Guidelines

How to develop a business model for One Stop Shop house renovation

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ONE shop

ERA-NET Eracobuild project

(1st September 2010 – 31st August 2012)

One Stop Shop
"From demonstration projects towards volume market: innovations for one stop shop in sustainable renovation"

http://www.one-stop-shop.org

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Helge Aschjem, Bolig Enøk *(middle photo)*

Architect T. Wimmer *(bottom photo)*
www.iea-shc.org/publications/downloads/task37-116-St.Valentin1.pdf

R. Steiner/T. Hartl, architect I. Prieler *(top photo)*
www.iea-shc.org/publications/downloads/task37-140-St.Martin1.pdf and www.grundstein.cc

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Contents

This report was written in fulfilment of the ERACOBUILD project entitled "One Stop Shop - From demonstration projects towards volume market: innovations for one stop shop in sustainable renovation", supported by IWT - the Flemish agency for Innovation by Science and Technology, Tekes and the Nordic Innovation Center.

Project Website:
http://www.one-stop-shop.org

Project start date:
01-09-2010; duration: 24 months

Project description

European and national ambitions for renovation lead to the prescription of greater energy performance standards, including objectives such as attaining the passive house standard, and zero-energy or CO2-neutral building. Consequently, it is becoming increasingly clear that the market for energy-efficient renovations will undergo dramatic change, both in volume and in terms of the need for more thoroughgoing renovations. Such renovations include innovative solutions to reach different target groups and to find solutions for technical bottlenecks. At present, advanced renovation of residential buildings is an emerging market in all European countries (to a greater or lesser degree), and is implemented in demonstration projects only (typically supported by subsidies). The Small and Medium-sized Enterprises (SMEs) that are involved are the front-runners/trend setters in renovation in the residential sector. Existing barriers include the fragmentation of the renovation process, which is split among many SMEs, each doing a fraction of the renovation work. Moreover, homeowners do not have a structured way to obtain all the necessary information for decisions on renovation solutions, e.g. contacts with building companies, quality assurance, and financing opportunities. These two problems are the core that we want to address in this project, by specific actions towards clustering innovative technologies to reduce the fragmentation of the renovation process for single-family houses, and increasing competencies, knowledge and innovation on the part of SMEs; and developing a one stop shop tool as a platform for both homeowners and companies offering holistic renovation solutions.

Objectives

The project's overall aim is to facilitate market penetration (market volume) for renovations of single-family houses to a very high energy standard that are sustainable and provide superior comfort to occupants.

The following assumptions will be investigated within the project: clustering the various innovative technologies provides the client with a less fragmented renovation process. Clustering also ensures a structured transfer of innovations to SMEs. The development of a 'one-stop-shop' tool as a platform for both client and company gives the opportunity to create supply and demand for holistic, integrated retrofit solutions. The clustering of innovative technologies can give SMEs the opportunity to develop skills, knowledge, capacity and a competitive marketing formula for holistic, cost-effective retrofit solutions. A 'one-stop-shop' tool for sustainable renovation can give homeowners the opportunity to make an informed investment decision. It simplifies access to quality-oriented constructors and companies. Together, these companies offer integrated retrofit solutions. Disclosure and publicity of project results can convince clients and SMEs to implement innovations.

Project partners

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Executive summary

The One Stop Shop Project

Introduction

The main objectives of the One Stop Shop project are to overcome barriers such as the major fragmentation of the renovation business on the supply side and the lack of a structured way for homeowners to obtain information for the purpose of decisions on renovation solutions. This missing link, which was also identified in IEA SHC Task 37 [9], is hindering the wider uptake of sustainable renovation across Europe. One of the strategies for attaining this goal is to cluster innovative technologies so as to reduce fragmentation of the renovation process and, specifically, for SMEs to increase their knowledge, skills, capacity and competitiveness with a view to offering holistic, cost-effective renovation solutions.

The project was set up under the European ERA-NET Eracobuild programme and coordinated by the Passiefhuis-Platform in Belgium. The other research partners are: the Belgian Building Research Institute, Norwegian consulting firm Segel AS, the Technical University of Denmark, VTT Technical Research Centre of Finland, and VCB, Vlaamse Confederatie Bouw (Belgium). The project followed up issues studied in the Nordic research project entitled SuccessFamilies, which was coordinated by VTT. [1]

One of the work packages (One Stop Shop business models for holistic renovation) in the One Stop Shop project was devoted to developing this guideline for how the supply side could set up a successful business model for holistic renovation of single family houses, based on experiences from pilot models in both the One Stop Shop project and the SuccessFamilies project. In the latter project, one of the main objectives was to develop new business concepts which combined technical solutions, financing services and promotion so as to overcome the existing behavioural, organisational, legal and social barriers to sustainable renovation.

Research approach

Several business models for single-family house renovation were studied in these two projects, and guidelines were developed around the examples of new business models that were detected. These examples include descriptions of stakeholders and the company in charge, cooperation, product and services offered, marketing and educational programs, as well as responsibility and quality assurance. These issues were discussed for the purpose of developing related topics into guidelines for One-Stop-Shop models, offering the homeowner information about the various professions involved in renovation, all in one place. The information was gathered in one-on-one meetings and in workshops and seminars, which were attended by government-level representatives. The seminars were very fruitful in providing an overview of the market situation for holistic renovation of single family housing. Particular attention was given to the introduction of governmental measures in the market in order to push holistic thinking rather than sub-optimal solutions.

The researchers from the One Stop Shop project drew inspiration mainly from the business model of Bolig Enøk AS, the Norwegian pilot project. Bolig Enøk AS was established in 2010 and started developing a One Stop Shop service, defined as a "project manager" approach, in 2011. In developing the guidelines, we both discussed and tested different strategies and measures with Bolig Enøk in order to get as close as possible to a realistic One Stop Shop development.

In the SuccessFamilies project and One Stop Shop, we established cooperation with pilot projects developing different types of business models. These different models involve different stakeholders from various levels in the value chain, and their product range mirrors the companies involved as well as the company in charge of the business. In addition to the Norwegian case, national cases of One Stop Shop business development were defined in Belgium (a "consultant" approach), Denmark (an "energy service" approach) and Finland (a "retail" approach). These cases were used to understand whether the guidelines developed by this project would be applicable to other countries and other initial situations of business development.

In addition to cooperation by the researchers with the various business development pilot tests, a set of different methods was used in this process of information gathering, analysis, documentation and development of the guidelines:

1) Theoretical studies:
   a. Several pilot models were described and studied through [2]:
      i. PEST analysis
      ii. Six Forces model
      iii. SWOT analysis

2) Osterwalder and Pigneur's "The business canvas model". [3] Workshops and one-to-one meetings with representatives from the pilot models in the participating countries
   a. Discussions regarding development of the business model

3) Workshops involving the researchers and representatives from the different pilot models and governmental bodies in order to identify barriers and drivers in a successful market introduction of new business models, through discussion of:
   a. Building stock analysis
   b. Different stakeholders' interests in the market
   c. Educational challenges regarding holistic thinking; both for homeowners and the supply side
   d. Subsidies and other measures to stimulate holistic offers rather than sub-optimal approaches

4) Participation in a networking event held in Antwerp on 18th April 2012 [4] where means of collaboration between the actors in the value chain were discussed in the context of renovation project case studies; the actors subsequently discussed the development of a business model for collaboration

5) Energy seminar and workshop held in Nordfjordeid on 19th June 2012. At this workshop, a number of craftsmen discussed the renovation of two single-family houses, for which Bolig Enøk AS had performed baseline energy audits

6) Workshops with Bolig Enøk AS regarding evaluation of their model on an overall basis, and regarding start-up activities in general
   a. Product development and innovation
      i. Customer satisfaction and evaluation. Customers who bought an energy efficiency status report of their house were interviewed by Segel AS
   b. Market segmentation and marketing activities
   c. Development of educational programmes; courses and training programmes for professional craftsmen, hardware store employees and homeowners
   d. Implementation and up-scaling of the business model in order to go nationwide

The One Stop Shop researchers analysed all this information and used it to develop guidelines on how to set up a business model for a One Stop Shop for renovating single-family houses. These guidelines resulted in the definition of three consecutive steps.

Guidelines to develop One Stop Shop pilot models

First step - Preparation

Status Analysis

First, a broad understanding is needed of the competitive arena in which the business model is to operate. A combination of a PEST analysis and the Six Forces model is a good start. PEST analysis is a tool for defining the most important Political, Economic, Social and Technological issues which influence the environment and framework for the business. Within this environment, the Six Forces model describes the actors in the competitive arena: customers, suppliers, competitors, potential new competitors, substitutes, and complementary businesses. Complementary companies often turn out to be important collaboration partners or actors which influence the market, e.g. banks charging lower interest rates on mortgages for energy-efficient renovation. These two analysis models feed information into the SWOT analysis, which summarises the future business model's internal Strengths and Weaknesses and external Opportunities and Threats. It forms the information foundation from which the business model is developed.

Second step – Business Model Canvas

Business model sketching

Based on this analysis, the company in charge of the future business collaboration is recommended to draw up a business model for the activity using the Osterwalder & Pigneur "Business Model Canvas", which consists of the following nine blocks: customer segment, value proposition, key activities, key partners, key resources, customer relationship, channels (communication, distribution and sales), cost structure, and revenue stream. These building blocks, which form the basis for a tool called "business model canvas" [3], are used to discuss a full-service or one-stop-shop concept for energy-efficient renovation.

The usefulness of the business model canvas was tested in the various partner countries. Several pilot One Stop Shop companies worked with the research partners to complete the value propositions and provide the information needed in all nine blocks. The company in charge of the business model drew up a potential business model and discussed it with future partners. The guidelines recommend continuing the business model development process by having a one-day internal workshop with all (potential) collaborating partners attending. Apart from a total understanding of the business model, special issues regarding the internal cooperation structure and lines of command should be on the agenda and can be dealt with in separate discussions between the partners.

Third step - Strategic focus and implementation

Strategies and action plan

Based on the SWOT analysis and the Business Model, the partnership between the actors contributing to a One Stop Shop must define their level of ambition through a vision statement. How to reach the vision must be expressed first through their strategic choices. The main questions to answer are: 1) What is to be sold (what is unique about the product/service); 2) Who are the target groups? (It is recommended that the market-oriented people answer this first); and 3) How should it be sold?

During this research project, some specific strategic issues came to light which all One Stop Shop models should consider how to solve. These are:

- How to guarantee that the right competencies are available in the right place
- Quality assurance.
- Legal issues.

Making strategic choices also includes being clear on what you are not going to do. A typical pitfall for many companies is that they make too many compromises in order to keep everybody happy.

In order to implement the strategies that have been developed, a specific action plan is needed which defines planned progress, responsibilities, and the necessary resources (financial and human).

How to benefit from positive customer experiences

Satisfied customers can be a major source of recommendations to other potential customers. Business developers should think about how to use such experiences and peer-to-peer communication for market development. The guidelines recommend that you should tell your customer: if he/she is not satisfied, to tell you, and if he/she is satisfied, to tell all his/her friends. An evaluation of every project to ascertain customer satisfaction and identify how they first heard about the service will give important input in order to improve and promote the service. The aggregated knowledge will also drive change, e.g. in marketing strategies, as the market develops.

After-sales services should be offered to maintain contact with customers. They should include periodic reviews and maintenance of the installations, which also means potential additional sales for the One Stop Shop company.

Conclusion

We hope that this booklet can help companies tap into the major business potential of housing renovation. The guidelines show how companies can change their business towards a systemic offering of highly energy-efficient housing renovation by specifically addressing owner-occupiers. The guidelines are based on experiences from different pilot projects and the various sections have been systematically ordered and deployed on the basis of modern theory of business development. By following the guidelines, enterprises in any country should be able to develop a One Stop Shop in an efficient way.

1. Introduction

In line with the project's overall objectives, this document is made to facilitate the process for companies intending to establish a One Stop Shop business for holistic renovation of single family homes. The authors have studied different business models that have been launched in the participating countries. Based on the lessons learned from these cases and combined with the authors' substantial experience in business development, this guideline should be helpful for companies planning to develop the market for energy-efficient renovation of single family homes.

The guide is meant to be practical throughout the process, starting with analyses and preparations and ending with implementation and how to follow up.

2. How to get started?

Before starting a structured business development process, we recommend first answering a few basic questions:

1. What are your motivations and expectations in undertaking this process?
2. What resources do you possess for the development process itself?
   a. Regarding human resources; do you have project management capabilities in-house?
   b. Financial resources to cover the development phase?
3. Is the idea already deeply rooted in your organisation, including the Board?
4. Do you already have good partnerships with complementary skills?

If you have a clear picture of how you can develop a new business for your company within this field, you will also be better able to communicate and motivate other people to be enthusiastic about it. Few small and medium-sized companies have the capacity and the right competencies to undertake new business development within a tight time schedule. The options are therefore either to accept that it will be a long time before you get started or to hire an external business consultant. If the project is structured as cooperation between several companies or as an innovation project, there may be public funding opportunities available.

Evidently, new business development should be conform to the strategies decided by the company's Board. If not, you should first review the strategies with the Board. The reason is that launching a One Stop Shop is an investment by your company and, therefore, needs to be given priority by the owners.

Many companies have already established ad hoc cooperation in specific projects and have both positive and negative experiences. Therefore, you probably have some potential partners in sight before starting this process.

If this initial homework is completed, the figure on the next page shows the big picture of the process that this guideline will take you through.

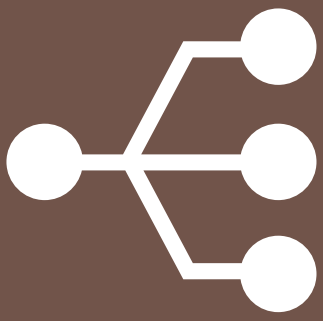
Preparation

Search and collect relevant information
Structure and analyse
Summarise
Prepare for discussion

Common understanding

Workshop: Structured discussions
Conclude on what are your:

- *Strengths*
- *Weaknesses*
- *Opportunities*
- *Threats*



Business modelling

Workshop:

- *Define customer segments*
- *Define the unique service*
- *How to process the service?*
- *How to generate cash flow?*

Implementation

Task forces:

- *Define your priorities*
- *Define action plan for start up*
- *Define procedures for follow up*

Figure 1: The development process

3. Preparation and Status Analysis

3.1 Information gathering

The first step is to collect all relevant information on which to base the decision of how to establish your One Stop Shop. The checklist below lists the information that needs to be gathered. Please note that this list should be complemented by your own knowledge of what is relevant for your country/ region.

