e. activities/services provided by the OSS; target clients; financial resources activated, etc.).

Starting from the information available in the JRC's report and from the screening of the initiatives' websites and their public documentation, partners filled in the matrix for the 26 cases.

Since business models data usually concern commercial aspects and may be confidential, the desk/web research on the selected cases provided limited information. For this reason, it was deemed necessary to develop a set of questions to be addressed to OSS representatives, in order to get deeper insights into the revenue mechanisms of these initiatives, as far as possible - given the confidentiality/sensitivity issues of these data.



Step 2 – Development of a questionnaire

In order to collect additional information, the Consortium agreed to write a questionnaire to be submitted to OSS representatives, focusing on a smaller set of selected initiatives. As happened in step 1, partners designed a set of questions in accordance to their competences. Questions have been shared among all the partners involved and a final version of the questionnaire was prepared.

The questionnaire is structured into 3 sections:

1. **Technical** - *developed by Sogesca*
2. **Financial & Business Model** - *Developed by Sinloc and FFS for the financial component, while UB focused on understanding Business model features and replicability*
3. **Engagement** - *Developed by CPD*

A complete version of the financial and business model questionnaire is available in Annex 2.

It was decided to submit the questionnaire only to a limited number of case studies, selected based on a voting procedure among partners. Each partner voted the most interesting initiatives based on their perspective. UB in particular suggested the initiatives which were most relevant to the Padova FIT Expanded project in terms of their target and scope, as well as the cases where a revenue mechanism could be identified and described.

Gathering all the preferences expressed by the partners, 12 OSS cases were selected:

| <i>OSS case study</i> | | <i>N° preferences</i> |
|-----------------------|--------------------------|-----------------------|
| 1 | BetterHome | 3 |
| 2 | Energies POSIT'IF | 3 |
| 3 | RenoWatt | 3 |
| 4 | Oktave | 2 |
| 5 | Reimarkt | 2 |
| 6 | SPEE Picardie | 2 |
| 7 | CLEAR project | 1 |
| 8 | Deseu | 1 |
| 9 | Retrofit | 1 |
| 10 | Småland | 1 |
| 11 | PKA | 1 |
| 12 | Kredex | 1 |

Table 3 – Case studies selected for the in-depth analysis through the questionnaire



2.2. Analytical study

The following paragraph presents the business model key elements for the overall 26 cases analysed in the common matrix. Overall, almost all OSS are set up through public grants – either from local authorities or the EU – which make up a large share of the total budget. In terms of revenues, the OSS charge a fee to either their customers or their suppliers, with the former being more common than the latter. The investment required in order to carry out the energy retrofit is substantial, usually being in the thousands of euros. These renovation projects usually have a holistic approach and include all aspects of the building energy systems. The OSS target a wide array of buildings, ranging from condominiums, to single family houses built in the mid-20th century, to public buildings etc. Most OSS provide financial support to their customers, mainly through grants or loans from partner financial institutions, although other ways are also adopted (e.g. through rent increase).

A deeper focus on the 12 selected cases selected for step 2 of the analysis is provided below, based on the available information. The description will be later on integrated based on the answers received to the questionnaires.

2.2.1. BETTERHOME

This OSS receives the whole budget from the four founders, who retrieve indirect sale revenues. Focused on lowering the energy consumption and improving indoor climate at the same time in single family houses built between 1950 and 1990, the OSS offers its clients 3 packages, namely, Energy Package, Comfort Package and Modernization Package. It also offers assistance in financing by providing the bank with the project details through its BetterHome tool. The associated banks – five - trust the BetterHome quality and financial characteristics. A single project usually entails investments of approximately €70000.

2.2.2. ENERGIES POSIT'IF

With a total budget needed to be set up of slightly over €2 million, of which 75% is financed through a grant from the IEE program, this OSS aims at activating between €60 and €90 million worth of investments over three years. Revenues come from a fee paid by the customers in order to get the service, which includes mainly measures targeted at



renewable energy heating and green electricity production. Energies POSIT'IF focuses indeed on energy efficiency programs with condominiums. Since the fee takes into account the energy savings, it is safe to assume that such investments are recorded on the citizens' balance sheet. The OSS also provides third-party financing in the form of grants and loans, either from the OSS itself or bank loans. Among the shareholders, we find two local financial institutions. The OSS is in contract with the bank, and the condominiums repay the debt as part of their monthly fee towards the OSS.