Type	Relevance	Where to find it
Indirect influence (PEST factors) • Political (regulations, tax policy,...) • Economic (homeowners' income level, interest rates, energy costs,...) • Social (income levels, demographics, educational level, health,...) • Technological (number of new passive houses, successful renovation projects, speed of technological development..)	• What are the most important drivers and challenges influencing the market for sustainable housing and energy-efficient renovation of single family homes? • How do these factors impact the market?	• Updated regulations can be obtained from the government agencies in charge of buildings. • New political initiatives within this area may normally be found on the website of the Ministry in charge of housing policy. • Statistical information for all countries can be found at: • http://www.ssb.no/english/links/ • Technological development: Research institutes and governmental bodies.
Identifying different segments and their potential • Building stock analysis • Demographic location • Newly-acquired houses	• Find potential segments in your area which need the service you plan to offer. • A segment is a specific combination of type of owners, home characteristics and their situation (e.g. newly moved in).	• On a national level, many countries have advanced building stock analyses. Some even have details at a municipal level. • The technical department in the municipality normally has information about location and year of construction. • You may be able to identify the area of the town where people will have the financial capacity to invest in holistic renovation. • The property registry and estate agents have information about homes that change owner.
The relevant market actors such as: • Suppliers • Existing competitors • Potential new competitors • Relevant substitutes for your service • Companies offering complementary services to homeowners (e.g. banks, utilities, estate agents, etc.)	• What are other actors doing in your geographical area which may influence this business? • Some complementary actors may currently represent a barrier/threat to the establishment of a One Stop Shop service, but they may even turn out to be important partners.	You should already have most of this information, but have you checked their websites recently to see what services they are actively promoting? • Do you know about their financial situation? In the Nordic countries, that information is available online, while in other countries it can be bought from credit information agencies such as Dun & Bradstreet, Lindorff, Experian, etc. • To identify complementary actors, you need to use your local knowledge.
Internal capabilities and capacities • Resources (skills, human resources, physical location and equipment, capital, customer base) to be used for one stop shop service. • Synergies between your existing activities and a one stop shop service? • What are your challenges today and how will this influence a one stop shop?	• Do you have the preconditions for establishing a One Stop Shop? • What are your constraints in this respect?	• Logically, this information must be gathered internally. • Structure (simplify) the information about financial situation, internal capacity, etc • Some of the information will also come up through internal discussions. This will also be an important part in the next step (analysis).

Table 1: Information gathering

3.2 Structuring and analysis

The information that is gathered must be analysed, preferably with the help of the tools presented in the next paragraphs. The figure below gives an overview of the analyses to be performed:

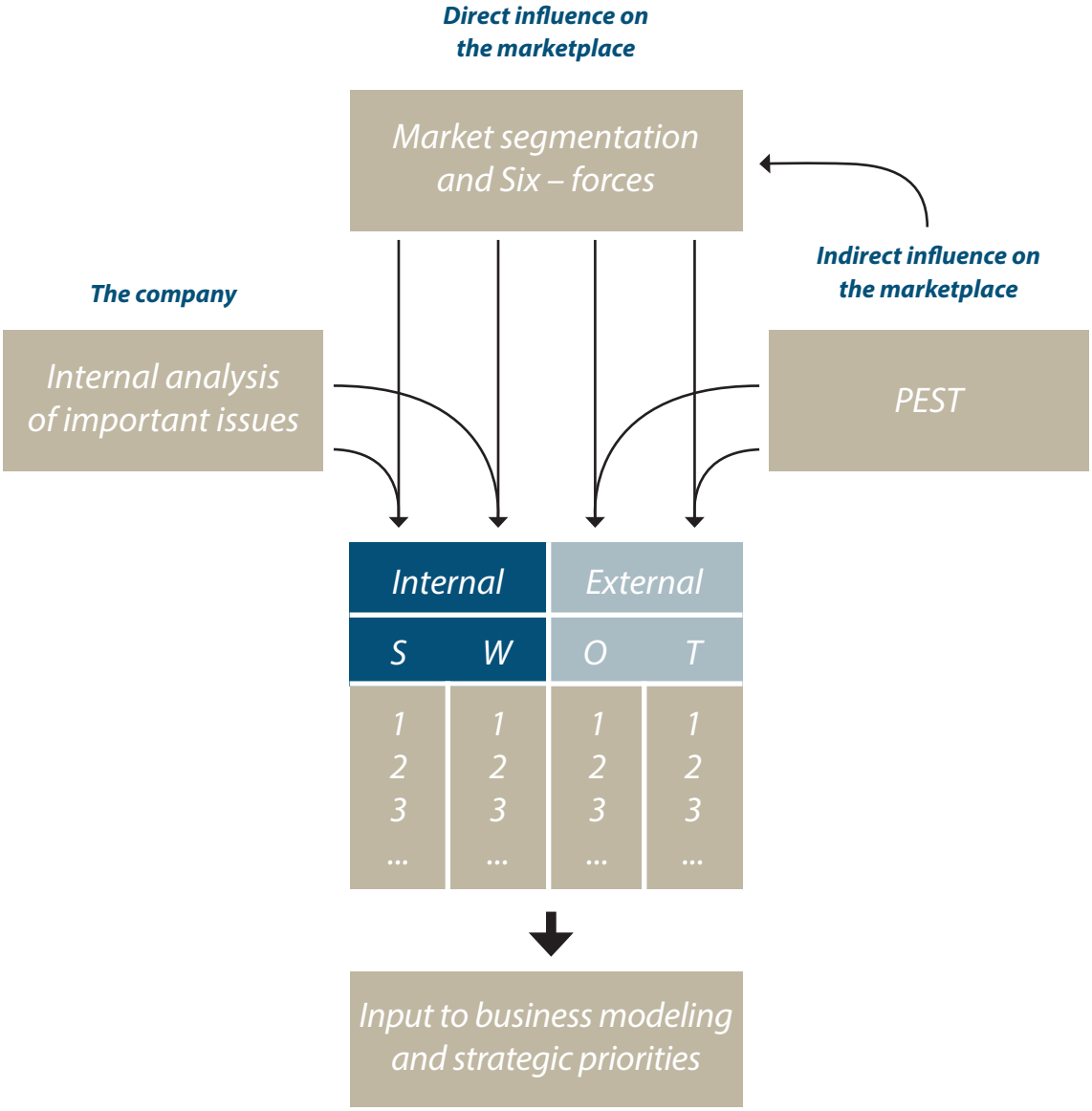


Figure 2: Overview of status analysis

Note: The aim of all the analyses is to sort out what is important for subsequent planning of the new business launch. These elements must further be classified depending on whether they represent:

- Strengths (of your organisation)
- Weaknesses (of your organisation)
- Opportunities (in the market or other external factors)
- Threats (in the market or other external factors)

This documentation will be used as the basis for an internal workshop where you will jointly make the above-mentioned classifications. Later, these conclusions will be used in defining your business model and implementation strategies.

3.2.1 PEST analysis

The general environment (Political, Economical, Social and Technological factors - PEST) influences the marketplace and, therefore, indirectly impacts each individual company. This is elucidated through a PEST analysis.

Questions to be asked for each area: (Political, Economical, Social and Technological)

- What are the most important threats/barriers for the One stop shop?
- What are the most important opportunities/driving forces?

List the important PEST factors	*Opportunity (O) or Threat (T)?*
POLITICAL • Building codes • Requirements for energy labelling of the house (Energy Performance Certificate) • Subsidies from governmental bodies • Tax deductibility of labour cost for maintenance, renovation or extension work (Sweden and Finland) • Other factors that are relevant to your situation	O/T
ECONOMIC • Energy costs • Homeowners' general income level • Mortgage interest rate • Energy efficiency loans from banks (e.g. the Norwegian State Housing Bank) • Other factors that are relevant to your situation	O/T
SOCIAL • Media focus: Climate change and CO2 emissions at the top of the agenda • Unemployment rate • Educational level • Residential area's attractiveness • Other factors that are relevant to your situation	O/T
TECHNOLOGICAL • New and improved products • Number of successful renovation stories • Level of knowledge in the construction industry about Passive House solutions • Other factors that are relevant to your situation	O/T

Table 2 : PEST factors

3.2.2 *Market segmentation*

The first step towards maximising effectiveness is to single out the best and most promising market segments for energy-efficient renovation.

One potential pitfall is to consider the market as one big melting pot where all customers are difficult to differentiate. This poses a considerable risk of wasting a lot of energy and money on generic marketing. Identifying segments with different characteristics and different types of needs that can be reached through different channels greatly improves the chance of a successful market introduction. Later in the process you will have to choose one or more of the potential segments as your target group(s). At this stage, we will simply focus on identifying several segments.

For segmentation to be effective, it must fulfil certain conditions:

1. The segment must be identifiable
   It should be possible to identify the segment and measure its size, i.e. different typologies, number of houses, geographical differences etc. The segments should be internally homogeneous while being heterogeneous with respect to other segments. The reason for segmentation is to reach homeowners that will act differently in response to different market communication.

2. The segment must be available
   It must be possible to reach the segment through the company's channels.

3. The segment must be profitable
   The segment must be large enough to be profitable to address. The more segments that are addressed, the higher the marketing costs per potential customer.

4. The segment must match the company's resources and goals.

The company must have available resources to address the segment. Do not dissipate your resources over too many segments, since you run the risk of lacking the resources needed to make a given segment profitable. [7].

For energy-efficient renovation of single family homes, we see that each potential segment may be described by different combinations of characteristics. All listed segments represent opportunities of different degrees.

Retrofit of a century old country house into a low energy house, Herstelt, Belgium, architect: S. Corten [9]

The practical way to do this in your business is to go through these steps:

1. Market segmentation
   Try to find differentiating factors; building type, building year, characteristics of the homeowner etc.

   Q: Which building years generally represent high energy saving potential and what geographical areas in your municipality(ies) have settlements of such houses? See Building typologies in Belgium, Norway, Denmark & Finland: http://www.one-stop-shop.org/sites/default/files/Building%20typologies%20in%20Belgium%20Norway%20Denmark%20Finland.pdf

2. Information gathering
   Try to find out what kind of local information sources are available: city building department, estate agents, utility companies, banks, etc

   Q: Which areas are recognised to be attractive? When were the target houses built? How long has the owner been in occupation?

3. Analysis
   Try to make a systematic index of the characteristics of each potential segment. Single out the most promising segments.

   Make a simple analysis: Which houses have icicles hanging from the roof in wintertime? These houses might need extra insulation.

The final step, market activities, is due in the action plan, and after choosing the most promising segments. See appendix 1. This appendix contains an introduction to how to perform market segmentation, where to look for information and how to analyse the information. The ease with which information can be obtained may vary from country to country, but make use of what you can get and try to combine the different information. In the end, what matters is prioritising segments and the kind of relationship your One Stop Shop wants to have with your customers.

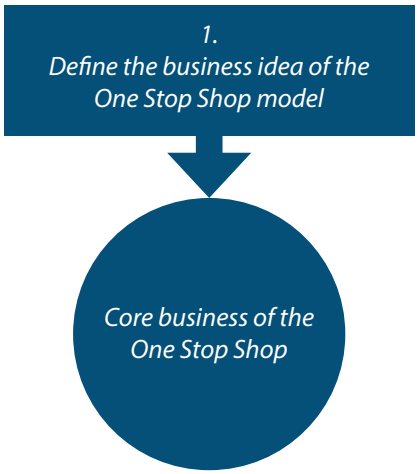
3.2.3 Analysing the competitive arena

Suppliers, competitors, substitutes, customers, etc, have the strongest and most direct impact on the development of a company's business. It is therefore important to analyse how these forces may influence your development of a One Stop Shop. The Six Forces Model [2] guides you through this analysis. Each step in the model is described below in the form of some key questions and is illustrated by an example from PB calc & consult bvba (Belgium):

PB example – background information (see Appendix 3 for more information)

PB calc & consult bvba is a construction management company. Its activities include coaching of building project teams in order to obtain efficiently cost-managed construction. In this framework, cost estimation and guaranteeing cost-effectiveness are a core competence of PB calc & consult. A range of services are offered to guide project teams.

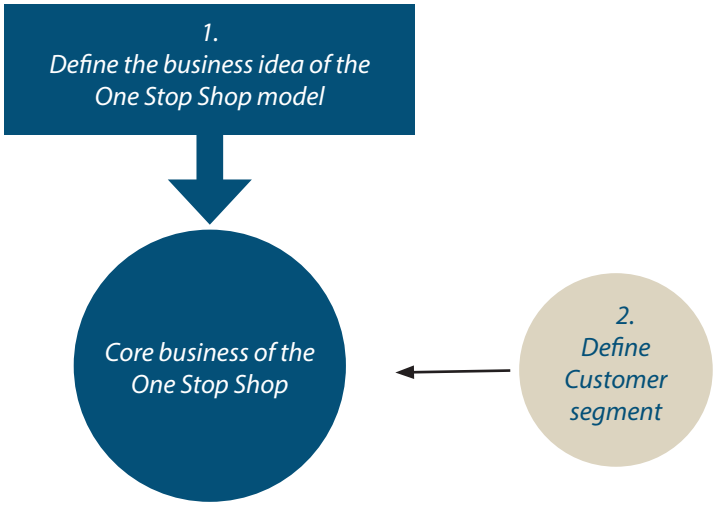
1. Define the business idea of the One Stop Shop model
   Briefly describe the planned core offer/service to be delivered by the One Stop Shop.



PB example

Low cost innovation projects – easy to use.

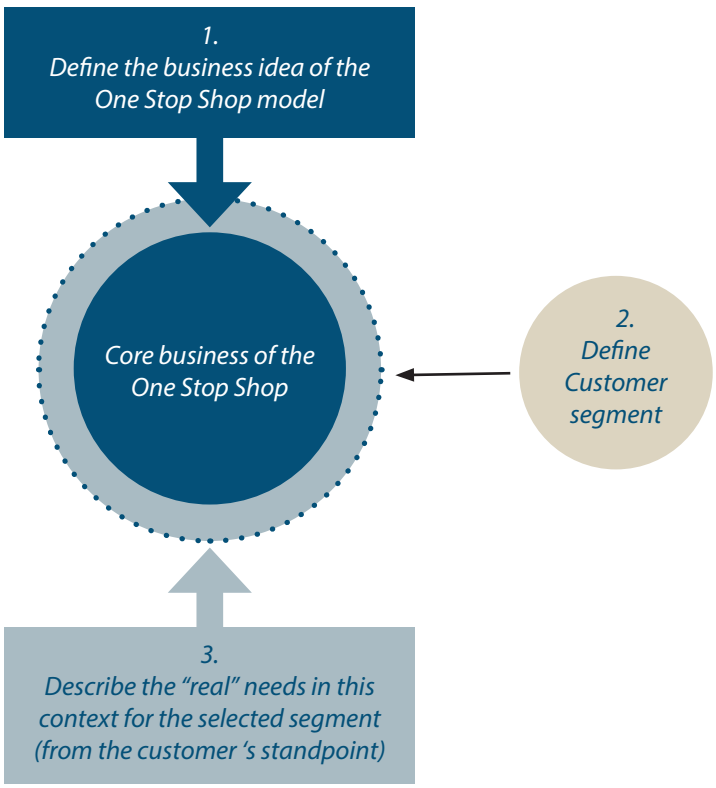
2. Describe the customer segment selected for analysis
   Use the analysis in section 3.2.2 as input and choose the segment(s) to be analysed.



PB example

Single-family houses, building permit required, high energy efficiency ambition.

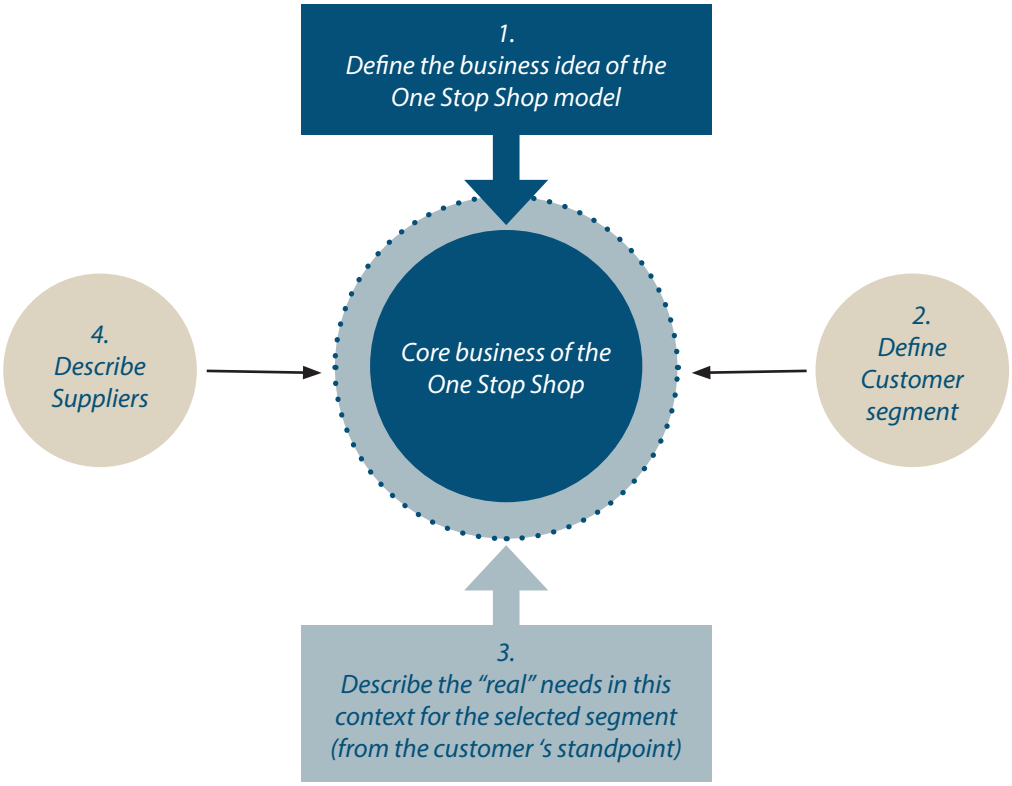
3. Describe the selected segment's "real" needs in this context (as seen from the customer's standpoint).
   It is important to adopt the customer's perspective. When considering such an investment, he/she probably has ideas about non-energy related refurbishment, as well as how to finance it.



PB example

Building team facilitation, cost estimation, energy saving estimation, performance contracting, subject knowledge.

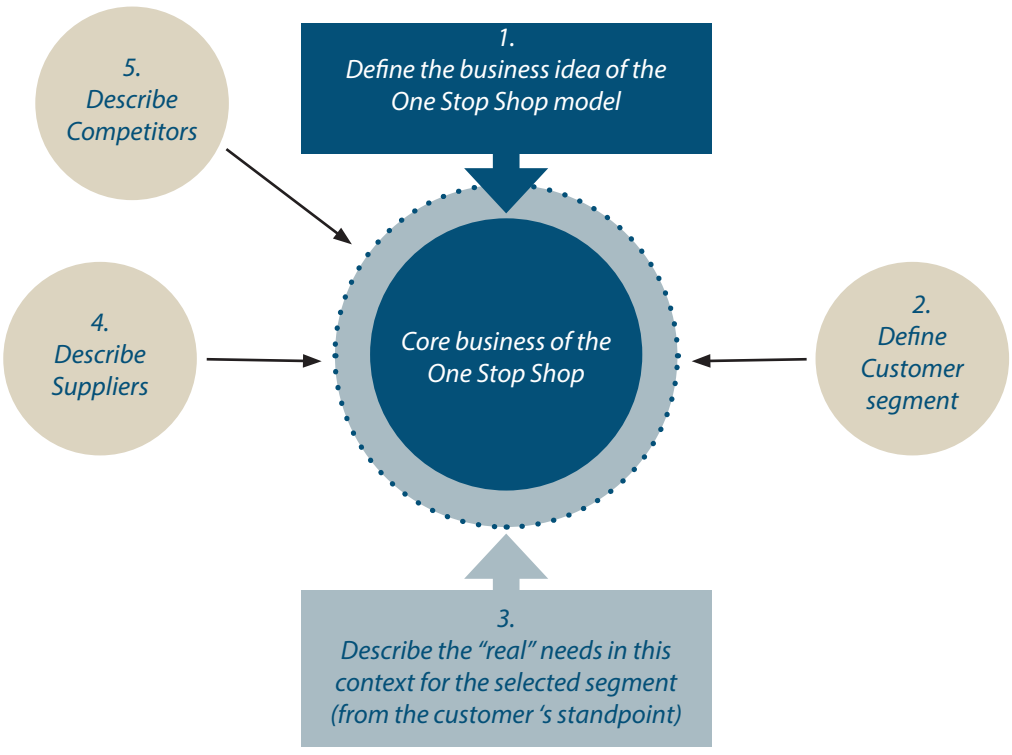
4. Describe suppliers
   List the most important suppliers for a One Stop Shop and consider how they might be an important resource (opportunity) in developing the business. It is also important to identify limitations (weaknesses) among those you have listed. It may be necessary to look for others.



PB example

Building teams, web/ICT developer.

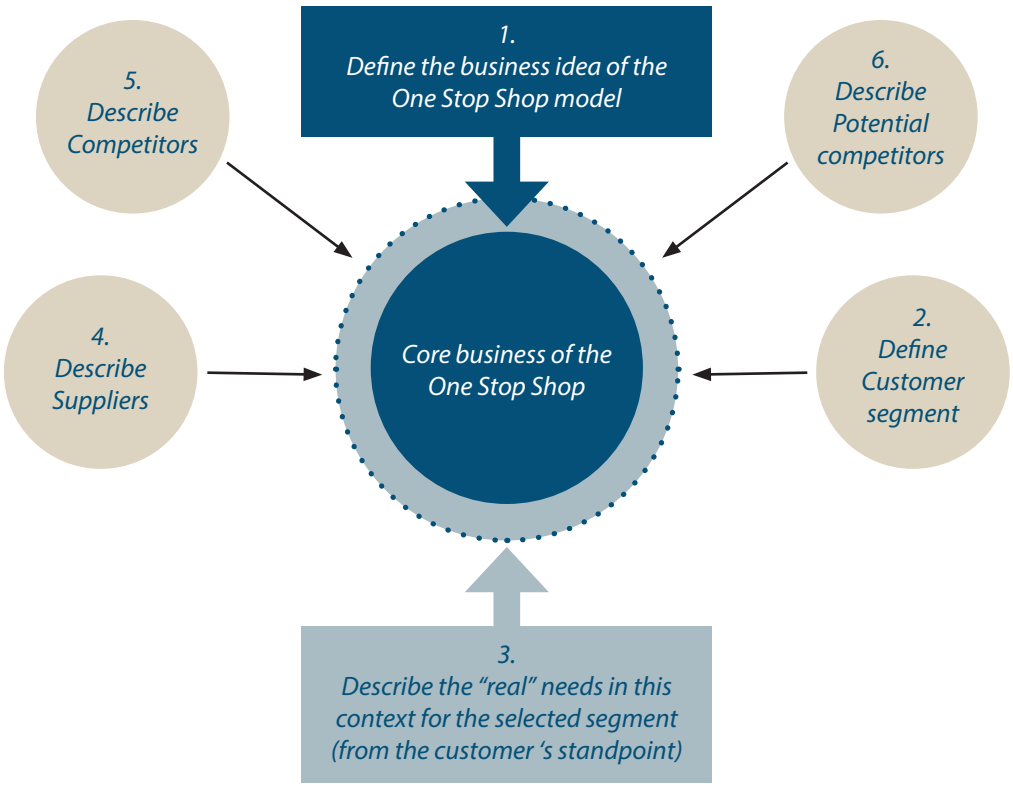
5. Describe existing competitors
   Your existing competitors normally represent a threat. How severe is this threat? Could some of your competitors also represent an opportunity?



PB example

Architects

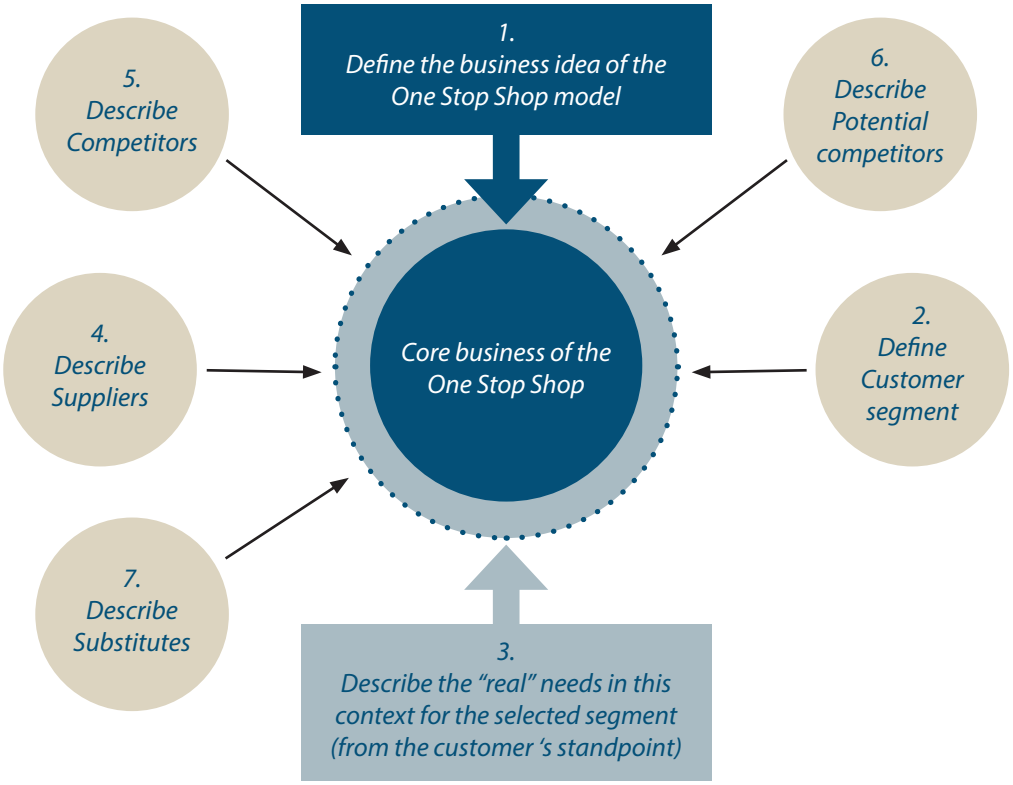
6. Describe potential new competitors
   Do you see potential new competitors? These could be actors from other geographical areas that expand their business, or even existing partners that redefine their business approach.



PB example

Emerging project managers, energy service centres.

7. Describe substitutes
   What are the homeowner's alternatives to energy-efficient renovation? They may include single measures, refurbishment, etc. How does each of those you list represent a threat to your business approach? Could some of them be opportunities? Perhaps the customer's initial approach would be adopt one of the substitutes, but he/she might be interested in your solution if he/she finds it interesting to combine more elements.



PB example

Homeowner as coordinator, fragmented coordination.

8. Describe complementary actors
   Several other actors play roles in fulfilling the customer's needs in a renovation process: banks, the municipality, estate agents and utilities. You have to consider who else should be listed. What opportunities and threats does each of them represent for your business concept? A fruitful exercise is to imagine the customer's "journey": from awareness of the need (which may start with a substitute or with an abstract need, such as a warmer house) to purchase and implementation of your service. Along this "journey", he/she may come into contact with other (complementary) actors who will influence subsequent decisions. Could the important ones be your "ambassadors"? If yes, you have identified an interesting opportunity.

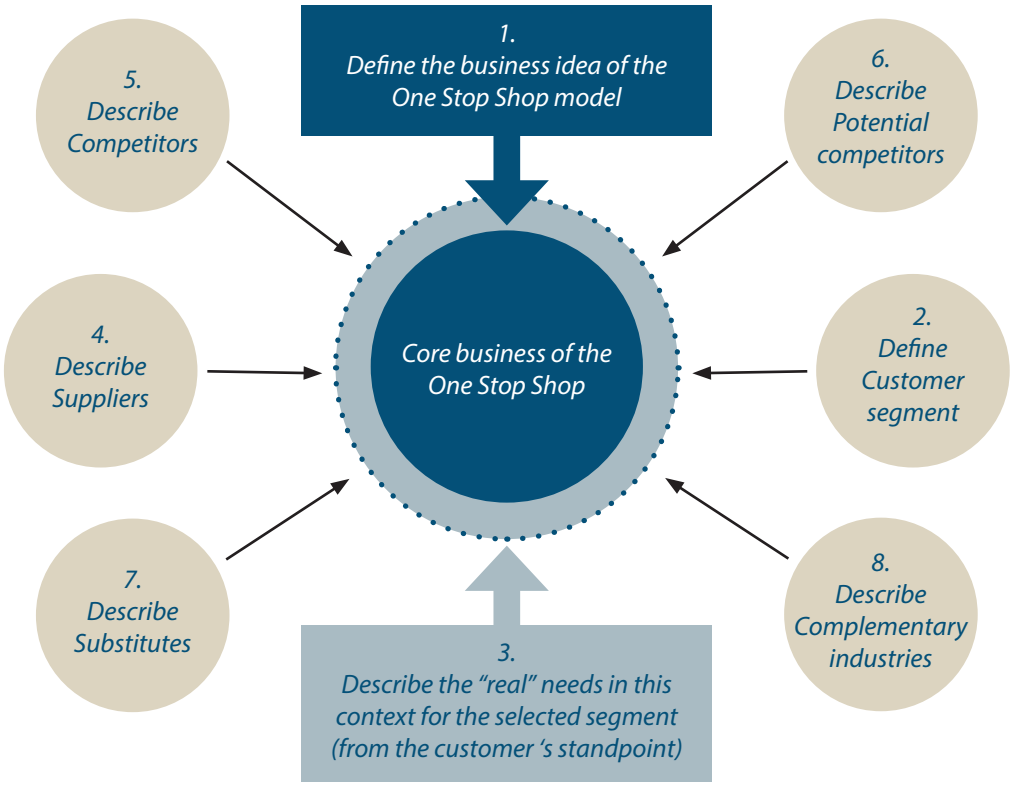


Figure 4: Six Forces Model

PB example

Energy consultants, first-line renovation consultants and web portals, financiers, customer forums.