2.2.3. RENOWATT

The initial investment amounted to €2 million and it was completely funded by the EEEF program. It generated €59 million worth of investments in three years. This OSS interventions are aimed at municipalities and their existing buildings. Savings of energy consumption are guaranteed. Even though the OSS provides financing among its services, no information about partnerships with banks is available.

2.2.4. OKTAVE

Regional grants make up for 50% of this OSS funds, while the other half of the budget comes from the IEE program, for a total of €3 million. The OSS aims at supporting 2100 renovation projects over the first 4 years, and then 1500 projects per year afterwards. The projects target single family houses. It also helps set up the financing plan, which can combine grants, tax rebates, and commercial loans. In this context support includes connection with banks for loans, or with third-parties/ESCOs in order to repay the loan from the energy cost savings. The commercial banks involved indeed act as financing providers.

2.2.5. REIMARKT

This OSS, which is financed through municipal grants, obtains revenues from the suppliers in the form of a kick-back fee amounting to 10%. From 2014 to 2017, the OSS assisted 10.000 contacts, of which 1.750 invested in energy efficiency, and around 5% requested financing support. It targets owners and tenants of private housing and help them implement energy efficient retrofits piggybacking on other retrofits. Projects are funded through the rent, household's own funds or by taking out a loan. Indeed, the OSS assists grant and financial solution access.



2.2.6. SPEE PICARDIE

This OSS required an investment of €58 million in order to be set up. Its goal is to realize interventions for a total amount of €300 million over the next 5 years. Retrofitting a house costs about €30000, whereas the price gets halved for apartments. Depending on the scenario chosen by the client, there can be three different types of measures that are implemented: scenario 1 consists of Insulation of walls, roofs, floors, double glazing, ventilation; scenario 2 encompasses all scenario 1 measures, but provides thicker insulation; lastly, scenario 3 entails triple glazing on North side, dual flow mechanical ventilation, and heat pump in addition to all the measures from scenario 2. The OSS also provides loans and helps obtain grants if need be. In that case, third party financing will be ensured by public financial institutions.

2.2.7. CLEAR PROJECT

The total budget for the OSS is €3888330, of which 62% comes from a IEE programme grant. It aims at installing renewable energy systems. The OSS works through group purchasing by which several home owners decide to purchase together the product in order to exploit economies of scale and obtain the energy renovation intervention at a lower price.

2.2.8. DESEU

In a partnership with the financial company AFC First Financial Group, this OSS offers homeowners low-interest loans up to \$25000 and rebates for both the auditing and the component installation services. With a focus on residential buildings, this energy point provides energy retrofit with a holistic approach.

2.2.9. RETROFIT WORKS

This OSS is peculiar because it is managed by a cooperative. Hence, a small percentage is added to the fee paid by customers for the works and, given the nature of the OSS, revenues are then used to provide services for the benefit of the community. Financial support is also offered to homeowners via grant and certificate schemes.



2.2.10. SMÅLAND-BLEKINGE PILOT OSS

This OSS, which is completely financed by the Kamprad Family Foundation, focuses on renovation projects of detached houses. A single actor will coordinate with other actors to offer full-service holistic renovation packages including financing support.

2.2.11. PKA – SUSTAIN SOLUTIONS

The pension fund PKA invested €40 million in order to set up the OSS. Since they offer the capital to invest, it is safe to assume that such investments are recorded on the OSS' balance sheet. The choice of projects is at the discretion of the fund's members, who tend to favor those linked to sustainability such as wind farms and energy renovation plans.

2.2.12. KREDEX

With a grant volume of €102 million, this OSS targets complex building designs. Its core is the offer of grants and loan schemes, for which it can act as a guarantor. Two local banks act as financial intermediaries



3. BUSINESS MODELS' REPLICABILITY

One-Stop-Shops are a relatively new type of structure, which are currently being tested in different forms across the EU and outside of it. As the previous paragraphs showed, OSS differ according to the dimensions considered in our analysis, in terms of scope and target clients, geographical coverage, services provided, revenue and business model adopted, engagement practices, contractual types, relations with suppliers, financial resources and schemes activated. Also in terms of results obtained there is wide disparity, given that the initiatives are at different stages of development and implementation – closed, running, recently activated. Despite these differences, a main common aspect is that OSS aim to provide a combined and integrated set of services to the target users, ensuring a comprehensive assistance along all the customer journey and going beyond the simple provision of information.