The completed figure now illustrates all the forces influencing the "complete package" of a One Stop Shop for home owners considering extensive renovation of their single-family houses.

In each point (2-6), what threats and opportunities do you identify? For point 1, what strengths and weaknesses are identified?

3.2.4 *Internal capabilities and capacities*

The following checklist may serve to identify the strengths and weaknesses within your company:

SUBJECT	Key questions	Where to find it	
		S	W
Strategy	Do you have a clearly defined strategy and does the OSS fit well into it so that you are prepared to attach a high priority to its implementation?		
Technological solutions	In your business today, do you apply solutions, systems and components that are relevant to energy efficient renovation? Consider if you are lacking any important elements.		
Market knowledge	How well do you know the market segment(s) that you intend to address?		
Knowledge about purchasing criteria	How well do you understand the homeowners' decision-making process in such projects? Are you able to list the most important purchasing criteria, i.e. the most important reasons why customers decide on an advanced renovation? Control question: How do you know this? Is it based on some type of research (customer surveys or market reports)? If it is only something you believe, could you survey a selection of customers? Be aware that unchallenged assumptions may represent dangerous blind spots.		
Relative strengths of each of the purchasing criteria compared with competitors	List the purchasing criteria and, for each of them, consider how good you are compared with your competitors; whether you are stronger (S) or weaker (W). The same control question as above – is this merely an assumption or has it been tested with customers?		
FUNCTIONS			
Management	What are your management competencies and capacity to develop and lead the implementation?		
Management systems	How good and relevant are your management systems for launching a One Stop Shop for renovating single-family homes?		
Training	Does your organisation have routines for training new and existing employees in the implementation of new knowledge?		
Innovation level	What is the level of innovation in the company compared with the industry? And specifically regarding innovative solutions in renovation of single-family houses?		
Sale function	Are your existing sales staff already interacting with any of the potential market segments? Do you have a system and approach which is well suited for this market?		
Sourcing function	Are you able to stay up to date about new products and solutions?		
Production function	How efficient are you in executing your services?		
After-sales function	Have you established an after-sales function and is it appropriate to the OSS concept?		
RESOURCES			
Physical	Do you have the appropriate physical resources for launching the OSS (buildings, transport, tools and equipment)? What is their status?		
Human	Do you have persons available with the capacity and enthusiasm to launch the concept?		
Relations & networks	Do you already have good relations that can be used for this purpose? What is your evaluation of their competency for this purpose?		
Organisation	Does your organisation possess the necessary skills to launch the concept? How does the team feel about the idea?		
Board	Has the Board been involved? Are there resources within the Board which may positively contribute to a successful launch?		
Financial freedom of action	Consider your financial situation. Is your enterprise solid enough to finance the development of a new business which probably needs some time before it can generate positive cash flow. Alternatively, do you have an owner willing to invest more in this initiative?		

Table 3: Internal analysis
Source: [5]

Highlight the most prominent strengths and weaknesses (to be used in the summarised analysis in the next paragraph.

3.2.5 Summarised SWOT analysis

All the SWOT factors identified in sections 3.2.1, 3.2.2, 3.2.3 and 3.2.4 are summarised in the SWOT matrix, supplied with other relevant ideas coming up during the discussions. The matrix summarises the status of all the important factors which have to be taken into account in further planning of the new business.

Strengths	*Weaknesses*
1. 2. ...	1. 2. ...
Opportunities	***Threats***
1. 2. ...	1. 2. ...

Table 4: SWOT analysis

This information must be dealt with (kept in mind) during the discussions in chapters 4 and 5.

Note: The exercises described so far are for a company initiating a One Stop Shop concept. If a number of companies do this together from the outset, the exercises can be performed jointly.

3.3 Involvement and conclusion regarding status

So far the work has probably been executed by few persons in the company. It is now time to involve all ***key persons*** who will be important for the One Stop Shop business. These persons must now contribute in order to fine-tune and complete the picture regarding the status of all relevant aspects. This should be done in a well-prepared workshop (with the help of the analysis done so far).

Chairing a workshop can be quite challenging. If the preparations so far have been done by one or two of the company's managers, we strongly recommend hiring a competent consultant to chair the discussions. Otherwise, a situation may arise where the persons who prepared the analysis will be both "defending" their work and also chairing the meeting, rather than participating actively in the discussion.

3.4 Guideline for the first workshop to conclude the status analysis

1. Preparations
   - Distribute a one-page abstract covering the following topics to participants in advance:
     - i. The aim of the process
     - ii. Who will be involved
     - iii. Timeline of the process
       - a) Mandate given by the Board – date
       - b) Preparation of a status analysis – date (described above)
       - c) First workshop – Concluding status analysis – date
       - d) Follow-up, possibility of more research before concluding on some items
       - e) Second workshop – Business Modelling – date
       - f) Third workshop – Strategic priorities and implementation
       - g) Final decision by the Board whether or not to go ahead – date
   - Gather the analyses into a document and distribute it to each of the participants at the beginning of the workshop.

2. Time frame
    - Normally you should allocate between half a day (at least) and a full working day (at most) for such event. You could consider starting at lunchtime and continuing during the evening. A good option is to do it on a Saturday to ensure that you will not be interrupted.

3. One person should be appointed to chair the meeting.

4. Another person should document the conclusions.

5. Procedure
    - As a first topic, the PEST analysis that has been conducted is presented.
    - The group is asked if it agrees with what is listed, and people come up with other important elements and/or delete some.
    - Ask if any important information needed for the conclusion is missing. If that is the case, define what other information should be gathered and by whom.
    - Discuss what information is most important and reach conclusions about the aspects to be identified as major opportunities and threats.
    - Go on to the next topic and follow the same procedure, including strengths and weaknesses where relevant.
    - Hold a coffee break before the SWOT analysis so that the facilitator can update it in line with the conclusions from the discussions so far.
    - After the coffee break, start brainstorming with blank sheets (use a flip pad) and ask participants to name important SWOT factors.
    - Then, show the updated SWOT analysis and check if it needs to be complemented by other elements from the brainstorming.
    - Can the group more or less agree that this summarises the most important opportunities, threats, strengths and weaknesses?
    - If any additional information needs to be collected, define deadlines and responsibilities for delivering it.

4. Business Model Canvas

Once the status analysis is concluded, you should have a good picture of the situation "as is", including the opportunities and challenges you see ahead. The next step is to decide how you are going to organise your new business. In this guideline, this is done in two major steps:

- Define the business model (concept) – in this section 4.
- Define ambition level, priorities (strategies) and actions for implementation – in section 5.

In this chapter we guide you through the Osterwalder & Pigneur Business Model Canvas [3]. The nine building blocks form the basis for a handy tool to develop the business model:

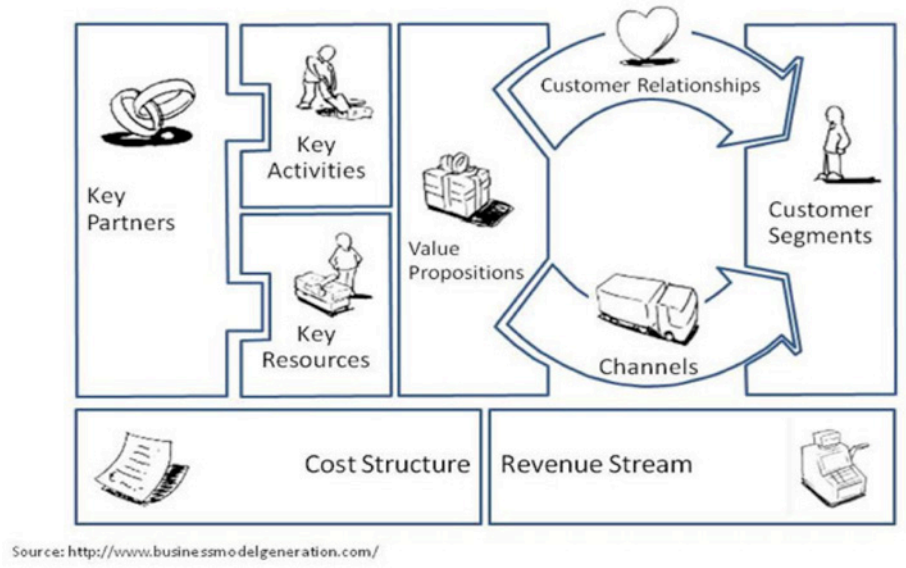


Figure 5: Business Canvas Model

We recommend that the same key persons who participated in the first workshop also contribute in this second workshop, where you will work together to define the business model for your One Stop Shop concept.

If you have already formed a partnership with other companies, the workshop should be done with representatives from all partner companies.

Questions to be asked to help describe the full model:

4.1 Customer segments

Here you can just bring in the conclusions from the Six Forces model in section 3.2.3.

- Which house types offer potential for renovation?
- Which housing areas are most interesting?
- Do we have other characteristics to link to the different segments?
    a. Attractiveness of location?
    b. How long has the homeowner lived in the house?

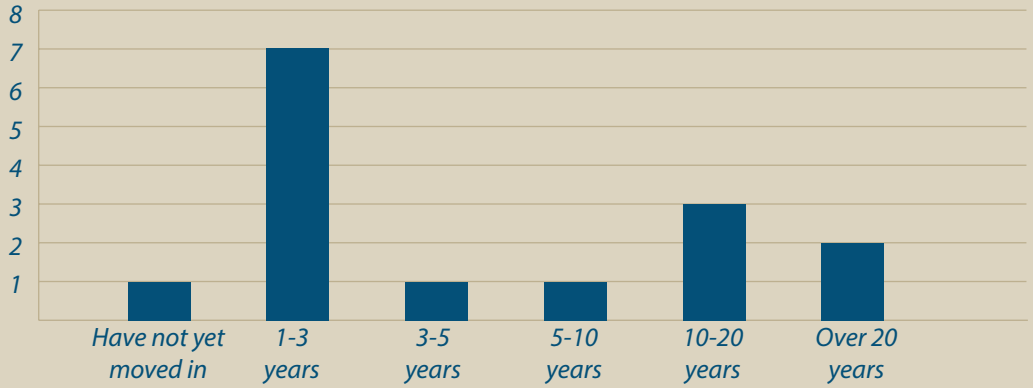
Based on the GIS analysis (Geographic Information System) in the REEP project from Canada, the following features are believed to characterise settlements most likely to be interested in the offer:

- *at least 80% of the houses were built before 1970 (pre-energy crisis)*
- *at least 10% of the houses require major repairs*
- *at least 85% of the houses are owner-occupied*
- *at least 50% of the households have moved in the last five years*
- *the average household income exceeds CAN $60k*
- *at least 40% of the households have a member with a university degree*

Based on these analysis, neighbourhoods were classified as being highly suitable, very suitable, suitable, somewhat suitable or unsuitable. [2]

On behalf of Bolig Enøk, consulting company Segel conducted a survey among homeowners that bought the Energy Efficiency status report. It showed that the majority of the respondents have lived in the house for less than 3 years:

How long have you lived in the house?



On behalf of Bolig Enøk, consulting company Segel conducted a survey among homeowners that bought the Energy Efficiency status report. It showed that the majority of the respondents have lived in the house for less than 3 years:

O. Adsbøll & Sønner A/S, a well-known reputable local contractor in south Denmark, chose a specific house typology from 1970s and 80s and developed packages of holistic energy renovation solutions with "standard solutions and actions" as all the houses had the same defects. As a result they were able to offer a good price for the renovation. [1] report D3.2.

4.2 Value proposition

- What kind of product and service are we offering our customers?
- What additional value do we deliver to the customer?
- Which of our customer's problems are we helping to solve?
- What customer needs are we satisfying?
- What bundles of products and services are we offering to each customer segment?

Characteristics:

- News
- Performance
- Customisation

- "Getting the job done"
- Design
- Brand
- Reducing costs/energy bills
- Risk reduction
- Trustworthiness
- Accessibility
- Convenience/usability /better indoor climate

The Norwegian OSS pilot Bolig Enøk:

Provide knowledge of holistic renovation including potential extension of the house. This is done by personal on-site analysis resulting in recommendations and an energy certificate. It also offers project management of holistic renovation. (See appendix 2)

The Finnish K-Rauta and Rautia OSS also offers flexible funding and frequent customer benefits as one of their value propositions towards the customer. By enabling their customers to carry out the renovation, one of the barriers for doing the renovation is reduced. [1] report D3.2.

4.3 Channels

- Through what channels do our customer segments want to be reached?
- How are we reaching them now?
- How are our channels integrated?
- Which ones work best?
- Which ones are most cost-effective?
- How are we integrating with customer routines?

Examples:
- Personal visits
- Information evenings in a specific area
- Advertisements in local newspaper
- Building magazines
- Fairs and theme days
- Internet sites, own site and link to our service at other sites (through partnerships)

Channel phases:

1. Awareness
   How do we raise awareness about our company's products and services?

2. Evaluation
   How do we help customers evaluate our organisation's Value Proposition as defined in section 4.2?

3. Purchase
   How do we enable customers to purchase specific products and services?

4. Delivery
   How do we deliver a Value Proposition to customers?

5. After-sales
   How do we provide after-sales customer support?

Bostoen – a Belgian supplier that started by offering turnkey solutions for new-built constructions – recently developed a chain of physical stores in major cities where clients can come in and 'buy' renovation services such as the installation of a heat pump, a new roof, insulated windows, and so on.[11]

The CleanTech concept developed by Danish energy company Dong Energy used energy bills as an important channel to raise homeowners' interest in energy-efficient actions in their houses; with their energy bill, homeowners received information about the services provided by CleanTech: heat pump solutions, insulation, solar heating etc. [1] D3.2.

4.4 Customer Relationships

- What type of relationships does each of our customer segments expect us to establish and maintain with them?
- Which ones have we established?
- How costly are they?
- How are they integrated with the rest of our business model?

Examples:

- Personal assistance
- Dedicated personal assistance
- Self-service
- Automated services
- Communities
- Co-creation - Could the customer do some of the renovation work him/herself?

The Norwegian OSS pilot, Bolig Enøk, assigns the homeowner a personal project manager who acts as the homeowner's representative in all contacts with subcontractors before, during and after renovation with regards to actions, quality assurance and price assurance. [1] D3.2.

Deep renovation of a semi-detached house at Ulvøya in Oslo, Norway. [8] "House renovation projects as information source"

4.5 Revenue Stream

- What value are our customers really willing to pay for?
- How would they prefer to pay?

Examples of different types for One Stop Shop:

- Fixed or variable price for an audit of the house
- Fixed or variable price for the renovation project
- Combination of a fixed price and a variable price tied to the energy savings
- Commission from product suppliers
  (as is the case for the Finnish hardware stores K-Rauta and Rautia).
- Also, the payment terms influence the business cash flow and impact its funding needs. Many companies within the building industry demand that customers pay a percentage of the total upfront.