This chapter aims to identify the main aspects and dimensions that should be considered when evaluating the replicability of an OSS business model. It starts from an overview of OSS “predecessors”, the energy info desks, which are diffused across all Europe as means to deliver relevant information about energy efficiency opportunities, whose diffusion has been primarily driven by policies at different levels and EU support. Later on, the main dimensions that affect replicability are considered, proposing a framework for the replicability evaluation of OSS business models.



3.1. Energy info desks

Starting as far as two decades ago, several “energy information desks” have been active in EU cities and towns. These structures have several elements in common with the OSS, since they aim to offer a qualified service to different types of stakeholders (citizens, businesses, professionals), to provide information on energy efficiency and renewable energy and facilitate investments in the field. These desks are usually set up with public funds, either from national/regional/local sources, or through European funds. (e.g. within EU-funded projects)¹. They can be managed by the regional/local authority itself or by a contracted agency/organization, like a regional or local energy agency or a dedicated organization. To our knowledge, a comprehensive picture and a quantification of energy desks’ diffusion in Europe, as well as their results, is currently not available. In Italy, such structures can be found in municipalities of all sizes, from the main cities to small municipalities.

A recent study by DG Energy mapped and assessed the information and awareness initiatives on energy efficiency implemented by Member States to comply with Article 17 of the Energy Efficiency Directive (EED), based on the analysis of their NEEAPs (National Energy Efficiency Plans). Energy info desks are investigated in the study, together with other measures, showing that such structures are the preferred means to disseminate the information measures and training activities on energy efficiency in five EU member States (VITO/EnergyVille, Denkstatt, ICF, 2018)².

Given their mainly publicly-driven structure and their informative scope, energy info desks are usually not characterized by a specific business/revenue model, since they provide services for free as means to foster and promote energy efficiency. The diffusion of such structures has been mainly driven by energy policies at the different levels, since they act as complementary tool to promote the information and awareness on energy efficiency opportunities and funding available in a specific territory.

¹ For example, the project “European Network of Information Centres promoting Energy Sustainability and CO2 reduction among local COMMunities (ENESCOM)” (2010-2012), supported by the Intelligent Energy Europe Programme, launched 16 local and 12 regional energy info points in the partner municipalities, organised training sessions, disseminated information and organised more than 260 awareness-raising activities along its duration

<https://ec.europa.eu/energy/intelligent/projects/en/projects/enescom>)

² In the study, such structures are named “consultation centres”.



3.2. Factors influencing replicability

Replication usually refers to the possibility to transfer the approach/model tested in a pilot experience to other contexts, which may present different boundary conditions (SCIS, 2017). In the context of Padova FIT Expanded, a relevant aspect is understanding to which degree the OSS services and their business models identified in the previous chapters are replicable in other contexts, in particular in the project target countries (Italy, Romania, Bulgaria), given that each local area is characterized by specific legal/political/administrative features, cultural aspects, economic and financial status.

For these reasons, to evaluate the replicability of a specific business model, a set of factors should be taken into account. A replication approach could consider the following main cluster of factors:

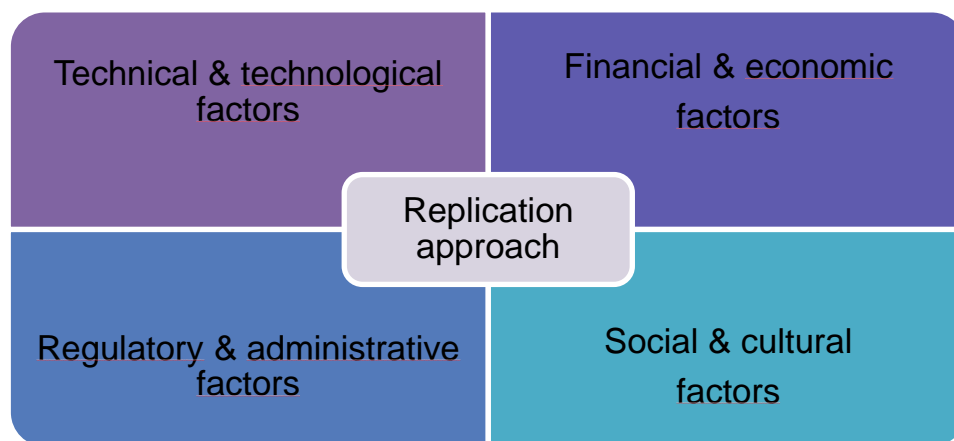


Figure 5 – Clusters of factors to be taken into account in replication (Source: own elaboration based on SCIS, 2017)