The Norwegian OSS pilot, Bolig Enøk, charges a low price for the analysis in order to motivate people to get recommendations for what to do. The project management which is offered as the next step is priced as a percentage of the renovation cost. [1] D3.2.

4.6 Key Resources

- What key resources do our value propositions (as defined in section 4.2) require?
- Our distribution channels?
- Customer relationships?
- Revenue streams?

These key resources can be further categorised as follows:

- Physical
- Intellectual/knowledge
- Human
- Financial

Finnish hardware stores K-Rauta and Rautia possess these key resources: two well-known brands, a distribution network, a customer database and a wide range of products available through their stores [1] D.3.2.

4.7 Key Activities

- What key activities do our value propositions require?
- Our distribution channels?
- Customer relationships?
- Revenue streams?

These key activities can be further categorised as follows:

- Production
- Problem solving
- Platform/network

The key activities in Bolig Enøk's business model for the "Project Manager" are: marketing, building inspection and energy audit, project management from tendering through renovation to after-sales. [1] D3.2.

4.8 Key Partnerships

- Who are our key partners?
- Who are our key suppliers?
- Which key resources are we acquiring from partners?
- Which key activities do partners perform?

It can be useful to distinguish between three motivations for creating partnerships:

- Optimisation and economies of scale
- Reduction of risk and uncertainty
- Acquisition of particular resources and activities

The Finnish OSS concept ENRA (which was offered by a group of companies providing different individual energy renovation services or solutions in a holistic package) entered into cooperation with VTT (Technical Research Centre of Finland). VTT became a key partner in order to establish and maintain trustworthiness and objectivity and, consequently, supported ENRA's value propositions. [1] D3.2.

4.9 Cost structure

- What are the most important costs inherent in our business model?
- Which key resources are most expensive?
- Which key activities are most expensive?

Is the company more

- Cost driven, i.e. minimising costs wherever possible?
- Value driven, i.e. focused on value creation?

Cost structures can have the following characteristics:

- Fixed costs
- Variable costs
- Economies of scale
- Economies of scope

Bolig Enøk's main costs are the project managers' salaries. Therefore, effective use of their hours is the most critical factor for profitability. Other costs are related to travel, marketing, administration and support. [1] D3.2.

The main costs of the K-Rauta and Rautia hardware stores in Finland are materials and products, labour, marketing, travel and subcontracting of the renovation work. [1] D3.2.

4.10 Guideline for the second workshop to define the business model (BM)

1. Preparations
   - Make sure that either you hire a consultant who knows this methodology very well (the preferred option) or two of you have studied the methodology thoroughly in advance.
   - No information needs to be distributed in advance.

2. Time frame
   - Normally you should calculate a full working day for this event. You could consider starting at lunchtime and continuing into the evening. A good option is to hold it on a Saturday to ensure you will not be interrupted.

3. One person should chair the meeting.

4. Another person should document the conclusions.

5. Procedure
   - Introduction to the business modelling methodology and the agenda and purpose of each step of the workshop.
     i. For an introduction, use the One Stop Shop basic PowerPoint presentation/lecture for business modelling, which can be freely downloaded at http://www.one-stop-shop.org/
     ii. Go through the agenda of the workshop, which shows the main steps;
        a) Prototyping business models (BM). Create several ideas for BM.
        b) Pick a few BMs for further elaboration.
        c) Each group works on their chosen BM and presents the result.
        d) The workshop concludes which BM is the best. Discuss also why the selected BM should be a success and what could go wrong. This will be further elaborated/ quality controlled in the next workshop.
     iii. Recommended process for prototyping a BM:
        a) Work in smaller groups (3-4 in each group) – in small companies, one group is enough.
        b) Each group has access to a flip-chart or similar.
        c) Pitch a BM idea on a poster (flipchart sheet) by:
           a. Drawing a simple picture of the idea.
           b. Making a headline describing the idea.
           c. Putting all posters on the wall.
        d) Choose BMs for further work.
           a. Each participant gets 3 stickers to place on their favourites (they can put all their stickers on one poster or spread them around).
           b. The winners (max. 3 BMs/ideas) are chosen for further work.
           c. Each group gets 1 BM/idea for further work.
        e) Each group start working on the chosen BM by filling out the nine blocks in the BM Canvas. You could either use a big canvas form (which may be ordered from http://www.businessmodelgeneration.com/) or draw a blank business model canvas on a flipchart or whiteboard.
        f) For each block of the BM, contributors spend 3 minutes writing down their immediate suggestions on Post-It notes. There should be only one suggestion on each note, using short words or drawings. If a person has more suggestions for a given block, he/she should write several Post-it notes for that block.
        g) The moderator/leader groups the suggestions as there will inevitably be repetition/overlap. (3 min.)
        h) Spend 5 minutes discussing which suggestions should be kept (try to limit the number to 3-5).
        i) Then move to the next block and follow same procedure as above.
        j) Start with the customer segment and continue in this order: value proposition, channels, customer relationships, revenue streams, key resources, key activities,

key partners and cost structure.

Presentation and selection of BM for further work.

k) Each group gives a presentation of their BM. Max. 10 min.
l) The workshop participants give feedback on each BM
    a. Negative. Why this BM will not work.
    b. Positive. Why this BM will work.
m) The participants decide which BM to choose for further work.

- In order to secure real involvement from the actors, no templates should be filled in before the workshop. This is important in order to mobilise and motivate the participants in the development process. However, the chair should have ideas (which he/she initially conceals so as not to "colour" the debate) about how it should look. As situations probably will arise where the actors find it difficult to reach conclusions, a well-prepared facilitator will be in a better position to facilitate progress in the discussions.
- The template is used as a working document for the workshop.

6. Summing up
    - After the workshop, we have a draft of the new business model

7. Verification
    - The draft is distributed for comments and verification by the actors involved.
    - It will probably be difficult to get through this in one day. If it is decided to have a second workshop to complete the business model, there should be a summing up and gathering of additional information before the next session.

5. Strategic focus and implementation

Once the business model is defined, it is time for detailed planning of how to launch it. First of all, you must decide what your ambitions for the business are. The vision you will now define should express what you want to achieve with your one-stop-shop model. Moreover, your strategies reveal your priorities or policies as to how this should be reached. Finally, you must specify the actions which are needed to establish it as a successful business.

Before describing the practicalities of the workshop, we describe below what the functional vision, strategies and actions should look like.

5.1 Vision

A vision describes the desired situation that a business model seeks to attain, and:

- Expresses a desired situation in the future (typically 5 years)
- Shows the ambition level which the organisation will strive to achieve
- Should be easy to communicate
- Should be compatible with the business model, strategies and actions

Example from Bolig Enøk

Bolig Enøk should be known as a leader in project management of holistic renovation of single family houses. A national network should be established by 2014. [1] D2.2.

Comment: Many companies include a quantitative goal as part of the vision in order to illustrate how large the business is planned to be.

5.2 Strategies

5.2.1 Introduction

Well-formulated strategies should:

- Show the direction for attaining the vision and how to operate the business model.
- Take into consideration the issues summarised in the SWOT analysis.
- Answer the three basic strategic questions:
  - What is to be sold? (what is unique about the product/service)
  - Target groups? (market-oriented persons answer this first)
  - How should it be sold?

Some priorities were defined in the Business Model Canvas (section 4), so the questions above have already been partly answered. During the study of pilot schemes in the One Stop Shop research project, some important issues came to light which every One Stop Shop business model should consider. We would like to highlight these important issues in the next subsection before we commencing the process of defining the strategies in subsection 5.2.3.

5.2.2 Important strategic issues

The strategic issues in the next paragraphs may already have been identified through your discussions in the first workshop concerning the status analysis. However, the One Stop Project found that these were the first issues that came up after defining the business model.

5.2.2.1 How to secure the right competencies in the right place

A critical factor for lasting success of the service is to ensure that the right competencies are available in all parts of the service. Therefore, it is necessary to define the required competencies for all levels.

This issue will probably arise partly in the discussions in sections 4.6 (key resources), 4.7 (key activities) and 4.8 (key partners). As this subject is crucial for launching the holistic renovation service model, we will address it more specifically here.

The following table contains a framework for defining a plan to attain the required skills: (to be adjusted and expanded in line with the specific situation).

Subject	*Formal education*	*Additional training needed*	*Which partner is responsible?*
Planning & Project Management	Energy engineer or architect (depending on which is more proficient in building energy, HVAC and WS issues)	Renovation experience Specialised project management training (project interactions)	
Analysis & Recommendations	Energy engineer or (consulting) architect (depending on which is more proficient in building energy, HVAC and WS issues)	Renovation experience Specialised calculation tools (e.g. specific tools for Passive House calculation)	
Building envelope	Civil engineer or Architect	Quality assurance training (thermal bridges)	
Plumbing	Plumber	Quality assurance training (airtightness, e.g. solar panels)	
Electrical	Electrician	Quality assurance training (airtightness)	
Ventilation	Air conditioning mechanic	Quality assurance training (indoor comfort)	
Materials	Civil engineer	Evaluation of material reusability	
Financing	Accountant	Influence of energy performance on cost evaluation	
After-sales	Potentially a variety of skills, from carpenter to engineer.	Development of specialised user manuals	
Quality Assurance	Energy performance adviser Independent certifier	Training in energy performance and quality assurance tool	

Table 5: Competency plan

Define the activities for the additional training programmes and identify who is responsible for what. Your final table you could be incorporated into your action plan (next chapter).

5.2.2.2 *Quality assurance*

Quality assurance is important in every renovation. The customer needs to be sure that actors can be trusted and that the quality of work and service meets some basic requirements.

Quality assurance should:

1. Verify that the required competency is available at all levels.
2. Verify that all actors involved follow a QA system and ensure that it is documented. This includes any necessary coordination between different systems.
3. Make a final check of the completed renovation project.

Each business model must describe how the three points above are solved and by whom. A useful tool for structuring the interactions between different crafts during the renovation of single-family homes was developed as part of work package "Interactions in the renovation process" in the One Stop Shop project [8].

A renovation task may disturb work that was done before, e.g. breaching the air tightness layer. On the other hand, certain tasks may lead to problems later on or may actually facilitate future renovation tasks. In order to deal with these challenges, the different points of attention and interactions between the various professionals in the renovation project were mapped in a matrix where the potential

challenges were listed on two axes: the vertical axis represents actions already done and the horizontal axis represents future renovation actions.

If something is missing or it is not clear how it will be solved, an action plan for resolving it must be defined.

Depending on the country, energy certificates for single-family houses prior to the renovation work may be issued by architects or some form of energy consultant (mainly in engineering offices). In some countries, such as Finland, most architects do not have building energy knowledge, so they do not have a role here. An energy certificate after the renovation should show reduced energy consumption. However, these certificates are still not a guarantee of the quality of the renovation.

It is crucial that all installers have good skills and perform the work reliably. So, the service provider should be able to trust that the work will be done well, which is an important part of the quality. It is possible to have different kinds of certificates for installers and the methods they use.

Inspecta is a leading provider of inspection, testing, certification and technical consultancy services in Northern Europe (http://www.inspecta.com/). One of their service sectors is real estate. They also provide many services which are relevant for energy renovations (http://www.inspecta.com/en/Our-Services/Technical-Consultancy/Building-services/). So, they may also be interested in quality assurance functions.

In Belgium, Passiefhuis-Platform offers a Passive House certificate which is also applicable to single-family home renovations. The certification procedure makes sure that energy performance calculations are done properly, that the air tightness of the building is tested and that estimated summertime overheating is limited. These procedures are currently being revised to include aspects of installation quality in building services. See http://www.passiefhuisplatform.be/

5.2.2.3 Legal issues

Another critical issue which needs discussion in the nine building blocks is how to distribute responsibility and payment terms among the partners involved in the work.

As legislation differs from country to country, it is wise to obtain legal advice before starting up. Some of the issues to address include the warranty, product liability, product declarations, responsibility for work executed by others, etc.

Of course, many of the details of these issues vary from country to country, although the basis is EU legislation (e.g. Directive 1999/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees, and Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999 amending Council Directive 85/374/EEC on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products). EU legislation is increasingly made via Regulations (directly applicable) instead of Directives (which need national implementation).

From a legal point of view, there are mainly four levels for regulation governing construction:

1. The homeowner
2. The architect and/or the project manager
3. The main contractor
4. The subcontractors

The legal systems governing the rights and responsibility of the parties are quite similar throughout Europe, though there can be slight differences between countries. The legislation will reflect the parties' rights and responsibilities.

If one chooses to be a project manager instead of a main contractor, one can design the contract to transfer liability during the building process from the project manager to the sub-contractors, if that is allowed by the national legislation (it is in Scandinavia). After the building process, the responsibilities are much the same. In any case, good contract competency and written frameworks should be developed with the help of skilled lawyers.

The checklist below is in line with the standard contracts developed by Standards Norway for main contractor (NS 8407) and subcontractor (NS8417) within the construction sector [10]. You need to define rules for each of these players:

1. Duties of cooperation and loyalty.
2. How, and how often, to meet to evaluate and make decisions.
3. Forms and procedures for alerts regarding deviations and complaints.
4. Milestones for delivery/production.
5. Financial and practical guarantees between the partners.
6. Partner representatives on site (name, legal powers, and rights/duties).
7. The right of project managers (and main contractor) to override partners' choice of subcontractor.
8. Transfer of contracts to third parties.
9. Quality definitions (e.g. contract definitions, unspecified issues, lawsuits, chosen solutions)
10. Rules for the building process
11. Design, consulting and reporting duties under contract and legal requirements
12. Issues related to the building site
13. How to handle damage on the site during the building process.
14. Control and restoration of the site (duties of disclosure, costs and responsibilities)
15. Progress and cooperation
16. The responsibilities of the project manager (other parties, lawsuits, design of the building site, products and services delivered by the project manager, etc.)
17. Payment (see appendix 4 Financing models)
18. Changes, delays and failure

An example of an issue of this type is the fact that Belgian law protects the architect's independence, and an architect must be hired for any project which requires a building permit.

The architect may not have a contract with the promoter/contractor and with their client. On the other hand, cooperation is possible, for example within a 'construction team'. But the architect must remain independent (vis-à-vis the contractor). He/she must always act on behalf of the client and defend their interests.

5.2.3 Definition of strategies

By defining the Business Canvas Model, you have already made several important strategic choices. Here we will focus on the priorities which go across and behind the nine building blocks in the canvas. Based on experience in the pilot One Stop Shop projects, there are some strategic topics which you also should consider:

1. How to build credibility.
2. Sourcing policy.
3. How to balance the need for custom solutions with the need for production scale.

By following these steps, you may discover other strategic topics when you check whether you have taken account of all important issues:

1. Structure in strategic topics. Check that you have covered (at least) these topics:
   a. Market (right side of the Canvas)
   b. Product/service (value proposition)

c. Organisation and processes (left side of the Canvas+legal+QA+competencies)
d. Economy and growth (bottom of the Canvas). This strategy also describes how you plan to expand your concept into new areas or other segments. You should also reach a conclusion on how to finance such expansion.