Technical and technological factors: given the types of services that an OSS aims to provide to its customers, a One-Stop-Shop may use a variety of technologies and tools, like for example software and applications for energy auditing, simulation models, financial assessment tools, etc. The availability and accessibility of these tools in the target countries may influence the possibility to adopt them and use them in the OSS activities (e.g. if they are open source or subject to the payment of a fee; if they are translated in the country's national language, etc.);

Financial and economic factors: the availability of specific funding sources or programmes in the target countries devoted to energy efficiency may influence the possibility to establish an OSS, as well as to replicate specific business models. Also, the financial/economic features of interventions promoted by an OSS may impact on its



replicability. An OSS which is able to promote interventions with a short payback time and relevant return on investment may prove more easily replicable, given the results it is able to provide.

Regulatory and administrative factors: the functioning of an OSS and the services it provides may be deeply influenced by the energy efficiency laws and policies in place in a country, including incentive mechanisms. Therefore, if an OSS business model is linked or dependent on the presence of particular regulatory conditions, these represent conditions for its replicability.

Social and cultural factors: an OSS business model may be deeply linked to specific cultural habits and social aspects. For example, in certain countries people may be more willing to ask for advice in consulting services such as OSS. Cultural habits may be coupled with different trust levels in these types of structures.

In order to evaluate how these factors impact on the replicability of OSS business models in the 12 cases selected for a deeper analysis, a set of questions was developed and included the Step 2 questionnaire (see Annex 3). Replicability questions aim to investigate the clusters of factors presented above. The questionnaire results will be discussed with project partners in the target territories, in order to understand if and how these factors may be present in their countries as well.



CONCLUSIONS AND FURTHER STEPS

The structure of an OSS involves an integrated supply chain and customer interface that provides a single point of contact for the customer. Homeowners are offered a comprehensive package of services, consisting of a more extensive modelling and design phase, the production of a comprehensive residential retrofit plan and finally the implementation of multiple complementary measures. Depending on the business model, the OSS can be more or less involved in the different phases of the building renovation project. This leads to a first distinction of the OSS based on the degree of support they provide customers. The facilitation model focuses only on providing technical advice, the coordination model coordinates the various actors involved in carrying out the renovating, whereas the development model offers its own solutions and contributes actively in the building retrofit.

Looking at the differences between these three models, it is clear that business models of OSS hinge around five main elements, namely: the services offered, the users, the provider, the actors involved, and the revenue stream. OSS services range from providing technical and financial advice, financing, coordinate actors, guarantee quality, to supply products. User-wise, most OSS target homeowners or building owners. Providers can be either a multi-disciplinary team or a contractors' cluster cooperation, PPP and semi-public entities, joint ventures of retailers with industry and contractors, or companies – usually utilities - who create OSS in order to start a complementary business. Financing options include home-based financing, on-bill financing, energy savings obligations and crowdfunding. Lastly, building and home owners can earn revenues through a rent increase, an add-on or vertical increase, or through properties certified with a green



building label. Also a revenue model for the energy supplier - the feed-in remuneration scheme - is available, implying that OSS users scope goes beyond building and home owners.

There are indeed other actors involved in the renovation works: architects, designers, material suppliers, contractors, real estate agencies, construction companies and many others. These actors also need proper training in order to be able to produce a high-quality outcome. OSS could expand the scope of their users so to encompass these actors as well or even completely switch their focus on them. The OSS could act the common reference point from which companies seek technical training and advice, which is now provided to each player separately. It could also provide advice on the incentives and environmental regulations which will come into effect in the near future, thus becoming the leading figure to the whole supply chain of the renovation sector. For example, in Italy, where the energy sector is extremely fragmented and the single players have different levels of knowledge in the field of energy efficiency, a more inclusive and holistic view of projects that incorporates sustainability could be offered by structures such as OSS.

An analysis of the business models of 12 existing OSS, mostly in but not limited to Europe, has been carried out. Overall, almost all OSS were found to be set up through public grants, and revenues mainly came from fees charged to customers. The renovation projects usually require a large investment, given that most interventions encompassed the whole building energy system. Finally, most OSS provide financing through partner financial institutions, with grants and loans available to customers if needs be.

Finally, a framework for the replicability evaluation of OSS business models has been defined, which will be used in next deliverable D2.2..to analyze the replicability of the OSS business models in the target countries – Italy, Bulgaria and Romania.

Four clusters of factors have to be taken into account in order to assess whether replication is feasible: technical and technological factors, financial and economic factors, regulatory and administrative factors, and social and cultural factors.

A questionnaire will be disseminated in January 2020 to the 12 selected OSS in order to collect more information concerning their business model and factors affecting replicability. These pieces of information will be used in the next deliverables.



D2.1. ANALYSIS OF EXISTING ONE-STOP-SHOP INITIATIVES IN EU AND BEYOND



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The PadovaFIT Expanded project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 847143.

ANNEX 1 – COMMON MATRIX TO ANALYZE OSS CASES

| | | | | |
|---|-------------------------------|-------------------------------------|--|-------------------------------------|
| | | WP2 - BUSINESS MODEL FOR OSS | | |
| | | WP LEADER: UB | | |
| | Name of the initiative | Initial investment/Funding | Revenue streams of the OSS | Operational costs of the OSS |
| 1 | Reimarkt | n/a | Kick-back fee of 10% from the suppliers. (Self-supporting in three | n/a |



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| | | | years – as of 2017) | |
|---|---|---|---|-----|
| 2 | Energies POSIT'IF | €2,1 million total budget for the project. The starting capital of €5.3 million of the ESCO is shared by the Regional Council and Local authorities (85%) and Private partners (2 financial institutions, 15%). To be increased to €15.5 million no annual budget allocated to the OSS. €1,545,763.50 EU budget (Intelligent Energy Europe programme) | The client pays a fee for the OSS services | n/a |
| 3 | Oktave | € 1.5 million starting grant from the Greater East Region of France (which is representing 50% of the capital of the company) IEE programme | n/a | n/a |
| 4 | RenoWatt | € 2 million initial investment (financed by EEEF) | n/a | n/a |
| 5 | KredEx | The grant volume is €102 million, public budget not available | n/a | n/a |
| 6 | EBRD credit lines | Various, public budget not relevant | n/a | n/a |
| 7 | Energy Efficiency and Renewable Sources Fund (EERSF) | Initial funding of €9,0 million from the Global Environment Fund (GEF) through the World Bank's International Bank of Reconstruction and Development (IBRD), from the Government of Bulgaria, the Government of Austria and from the Bulgarian private sector. Operates as a | As a lender, the EERSF provides loans at interest rates of between 4,5% to 9% for up to 5 years | n/a |



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| | | | | |
|----|------------------------------|---|--|-----|
| | | revolving energy efficiency fund. | | |
| 8 | PKA Sustain Solutions | €40 million investment by PKA, no public budget | Market based, no dependency on subsidies. The investment is repaid through savings on energy bills, plus interest on the loans provided | n/a |
| 9 | ENRA concept | n/a | Customer pays for the renovation as well as suppliers pays commissions while the service provider takes charge of the material and product, salaries & overheads, marketing, travel, subcontracting from the other partners | n/a |
| 10 | Bolig Enøk | n/a | Customer pays for the energy audit and analysis report (about 1000 €) and for the renovation (about 10500-300000 €) while the service provider takes charge of the salaries of the actors involved. The Project Manager Service will be offered at competitive terms | n/a |
| 11 | BetterHome | Indirect turnover was ~ €13 million in 2017 | Budget provided by Danfoss, Grundfos, the ROCKWOOL and VELUX Groups, who, in return, retrieve indirect sale revenues. However, the installers are not obliged to exclusively sell these | n/a |



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| | | | | |
|----|-------------------------------|---|---|---|
| | | | brands. So, the renovation contract is only between the building owner and the installer | |
| 12 | Haarlemse Huizenaanpak | Initial budget: revolving fund from the province of North Holland | n/a | n/a |
| 13 | Tighean Innse Gall | 13 mln£ of funding into the local economy | No fee on energy advisory for Western Isles residents | n/a |
| 14 | Stroomversnelling | Support from Members of Stroomversnelling, Ministry of Interior and Kingdom Relations; H2020: The grant is for up to €3.6 million over the three years 2016 to 2019 Interreg NW Europe: 5,2M€+11,58M€ | The Guardian 6 months ago on Net Zero Energy programme: "Costs are relatively high, at £85,000 per property initially but are expected to fall to £62,000 by the end of the programme." | n/a |
| 15 | Energy Savers | n/a | n/a | n/a |
| 16 | Elevate Energy | n/a | Energy assessments to help homeowners find ways to be more energy efficient Homeowners may qualify to receive free weatherization improvements, LED lighting, programmable and smart thermostats and more Need to verify existing intermediation fees on contractors revenues | 2017: 17,5mln\$ (84% Program expenses, 15% General and Administrative, 1% others) 2016: 12,4mln\$ (81% program expenses, 15% General and Administrative, 4% others) 2015: 13,8mln\$ (84% Program expenses, 15% General and Administrative, 1% others) |