2. Answer the three basic questions and describe:
   a. A headline which briefly illustrates the direction of each strategy. Instead of calling it "Market Strategy", it could be named "Dedication to new single family homeowners". In this case, the title of the strategy shows the desired direction.
   b. Below the headline, describe each strategy more precisely with concise sentences. Example: "Our target group consists of people who have recently bought an existing home that was built before 1980. We will reach this group through a network of real estate agents. We build a close relationship with the customers through direct, personal communication".
   c. Then describe the purpose of this strategy, i.e. what will have been achieved if you succeed in implementing it? You may define one or more such strategic targets for each strategy.

3. Go through the SWOT analysis and the special issues discussed in section 5.2.2 and check if all points have been taken into account in the strategies that have been defined. If not, see if the issue fits logically under any of the defined strategy headlines (see 2.a.) and then add the solution into the descriptive text (see 2.b.). If it does not relate to any of the previously-defined strategic headlines, you should define an additional strategic topic by following the procedure in point 2 above. This illustrates the reason for doing good analyses and summarising them in an overall SWOT analysis: the identified strengths should be used to exploit opportunities and avoid threats, and weaknesses should be eliminated or reduced. How this should be done is expressed through the defined strategies.

You will probably end up with four to six strategies.

An example of the product strategy for Bolig Enøk

Complete package through local sourcing
The house should be considered as a system. Our product range and know-how, as well as our network and partners, must reflect this. All products and craft services are provided through local tendering. These suppliers will therefore have an interest in developing this as a new business opportunity, and players who are not committed can be avoided. [1] D2.2.

5.3 Action plan

For each of the strategies defined above, an action plan is made for putting the strategies into operation. The action plan should specify at least:

- Name of action
- Resources needed for execution
- Time schedule
- Responsibility

The table of examples below could be used as a template for an action plan (note that we use the headline of each strategic topic as the subchapter):

Strategy 1 *Dedication to new single-family homeowners (example of market strategy)*	*Strategic target (purpose):* *• Reach 1,000 potential customers within 12 months.* *• Establish agreements with three estate agents.*		
Action	***Resources***	***Time schedule***	***Person responsible***
1.1 Mapping of target residential areas	€5k+1W*	1.9.13->1.10.13	B. Gates
1.2 Agreements with estate agents	2W	1.10.13->1.11.13	B. Clinton
1.3 Develop websites, leaflets for DM, …	€40k+3W	1.9.13->1.11.13	A. Merkel
1.4 ……			

** Resources are defined in your currency (Euro, in this case) for external costs and in weeks (W) for internal human resources.*

Continue and work through the other strategies in the same way:

Strategy 2 *(Product/service strategy)*	*Strategic target (purpose):*		
Action	***Resources***	***Time schedule***	***Person responsible***
2.1 ……			

Strategy 3 *(Organisation and processes)*	*Strategic target (purpose):*		
Action	***Resources***	***Time schedule***	***Person responsible***
3.1 ……			

Strategy 4 *(Economy and growth)*	*Strategic target (purpose):*		
Action	***Resources***	***Time schedule***	***Person responsible***
4.1 ……			

Table 6: Action plan

You could use the same template for other strategies that you define.

Comment:
Try to estimate what external costs you expect to incur on this activity as well as the internal hours needed (in weeks, in the example). Companies tend to underestimate the amount of internal hours needed for business development.

5.4 Guideline for the third workshop

1. Preparations
   a. Make sure that you either hired a consultant who knows this methodology very well (the preferred option) or that two of you have studied the methodology thoroughly in advance.
   b. Someone must prepare facts about the issues discussed in section 5.2
   c. Make sure that all key persons for implementation of the plan attend this workshop.
   d. You could distribute the text above in this main chapter (5) prior to the meeting. As it is only a few pages long, all participants should be able to read it advance.

2. Time frame
   a. Normally you should allocate a full working day for this event.

3. One person should be appointed to chair the meeting.

4. Another person should document the conclusions.

5. Procedure
   a. Start with the vision
      i. Go through the description as presented in section 5.1
      ii. Take two minutes of silence and each participant writes down 2-3 words which should be included in the vision.
      iii. Share and discuss the words and reach conclusions about what should be included.
      iv. It is very good if you can produce a short sentence describing the vision. If not, one person is assigned to make the final adjustment after the workshop.
   b. Go through the special issues presented in section 5.2.2 and reach conclusions on how these should be solved.
   c. It normally takes longer to define the strategy than to define the vision, but follow the procedure described in section 5.2.3 carefully. If there are more than five persons in the group, you can split into smaller groups after the overall group has agreed on the topics of the headlines. It is more efficient if the description of each strategy is drafted in smaller groups.
   d. It is straightforward to define the action plan by taking the first strategy and asking which specific actions are needed to implement it. Do the same with the next strategy, and so on. For each action, define the resources needed, who is responsible, and planned progress. The action plan will therefore have the same number of subchapters as there are strategies. The headlines of the strategies are used as headlines for each sub chapter of actions.

6. Summing up
   - After the workshop, a draft of the conclusions is drawn up on the basis of the discussion in the workshop.
7. Verification
   - The draft is distributed for comments and verification by the actors involved.
   - You may find it necessary to have a meeting to discuss and verify the conclusions.

5.5 Implementation and ongoing evaluations

You should now have a complete action plan which allocates responsibility and resources to attain the planned progress. The challenge now is how to fit this in among all the other operational tasks which the key persons have to perform as part of the existing business. It is therefore important to have a fixed procedure for implementing the new business model.

The management team with the mission to implement the business model should hold a status meeting at least once per month, which could follow this agenda:

1. What results have been achieved so far?
   - Facts & figures

- Average level of energy efficiency on completed projects
- Customer satisfaction rate
- Success rate of marketing activities

2. Status of ongoing activities
   - Deviations are discussed and decisions made as to necessary actions
   - Completed actions are moved from the action plan to a separate file of "completed actions"
   - Should any action be halted?

3. Consideration of potential new actions
   - Potential new actions are presented for the group
   - Conclude whether the proposal of action is:
     - A priority, to be added to the action plan under the respective strategy
     - In a waiting state, for inclusion in a separate list to be considered later
     - Rejected

4. Resource planning
   - Is there a need to reallocate financial, physical and/or human resources?

In order to systematise lessons learned as you go on with your business, we strongly recommend incorporating a procedure to send out online questionnaires after you have completed a service. The internet offers several online feedback tools for this purpose, e.g. http://www.surveymonkey.com.

If you sell energy audits as a first step towards a renovation project, you should also ask customers who did not return to fill in an online feedback form.

Satisfied customers can be a major source of recommendations to other potential clients. Business developers should think about how to use those experiences and peer-to-peer communication for market development. We recommend that you ask your customer: *if he/she is not satisfied, to tell you, and if he/she is satisfied, to tell all his/her friends*. Evaluations of all projects to find out how satisfied the costumers are and how they first heard about the service will give important input for improving and promoting the service. The aggregated knowledge will also lead to changes in marketing strategies, for example, as the market develops.

After-sales services should be offered to maintain contact with customers. This would include regular reviews and maintenance of installations, which can also generate additional sales for the One Stop Shop company.

Examples of relevant questions after an energy audit (specify options for each question):

1. How did you become aware of our service?
2. What is your opinion of the audit? Please indicate what could have been done better.
3. Was the energy audit report informative? Please specify if you lack any information.
4. Have you already implemented, or do you plan to implement, the suggested measures, either partly or wholly? When?
5. If not, why not?
6. If the renovation was executed by another firm (other than our One Stop Shop service), could you tell us by whom?
7. Have you recommended an energy audit to anyone else?

Examples of relevant questions after completion of a renovation project
(specify options for each question) :

1. Overall, how satisfied are you with the execution of the renovation project?
2. How was communication:
   a. during the planning phase?
   b. during the construction phase?
   c. after completion?
3. What is your opinion of project organisation among the various crafts?

4. How pleased are you with:
    a. the quality of the construction?
    b. the installations?
    c. the services?
5. The quality assurance procedure? Could you please list what you are not satisfied with?

In the report "Evaluation of different business models for a One Stop Shop" [6], the researchers summarise the available information about the performance of pilot models to date. The major questions studied are: a) profitability, and b) degree of holistic energy-efficient renovation in planned and executed projects.

References

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[10] Standards Norway is responsible standards in all areas except electrotechnology and telecommunication. Standards Norway adopts and publishes some 1,500 new Norsk Standard (Norwegian Standards) annually. NS are adopted by Standards Norway based on national, European and International standards. Standards Norway is the Norwegian member of CEN and ISO. http://www.standard.no/no/Nyheter-og-produkter/Vaare-kampanjer/Bygg-anlegg-og-eiendom/Ny-NS-8407-og-NS-8417/?gclid=CMCpvpuo7rECFaEtmAodY18AH

[11]http://www.confederatiebouw.be/Portals/0/documenten/VCB/Studiedag130912/plus%20Home%20group%20Bostoen%20Geert%20Verspeel%20financiele%20rendementen%20Hernieuwbar%20Energie.pdf

Appendix

Appendix 1
Sub delivery of WP 4 – One Stop Shop business models for holistic renovation
Market procedures

Appendix 2
One Stop Shop model: Project manager
A joint venture of industry, retailers and contractors

Appendix 3
WP 4 - Guidelines to One Stop Shop model.
Case study Belgium: PB calc & consult bvba

Appendix 4
Sub delivery WP 4 – One Stop Shop business models for holistic renovation
Financing Models

Special relevant links:

OSS Project:
http://one-stop-shop.org/

SuccessFamilies:
http://virtual.vtt.fi/virtual/successfamilies/index.htm

Tools for business modelling:
http://www.businessmodelgeneration.com/

Appendix 1:

Sub delivery of WP 4 – One Stop Shop business models for holistic renovation

Market procedures

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1. Introduction

Market activities are ongoing actions such as market segmentation, marketing and sales activities, customer communication, etc. and are part of the one-stop-shop action plan. The idea behind one-stop-shop is to deliver holistic energy-efficient renovation of single-family homes through a single point of contact with the homeowner.

This report is focused on market activities: how to identify segments, find usable characteristics of both areas and homeowners, ascertain where to collect the necessary information, how to analyse the information and, finally, how to market and communicate the products and services.

2. Market segmentation

The first step towards defining relevant One Stop Shop market activities is to single out the best and most promising markets for energy-efficient renovation. One potential pitfall when defining market activities is to consider the market as one big melting pot where all customers are difficult to differentiate. This poses a considerable risk of wasting a lot of energy and money on generic marketing. Identifying segments with different characteristics and different types of needs that can be reached through different channels greatly improves the chance of a successful market introduction. After identifying potential market segments, you will be able to choose one or more of them as your target group(s). At this stage, we will simply focus on identifying several segments.

For segmentation to be effective, it must fulfil certain conditions:

1. The segment must be identifiable
   It should be possible to identify the segment and measure its size, i.e. different typologies,

number of houses, geographical differences, etc. The segments should be internally homogeneous while being heterogeneous with respect to other segments. The reason for segmentation is to reach homeowners that will act differently in response to different market communication.

2. The segment must be available
   It must be possible to reach the segment through the company's channels.

3. The segment must be profitable
   The segment must be large enough to be profitable to address. The more segments that are addressed, the higher the marketing costs per potential customer.

4. The segment must match the company's resources and goals.
   The company must have available resources to address the segment. Do not dissipate your resources over too many segments, since you run the risk of lacking the resources needed to make a given segment profitable. [1].

5. For energy-efficient renovation of single family homes, we see that each potential segment may be described by different combinations of characteristics.

The practical way to do this in your business is to go through these steps:

1. MARKET SEGMENTATION
   Try to find differentiating factors; building type, building year, characteristics of the homeowner etc.

   Q: Which building years generally represent high energy saving potential and what geographical areas in your municipality(ies) have settlements of such houses? See Building typologies in Belgium, Norway, Denmark & Finland: http://www.one-stop-shop.org/sites/default/files/Building%20typologies%20in%20Belgium%20Norway%20Denmark%20Finland.pdf

2. INFORMATION GATHERING
   Try to find out what kind of local information sources are available: city building department, estate agents, utility companies, banks, etc

   Q: Which areas are recognised to be attractive? When were the target houses built? How long has the owner been in occupation?

3. ANALYSIS
   Try to make a systematic index of the characteristics of each potential segment. Single out the most promising segments.

   Make a simple analysis: Which houses have icicles hanging from the roof in wintertime? These houses might need extra insulation.

4. MARKET ACTIVITIES
   After choosing the most promising segments, ask yourself what is the most effective and strategic way to reach your potential customers: personal visits, DM, advertisements, etc. This is to be used as input for your action plan.

Use the information you have available and define different segments through combinations of the three dimensions mentioned above.
Each defined segment represents an opportunity. The analysis should demonstrate which segments represent the greatest opportunities.

In order to expand the One Stop Shop business, we need to focus marketing efforts on homeowners that are most likely to have both: a) an interest in energy-efficient and sustainable renovation, and

b) the necessary economic resources to undertake such a project. In order to locate the majority of homeowners who would like to renovate their house, a good way to start is to segment the potential area covered by the One Stop Shop company.

A segmentation analysis makes marketing and sales efforts more effective as well as enhancing the chances of finding potential customers [1]. It is also advantageous to concentrate on one geographical area at a time, simply in order to exploit the word-of-mouth effect among neighbours.

Earlier projects [2] worked on the hypothesis that there are several dimensions that affect homeowners' interest in renovating. One of these is, of course, the condition (and age) of the house, but there are other characteristics associated with homeowners that may reveal an interest or willingness to undertake advanced renovation.

The most important dimensions are:

- Characteristics of the house – condition and age
- Characteristics of the persons/homeowners (age, education, interests, etc.)
- How long has the homeowner lived in the house? [2]

Based on the information that is gathered, an analysis of these dimensions is discussed in the following sections.

2.1 Building typologies

The overall state of the house (building envelope, windows/doors, roof, amount of insulation, etc.) will evidently influence whether or not it is a potential renovation candidate. This can often be determined simply by ascertaining the year of construction, assuming no renovation has been done before. In Success Families project D1.2 [2], it was found that the typical single-family houses identified as having high energy saving potential all dated from the same time period in each Nordic country. Single family houses built before 1945 and houses from the 1960s and 1970s have high energy saving potential since they were built in large numbers right before insulation standards were raised in the late 1970s.

2.2 Characteristics of the homeowner

After choosing the building typologies that have the best potential for advanced holistic renovation, we need to single out those homeowners who are interested in an energy-efficient renovation. People who are generally interested in the climate challenge and are able to refinance their mortgage appear to be more willing to undertake sustainable renovation work. [2] Also, owners who have recently purchased their home appear to be more likely to renovate.

2.3 Windows of opportunity

We do not have any sources of information about homeowners' individual needs, but it is a fact that these needs—such as a warmer house in winter, reduced draughts, reduced energy costs, and improved window conditions—represent different windows of opportunity for the One Stop Shop Business to offer relevant options for the homeowner. In other words, these are situations where the homeowner is focused on doing something with the house, or at least plans to do some sort of renovation.