| | | | | |
|----|--|---|--|--|
| 17 | Energieheld | n/a | Customer pays for the renovation while the service provider takes charge of the whole costs (salary of product manager, marketing, consultancy, administration and support) earning money from the partners of the value chain involved, paying a fee to become members of the cooperation cluster | n/a |
| 18 | DESEU (Home Performance with ENERGY STAR program) | n/a | Through the HPwES Program, customers can receive an instant rebate covering 75% of the cost, up to \$300, of an HPwES audit. The SEU offers program rebates up to \$6,750 for the installation of recommended air sealing, insulation, and HVAC upgrades | n/a |
| 19 | Public Energy Efficiency Service/SPEE Picardie | The financing need for the operator of the SPEE is 58 M€ for 2000 projects: €50 million for the works | The average cost of the measures is 30.000 € VAT excl. for a home and 15.000 € VAT excl. for an apartment | €8 million for the operations (agency, renovation technicians, pilot sites, first loss guarantee fund) |
| 20 | CLEAR project | €3,9 million total cost of the CLEAR project of which €2,4 is public budget (Intelligent Energy Europe programme) | The cost for the client (either the supply or the demand side) to use the OSS services | n/a |
| 21 | Rhodoshop Programme Development Unit (PDU) | € 0,5 million (EU Horizon2020) | n/a | n/a |



D2.1. ANALYSIS OF EXISTING ONE-STOP-SHOP INITIATIVES IN EU AND BEYOND

| | | | | |
|----|------------------------------------|---------------|--|-----|
| 22 | Småland-Blekinge pilot OSS | n/a | n/a | n/a |
| 23 | Retrofit Works | n/a | For every job that passes through RetrofitWorks, a small percentage uplift is added to the cost of the work Being a cooperative, the percentage fee goes back into providing member services for the benefit of the local community | n/a |
| 24 | CleanTech | n/a | market based | n/a |
| 25 | Adsboll - Projekt Lavenergi | n/a | market based | n/a |
| 26 | Be Reel! | €13,9 million | n/a | n/a |



ANNEX 2 – QUESTIONNAIRE ON FINANCIAL AND BUSINESS MODEL ASPECTS

1. Which was the amount of investment needed to set up the OSS?

.....

2. Did the set-up of the OSS benefit from public or private dedicated grants? Yes/No.

If yes, please indicate which ones and their share:

| Grants type | Share (%) |
|--------------------------------------|-----------|
| national grants | |
| regional grants | |
| municipal grants | |
| other public grants | |
| private grants | |
| other contributions (please specify) | |

3. Which was the target amount of investments to be activated by the OSS?

.....



D2.1. ANALYSIS OF EXISTING ONE-STOP-SHOP INITIATIVES IN EU AND BEYOND

4. What are the main revenue streams of the OSS? (Please indicate them and provide an estimation of their economic dimension on an annual basis)

| Revenues streams types | Average economic dimension on annual basis (€) |
|----------------------------------|--|
| Fee paid by the customers | |
| Fee paid by the suppliers | |
| Kick-back fee from the suppliers | |
| other (please specify) | |

Please add detail if needed:

5. In case a fee to access the OSS services is foreseen, what is the amount?

| Fee types | Fee amount (€) |
|----------------------------------|----------------|
| Fee paid by the customers | |
| Fee paid by the suppliers | |
| Kick-back fee from the suppliers | |
| other (please specify) | |

6. What are the main operational costs of the OSS? (please indicate them and provide an estimation of their economic dimension on an annual basis)

| Operational cost types | Average economic dimension on annual basis (€) |
|-----------------------------|--|
| Personnel | |
| Equipment | |
| Utilities | |
| Other (please specify)..... | |

Please add detail if needed:

7. Considering energy efficiency investments directly or indirectly generated by the OSS, on which budget are they financed? Please indicate on which ones and their share on total budget:

| Budget | Share on total budget (%) |
|----------------------------------|---------------------------|
| OSS' own budget | |
| Financial institutions' | |
| Private actors' (citizens) | |
| Public entities' | |
| ESCOs | |
| Other subjects' (please specify) | |



8. Considering energy efficiency investments directly or indirectly generated by the OSS, what types of interventions do they regard? Please indicate which ones and their share on total investments:

| Interventions | Share on total investments (%) |
|--|--------------------------------|
| Building shell | |
| - vertical cladding | |
| - horizontal cladding | |
| - window | |
| Heating systems | |
| - Condensing boiler | |
| - Heat pump | |
| - Thermoregulation | |
| Air conditioning systems | |
| Fixtures | |
| Lighting | |
| Appliances | |
| Building automation | |
| Renewable energy production | |
| - PV system | |
| - Solar heating system | |
| - Geothermal | |
| Integrated interventions (please specify which ones) | |
| Educational programmes/training | |
| Technical assistance | |
| Other (please specify) | |

9. Considering energy efficiency investments directly or indirectly generated by the OSS, what types of financial instruments do they use? Please indicate which ones and their share on total investments:

| Financial instruments | Share on total investments (%) |
|---|--------------------------------|
| Private's own resources (eg. households') | |
| Grants | |
| Loans | |
| Crowdfunding | |
| Bonds | |
| Other (please specify) | |



10. Which are the main characteristics of the financial instruments mentioned above?

| Characteristic | |
|------------------------|--|
| Beneficiaries | |
| Amount | |
| Selection criteria | |
| Financing conditions | |
| Rate | |
| Pay-back period | |
| Other (please specify) | |

11. Which types of financial actors are involved in OSS activities? Please indicate which ones and their role in the OSS

| Financial actors | Role in the OSS |
|-------------------------------|-----------------|
| Commercial banks | |
| Public financial institutions | |
| Credit unions | |
| Saving and loan associations | |
| Mutual savings banks | |
| Insurance companies | |
| Pension funds | |
| Finance companies | |
| Mutual funds | |
| Other (please specify) | |

12. How is the relationship with financial actors mentioned above managed? (i.e. economic conditions, involvement, etc.)

.....

13. Are financial actors selected through calls for tenders? Is there a supplier list? Closed or Open? How frequently do you update this list? Can a supplier ask to be included in the list? And how?

.....

14. Does the OSS/project activate some guarantee scheme? Please indicate which ones and what share of investments they cover on average.

| Guarantee forms | Share on investments (%) |
|------------------------|--------------------------|
| Insurance | |
| OSS' own guarantee | |
| Third-party guarantee | |
| Other (please specify) | |



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15. Please express your opinion about the main advantages and the main limits of the different financial instruments and guarantee schemes adopted by your OSS:

.....

16. Which selection process does the OSS apply? Please describe the selection and evaluation criteria for investments used by the OSS.

.....



ANNEX 3 – QUESTIONNAIRE ON BUSINESS MODEL REPLICABILITY

1. Is the business model of your OSS scalable?

- No, it only works at a specific scale
- Yes, with some changes/adaptations
- Yes, it is completely scalable

Please motivate your answer:

2. Is the business model of your OSS linked to specific laws/incentives available in your country/region?

- No, it is not linked to any specific laws/incentives
- Yes, it is linked to specific laws/incentives

Please motivate your answer and list the related laws/incentives:



3. What is the average return of investment of interventions supported by your OSS?

- Short-term (1/5 years)
- Average-term (5/10 years)
- Long-term (10/20 years)

Please motivate your answer:

4. Is the business model of your OSS linked to a specific cultural habit or behaviour in your country/region?

- No, it is not linked to any specific cultural habit/behaviour
- Yes, it is linked to specific cultural habit/behaviour

Please motivate your answer and describe the related habits/behaviour:

5. Are technologies adopted by your OSS easily available (e.g. audit tools)?

- They are open source and freely available
- They are open source and available based on a fee payment
- They are proprietary and available based on a fee payment
- They are not available for use by others.

Please list the technologies adopted by your OSS and their main functions:

6. Did you experience any obstacles (e.g. of technological, socio-cultural, political-institutional, economic-financial type) in launching the OSS? Which measures did you adopt to overcome these obstacles? (please describe).....

7. Which factors (e.g. of technological, socio-cultural, political-institutional, economic-financial type) facilitates/facilitated the OSS activities? (please describe).....