These situations are called "windows of opportunity" because the homeowner in those circumstances is amenable to information and interested in learning about smart solutions and the measures that should be taken at the same time to reduce future renovation costs. Therefore, it is important to give out information about the One Stop Shop service at places and times where potential customers are seeking solutions for their problems. A typical place is the local hardware store. (Others can be fairs, or internet ads triggered by searches on renovation-related terms). Hardware stores are a useful venue

since they are places that people come to for other renovation needs. This represents an opportunity to offer people a broader service. Be sure that your products are offered when and where a homeowner would be expected to come naturally, either in person or on the internet.

One of the dimensions described above is how long the person has been living in the house. A person who has just bought a used home will often be interested in renovation work. If it is not immediately clear that the house need renovation, then during the early years the family will gradually discover the house's deficiencies—draughts, poor indoor climate, etc.—and will then be interested in improving the house.

3. Information gathering

In practice, several resources can help us find the most promising segments. This is practical information which does not require advanced analysis. The biggest challenge, if any, might be getting hold of this information, and its availability may vary between countries.

Regarding the first dimension (characteristics of the house), we start by obtaining information about building typologies, and also where to find areas with houses built in the same period.

3.1 Sources for local information gathering

3.1.1 *Geographical information from municipalities*

In many European countries, the city's building department is an important source of information for identifying houses built in the chosen period. Development plans (undertaken by the municipality or private contractors) are open to the public. The date of approval of the development plan indicates when the area was developed and the sites were ready to be built on. We can therefore estimate which year the houses in the area were built.

This information is easy accessible from the municipalities. Since 1st January 2010, all municipalities in Norway are obliged to have a digital record of all plans and maps. Denmark has started digitising building information, and some municipalities are already up and running with this type of information.

In several countries, municipalities have registers of renovation permits; if it is possible to identify them geographically, this information can be used to pinpoint areas with renovation potential. Another important factor is that, if one homeowner renovates, other homeowners in the neighbourhood are more motivated to do the same. When focusing on a geographical area, the One Stop Shop pilot will have synergies both in marketing and cost-effectiveness. The fact that one resident renovates will likely influence neighbours, or at least draw their attention to the issue.

3.1.2 *Personal knowledge*

Local contractors and craftsmen might also be an important source of information for pinpointing areas with high renovation potential, since they know their neighbourhood.

In summary, the most important sources of information about houses are:

1. Municipal building department
2. Personal information through local craftsmen and companies

3.2 Characteristics of the homeowner – where to collect information

The second dimension—characteristics of the homeowner—might be more difficult to ascertain, but there are still some useful sources of information.

3.2.1 *Estate agents*

An estate agency can help identify attractive residential areas from their own surveys. From there, we might assume that homeowners in these areas are more likely to have the necessary economic resources to do something with their houses.

Moreover, agencies may also have information about houses that have changed hands recently. People who have lived in their house for less than 3 years or have moved more than once in the last 5 years have been found to be more likely to carry out advanced renovation work [6].

This is valuable information when using direct mail (DM) campaigns or personal visits to reach potential customers.

3.2.2 *Relocation notices*

In Finland, at least, official relocation notices are available through Itella (the Finnish post office). People who move, often want to undertake renovation work. This is the time to implement energy efficiency measures. However, this information is not available in all countries.

3.2.3 *Banks*

We assume that persons with the capacity to increase their mortgage loan are more likely not only to renovate but also to actually upgrade their homes. Therefore, if the bank is interested in moving their services and branding towards more sustainable issues, they might want to offer their customers information about how to invest in their own homes in a way that increases the house's value and quality. In Belgium, some banks offer explicit loans and assistance for spot renovations.

Through their customer management system, the banks know who is in a position to take on a larger loan and can therefore reach potential homeowners through personal contact, direct mail or e-mail/internet. This is, of course, an extremely delicate issue as this kind of information is based on trust between the customer and the bank. Therefore, if the bank does not wish to focus on reducing energy consumption or environmental issues, it will be unlikely to offer such a service to customers.

3.2.4 *Socio-demographic characteristics*

It is important to bear in mind that several socio-demographic characteristics— homeowner's family situation, age, how long the home owner has lived in the house, whether it is newly bought (as referred to earlier in section 2.3. Windows of Opportunity)—may influence the extent to which the renovation will be done in an energy-efficient way [2].

For example, based on a GIS (Geographic Information System) analysis in the REEP project from Canada [3], the following features are believed to characterise settlements most likely to be interested in the offer:

- at least 80% of the houses were built before 1970 (pre-energy crisis)
- at least 10% of the houses require major repairs
- at least 85% of the houses are owner-occupied
- at least 50% of the households have moved in the last five years
- the average household income exceeds CAN $60k
- at least 40% of the households have a member with a university degree

Based on this analysis, neighbourhoods were classified as being highly suitable, very suitable, suitable, somewhat suitable or unsuitable.

This kind of information is difficult to obtain without combining data from several sources. The best way to find this kind of information is to combine local knowledge with data from real estate agencies about attractive areas. We can assume that very attractive areas will be inhabited by people with above-average incomes and educational levels.

The ideal zones are residential areas that have undergone a generation change, i.e. where older people are selling to younger families. We can assume that those houses need upgrading and that the new owners will be interested in renovating before moving in or right after they have moved in.

4. Analysis

After collecting the necessary information, the next step is to analyse it and identify the most promising segments. Therefore the One Stop Shop pilot should register all the information very carefully, ideally in some sort of Customer Relationship Management (CRM) system.
If this is done systematically, it is much easier to combine different types of information and build an information platform with potential customers.

The analysis needed in order to select the market segments with the greatest potential for renovation is not very complex. It requires systematically indexing each item of data and linking it to the related segment.

A simple analysis is to drive through a residential area in wintertime and note any houses with icicles hanging from the roof. This reveals that the house might need better insulation in the roof and loft.

4.1 Key questions

In summary, the questions below identify what to consider and what kind of information might be useful to collect to help make a segmentation and analysis of the most promising residential areas for energy-efficient renovation.

- What do we know about the different real estate areas in this region?
- Who do we know that can give us information about residential areas – local carpenters/ builders and other partners (e.g. hardware stores)?
- Does the municipality emphasise energy efficiency in general?
- Etc.

5. Market activities

When you have reached the stage for market activities, you have already done the segmentation, gathered the information and performed the necessary analyses. If your company is a partner in a One Stop Shop, and you have been following the guidelines, you have already defined and selected the most promising segments to work on at this stage [4]. In addition, customer value (what kind of product and service to sell to the customer), customer relations (what kind of relation the pilot should have with the customers) and channels have probably also been discussed.

Below we list some distribution and communication channels; which one you choose depends greatly on what segments have been targeted and what kind of customer relationship the One Stop Shop prefers.

Each pilot will have different available channels for contacting potential customers. Depending on the marketing strategies [2], one should use activities that can change consumer behaviour by:

1. Providing information to the customer: show what is possible and what products are available when renovating their home
2. Persuading the customer: enable the customer to turn this information into knowledge for further decision making. "Is this product/service suitable for us?"
3. Helping the customer to make the final decision. Show relevant sales arguments, draw up a contract, describe the renovation process
4. Giving the customer some sort of positive confirmation of their decision [5].

5.1 Direct mail

Direct mail is used when either you have a list of addresses or have delimited a given post code area. For the example, in Finland some firms get the information directly from Itella (Finnish mail) in the

form of official relocation notices when somebody moves house. They can send direct mail to the new residents to offer renovation services. This is very effective since it provides direct communication with potential customers. It is also cost-effective as it is not necessary to contact homeowners who will presumably not be interested.

5.2 Advertisements

Advertisements in local newspapers, with information on how to contact the One Stop Shop, are a cheap way to reach potential customers interested in renovation. Combined with editorials about the service, an advertisement can be quite effective as an information channel for your business. Advertisements in magazines and local TV stations may be more effective, but are often more costly.

5.3 Personal visits

Personal visits are quite costly and are mostly used after contact has been made with the homeowner. Usually the homeowner becomes aware of the service and gets in contact with the supplier to ask for more information.

5.4 Information evenings

The ENRA concept [2] in Finland arranged information evenings in certain areas to provide information about their service. The ENRA concept was offered by a group of companies offering different individual energy renovation services or solutions in a holistic package. The technical solutions offered included energy-efficient windows and doors, heat pumps, extra internal insulation or new insulation, and demand-based ventilation with heat recovery.
They invited local residents to an information evening to provide product information on energy-efficient products and renovation services.

5.5 Fairs and theme days

Fairs and theme days in the building sector often focus on specific challenges faced by homeowners. Such events are a very good opportunity to gauge interest in the city/area regarding energy-efficient renovation or to raise such interest/awareness. Visitors can register if they are interested in receiving more information on the issue or in being contacted by the One Stop Shop pilot. The pilot decides what kind of information to ask for. If this information is processed systematically, it can become a valuable database of prospects.

5.6 Information through partnerships

To enhance credibility, information can be distributed through partners:

- State bodies, such as Enova and Husbanken (Norway), and Motiva (www.motiva.fi)
- The municipality
- Homeowners' association

The REEP project in Canada is an example of how to find motivated homeowners who would be interested in upgrading their house [3]. To reach potential customers, the REEP project office worked with the utility company, which sent out information about the REEP service with energy bills. Enclosed with the bill, the homeowner received an application form enabling them to ask for additional information or request a visit and an analysis, on the spot, with a report containing recommendations for making the house more energy-efficient.

Homeowners who pay large energy bills are made aware of the possibility of renovating to a higher energy standard when they receive the information with the bill.

In direct mail campaigns, utility companies can also use annual energy use as a factor to single out potential customers. Homeowners that use more energy than average probably have poorly equipped houses.

However, utility companies may be reluctant to support activities of this type since they would actually reduce energy consumption (and, consequently, profits).
Also in some countries it can be difficult to get this kind of information from utility companies as their information databases may not allow for local segmentation.

5.7 Websites

Nowadays, practically all services have at least some information in the internet. In some cases (e.g. travel tickets), it is very easy to make a purchase on-line. However, energy renovations are much more complicated and often require personal assistance during purchase. Nevertheless, the internet can be used to distribute all kinds of information on these services and users can use it to find potential service providers.
Social media, such as Facebook and Twitter, can be used to distribute information about holistic energy-efficient renovation. In this case, it is possible to directly inform people who express interest in the subject by creating specific renovation-related groups which homeowners can "like" or "follow".
OSS project WP 5 developed a tool for creating a One Stop Shop website; it is an effective method for one-stop-shop partners to build their own specific web sites [4].

6. Evaluation

The various market activities should be evaluated continuously in order to use the most cost-effective channels at any given time. Depending on which channels are used, this can be done either by counting feedback, the number of services/products sold, the number of renovation contracts processed, etc.

For future activities, you should use the channels you find to be most effective.

References

[1] PHILIP KOTLER. Marketing Management, 2003.

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[3] SHC Task 28 2006. Haavik T., Aabrekk S., Prendergast E. Stoecklein A., McDonald H., Rødsjø A., Holt.G. Business Opportunities in Sustainable Housing, A Marketing Guide Based on Experiences from 10 countries, 2006.

[4]OSS 2012. One Stop Shop - From demonstration projects towards volume market: Innovations for sustainable renovation. Work package: One Stop Shop business models for holistic renovation. Work package: Development tool: How to create a One Stop Shop website. http://www.one-stop-shop.org, accessed: 31 August 2012.

[5] Mlecnik, E (2011). Passive house networks: a social innovation targeting innovation in SME's in the construction sector. In H Wamelink, R Geraedst & L Volker (Eds.), Management and innovation for a sustainable built environment - MISBE 2011 conference proceedings.
Amsterdam: CIB, ENHR, AESP

[6] Survey conducted by Segel as part of the evaluation of Bolig Enøk's One Stop Shop pilot. To be found at the OSS WEB under "Evaluation of different business models for a One Stop Shop".

Appendix 2:

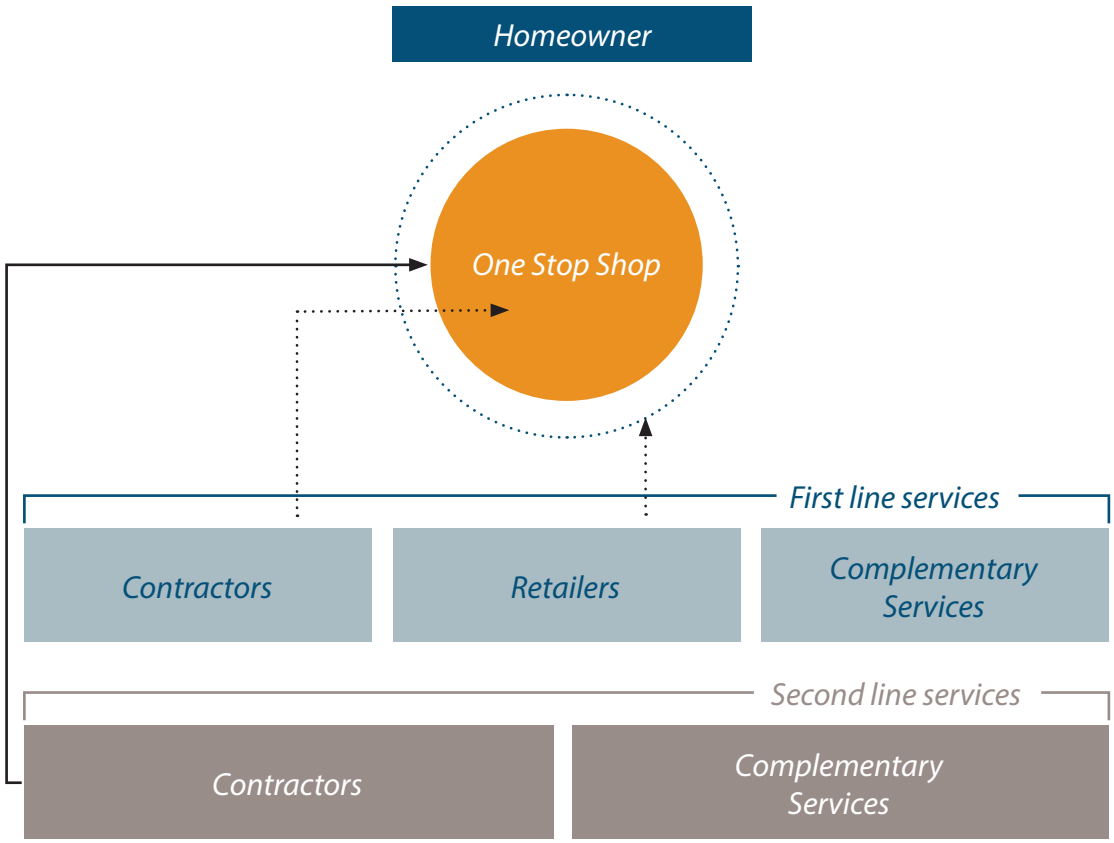
One Stop Shop model: Project manager.

A joint venture of industry, retailers and contractors

Authors:
Synnøve E. Aabrekk , Trond Haavik Segel (Norway)

Norwegian company Bolig Enøk is a newly-established subsidiary of one of Norway's big two insulation companies: Glava AS. As a subsidiary of Glava AS, it is important for Bolig Enøk not to clash with the parent company's two main distribution channels: retail chains and carpenters. Therefore, each renovation project will buy all products (including insulation) from local suppliers.

The figure below shows that insulation company Glava AS plays the leading role in this pilot (bold arrow). The orange (inner) circle represents the core business of the one-stop-shop entrepreneur, while the white (outer) circle represents additional services which are supplied by the partners.



One of Bolig Enøk's business ideas is to provide the services of a project manager to homeowners seeking to renovate their single-family homes.

Due to the project manager's broad competencies, the homeowner gets technical analysis, recommendations and project management of the renovation process from a single person. The Project Manager handles contacts with all actors involved in the process, such as main contractor, subcontractors, authorities and financing institutions. Initially, Bolig Enøk planned to invoice the homeowner

directly for the entire project, and therefore to take on the liability vis-à-vis the customer. Due to differences in the warranty period between consumer law and business-to-business law, this model was considered to be too risky. Under the current setup, the respective suppliers invoice the homeowner, but the invoices are vetted and certified first by Bolig Enøk. Bolig Enøk currently charges a fee in the form of a percentage of the total renovation project cost, but it is re-evaluating this approach.

Regarding status, we refer to the summarised SWOT analysis in report D2.1 [SUCCESSFAMILIES], with both general and specific strengths and weaknesses, opportunities and threats of this type of pilot model. A full description of this business model is contained in report D3.2. Report on business models for one-stop-shop service for sustainable renovation of single family house [SUCCESSFAMILIES].

Using the business model canvas to describe the pilot model; Project Manager

<table>
<tr>
<td rowspan="2">Key partners
1. Building product supplier (service provider)
2. Contractors
3. Local retail stores
4. Partners with expertise in building physics, energy and heating. (Sintef, Glava, KVT)</td>
<td>Key activities
1. Marketing
2. Building inspection and energy audit
3. Present report with recommendations and energy certificate
4. Project management
4.1 Help obtain permits from local authorities
4.2 Tendering process
4.3 Regular contact with suppliers and homeowner
4.4 Quality assurance: both price levels and product/ competency/ service by sub-suppliers
4.5 Assist in filing applications for subsidies
4.6 Inspection when renovation is completed
5. Execution of renovation (by hired contractors)
6. After-sales service</td>
<td rowspan="2">Value proposition
1. Provide knowledge of holistic renovation, including potential extension of the house.
2. Personal visits to the homeowner
3. On-site analysis
4. Technical analysis with recommend-ations
5. Energy certificate
6. Project management
7. Offer holistic renovation service</td>
<td>Customer relationship
1. Dedicated personal assistance. The Project Manager is the main (only) interface with the customer</td>
<td rowspan="2">Customer segments
1. Owners of single family houses from 1960s- 80s in selected areas in the region of Østfold, Akershus and south-east Oslo.
2. Homeowners who have capacity to increase their mortgage loan</td>
</tr>
<tr>
<td>Key resources
1. Two project managers
2. Administration and marketing personnel at Bolig Enøk</td>
<td>Channels
1. Information in local newspaper
2. Information in Homeowners' Association magazine
3. Municipal environment plans
4. Direct mail
5. Invitation to local information evenings
6. On-site visit to the homeowner
7. Telephone</td>
</tr>
<tr>
<td colspan="2">Cost structure
1. Project manager salaries account for the bulk of costs. Therefore, effective use of their hours is the most critical factor for profitability.
2. Travel costs
3. Marketing costs
4. Administration and support costs</td>
<td colspan="3">Revenue stream
1. Analysis and Energy Certificate: NOK 6.900 incl. VAT
2. Renovation: NOK 100.000-3.000.000 NOK incl. VAT</td>
</tr>
</table>

Table 1: Example of the Bolig Enøk AS business model [Report D3.2. SUCCESSFAMILIES]

A. Mission

Simplify implementation of energy-efficient renovation in single-family houses.

B. Vision

Be known as a leader in project management of holistic renovation of single family houses. A national network should be established by 2014.

C. Strategies

1. Target group

Owners of single family houses from the 1960s- 80s in selected areas in the region of Østfold, Akershus and south-east Oslo.
Homeowners who have capacity to take on a larger mortgage loan.

2. Complete package through local sourcing

The house should be considered as a system. Our product range and know-how, as well as our network and partners, must reflect this. All products and craft services are provided through local tendering. These suppliers will therefore have an interest in developing this as a new business opportunity, and players who are not committed can be avoided.

3. Trustworthiness

All analysis, renovation recommendations, products, solutions and service providers will be evaluated during and after renovation. The best possible competencies, courses and certification will be undertaken to build credibility. These actions should be addressed to all partners, local authorities and customers. This service, including energy-efficient renovation and specific products, should be recommended by Enova (Ref. "Enova Anbefaler"). Through certification of the project managers and by tendering, the homeowner should can assured of receiving neutral advice.

4. Custom solutions

Through on-site visits and analysis, the Project Managers will make the homeowner aware of the opportunity to renovate the house to a good standard of energy efficiency, with a plan of action (what to do first), how to do it (offer certified carpenters) as well as a cost plan and opportunities for subsidies for renovation.
Based on the analysis, the homeowner receives competitive bids for holistic renovation. Competent project management facilitates and reduces the risk of the renovation process. Accumulated experience in projects will make it possible to develop and replicate standard approaches. The service includes updated information about all available subsidies. These factors will increase the appeal of the service for the homeowner compared with the DIY option.

5. Marketing mix

The Project Manager Service (Product) will be offered at competitive terms (Price) as Bolig Enøk achieves good rates through the tendering process, and thereby also secures a return for itself. Distributing the idea of a holistic approach through different media (Promotion) arouses interest in potential customers to attend information evenings arranged by Bolig Enøk. Personal contact and trust will be established during such events and followed up by on site visits (Place).

Reference

[SuccessFamilies]. Nordic project which studies business concepts for renovation services for single-family houses http://successfamilies.vtt.fi/downloads.htm, reports D2.1, D2.2, D3.2, are particularly relevant for this paper, retrieved 27 June.

Appendix 3:

WP 4 – Guidelines for one stop shop model

Case Study Belgium: PB calc & consult bvba

Authors:
Erwin Mlecnik PHP
Johan Cré PB calc & consult bvba
Trond Haavik Segel

1. Introduction to the case study

PB calc & consult bvba is a construction management company. Its activities include coaching of building project teams in order to obtain efficiently cost-managed construction. In this framework, cost estimation and guaranteeing cost-effectiveness are a core competence of PB calc & consult. The firm offers a range of services for guiding project teams, such as defining the list of building requirements, assisting with budget estimates and budget monitoring, coaching in the development of the final design, supervision of building cost during the execution, and analysis of building cost for the benefit of subsequent projects.

The key person at PB calc & consult is the company's founder, Peggy Bovens. She graduated as a civil engineer/architect from the University of Ghent in 1992 and has acquired cost management expertise in several building projects and companies (Antwerpse Bouwwerken, Ibens, Bolckmans), thus becoming familiar with the overall issue of estimation and optimisation of the building cost and project budgeting. She was also involved in producing a number of estimation and quality manuals, having produced sufficient material for a course on construction costs.

In 2008, the company applied for an SME Innovation Project from IWT-Vlaanderen to examine the feasibility of developing an integrated construction supply chain bookkeeping system. The idea was that the communication between partners in a project team, in all project phases (project definition, structural design, design, detailed design, execution, commissioning, ownership, management and use), be improved by standardisation. As a result, the quality and cost management of projects can be expected to improve. An integrated material, object and project development coding system was developed that standardises communication codes for the purpose of managing building projects, connecting different standards (Belgian and Dutch) on costs related to investment, design and running a facility. This resulted in PB calc & consult's BouwData PB®. BouwData PB® is a building process management system (not software) structured mainly around standard coding of all construction activities and their related costs. PB calc & consult now intends to use this (software-independent) coding system in different building process management tools, such as "groupware" and building information modelling (BIM) systems, in order to facilitate the information stream. The question now arises as to how such a supply chain bookkeeping system could be used for single-family housing renovation.

A study was recently performed for Leonardo Energy/European Copper Institute (ECI). In that research project, PB calc & consult (with partners BECO, Elektriciteit Vochten and Ecopuur) investigated cost issues in four types of housing: a newly-built family apartment, a renovated loft in an old building, a newly-built two-façade terraced house, and an old two-façade terraced house with a newly-built extension at the back. In the long term, ECI would like to use this research to provide customers with a tool to estimate the cost/benefits of energy-saving measures for houses (also including renovations). It was suggested that the use of BIM, for example, would be too expensive for small single-family

houses; therefore, low-cost alternatives are now sought to guide customers towards finding and executing energy-saving measures.

The idea of providing project management services and tools for homeowners in renovation is a novel strategic option for PB calc & consult, which could be developed as an innovation. Whereas PB calc & consult has gained relevant expertise to act as a project manager and cost estimator for larger housing projects, the work for ECI and the prospect of further collaboration inspired PB calc & consult to consider new services and a new tool that addresses the specific market segment of single-family house renovation. However, this target market segment is very different from PB calc & consult's usual clients. Therefore PB calc & consult needs to find a suitable strategy to enter this market segment, possibly by using new marketing strategies and adapting tools that can easily be understood by homeowners. For example, whereas larger projects usually 'invest' in a project manager, single-family homeowners are generally not accustomed to doing so. New services and tools would need to find a link with customers' motivations (why they should want to renovate using project management). Also, homeowners need to be informed and persuaded about the benefits of project management services. Cost-effectiveness is an obvious marketing argument, but the issue of cost is also connected to energy saving. This means that proper tools need to be developed to find a way to guarantee energy performance and related energy savings. Since existing tools and services were mainly built for the purpose of costing large projects, estimating energy savings (particularly for single-family house renovation) as an additional or equivalent decision parameter is still a major challenge for PB calc & consult.

In the vision of PB calc & consult, experience with BouwData PB® could be used as a general framework for developing a tool for single-family house renovation, possibly resulting in a new or adapted low-cost tool, and integrating energy efficiency. It is understood that single-family house-owners would need simple, readily-comprehensible information related to their renovation expectations. In this framework, PB calc & consult considers that a website might be a useful bridge for connecting clients' motivations (e.g. proposing renovation measures related to building typology), estimating cost and energy saving of renovation measures, and promoting project management services. Furthermore, Web 2.0 services could be considered. For example, PB calc & consult considers the development and/or integration of low-cost e-learning services, advice apps and consumer portals as interesting options to be explored for exchanging experiences. Furthermore, PB calc & consult does not rule out working with other market players to develop such a portal (e.g. ECI or members of the One Stop Shop user group).

In brief, in the vision of PB calc & consult, a one-stop-shop portal (with a strong emphasis on cost estimation and promoting project management services) could be developed to guide a homeowner towards project management services, using additional tools and services that can be marketed separately. In order to better understand the position, potential and direction for a one-stop-shop business, different market analysis tools were used, such as the Six Forces model and PEST and SWOT analysis.

2. Methodology

To define key elements for business model development, an interactive process was used involving the lead company, One Stop Shop researchers and different market players.

The report is the result of the following process of interaction between the OSS researcher and the company:

a) The researcher had an introductory meeting with PB calc & consult to explore the company's vision and to discuss opportunities for business development of innovative services for the specific segment of single-family house renovation.
b) A first draft of a PEST analysis was presented to the company for clarification, and ideas for input into the Six Forces model and SWOT analysis were discussed and fine-tuned in two further meetings.
c) Furthermore, the development of a business model canvas and an innovation study were discussed. However, the company did not wish to pursue the development of the business model and study.

3. Analysis

3.1 PEST analysis

PEST is an acronym for Political, Economic, Social and Technological factors, which are four perspectives used to assess the market for a business or organisation unit (see also WP4 final report). The PEST analysis headings are a framework for reviewing a situation. Like SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), and Porter's Five Forces[1] model (extended to the Six Forces Model in the next section), it can be used to review a strategy or position, a company's direction, a marketing proposition or an idea; it encourages proactive thinking, rather than reliance on habitual or instinctive reactions. Keeping to four fundamental perspectives imposes a discipline for considering strategic context and effect. As PEST factors are essentially external, completing a PEST analysis is helpful prior to completing a SWOT analysis, since a SWOT analysis is based equally on internal and external factors. Table 1 presents the PEST analysis as a grid comprising four sections, one for each of the PEST headings: Political, Economic, Social and Technological.

Political factors	*Economic factors*
• European policy is moving towards requiring nearly-zero energy housing • A Flemish energy performance certificate is needed when a house is sold or rented; use of official Flemish energy performance software is obligatory for renovations requiring a building permit • The Belgian income tax credit for energy-efficient renovations has been abolished • The house tax (kadastraal inkomen) is expected to be lower in the future for houses with better energy performance • Innovation policy stimulates SME development • Policy instruments (e.g. grants) change frequently; the framework is unstable	• The real market value of houses is still largely dominated by location and largely independent of energy-saving measures • People who buy a house to renovate usually have only a limited budget left over, so a phased approach is often preferred • Flemish grants focus on a few energy saving measures (e.g. roof insulation); energy distribution net managers offer additional grants, also at a building level • Homeowners are not expected to spend a lot on information about renovation • Realistic life cycle and living costs are becoming more important, but are not well known
Social factors	*Technological factors*
• An architect is required for renovations with building permits: the architect is often perceived as a project manager, but does not always act as such • Different customer segments and scattered information from different sources; renovation mainly driven by non-energy issues • Homeowners find their information via different channels (DIY stores, internet, forums, contractors, architects, building fairs) • The Flemish renovation market is very fragmented; this sometimes results in coordination difficulties and the risk of low quality when different subcontractors are involved • Homeowners are largely unfamiliar with the 'building teams' which might be required • Homeowners are not aware of project management services • The public is not aware that high energy efficiency can be attained in renovations at little additional cost, but demonstration projects exist • Different market players are interested in One Stop Shop collaboration • Application for grants can be cumbersome because of fragmentation	• Project management and cost estimation services are used only sporadically in house renovation at present • Current project management services allow for standardisation, but these services are not often applied by homeowners • Energy consumption can be estimated with different tools • Automatic 3D building measurement is available that can be coupled with BIM/CAD • E-learning tools are emerging • Low-barrier/low-cost information systems are appearing, e.g. smartphone apps, Wikis, etc. • Voluntary quality assurance schemes exist for energy renovation (passive house certification) • Smart, speedy house renovation solutions exist • 'Analytics as a Service' is emerging: shift of information towards the 'cloud', e.g. Q/A can trigger analysis • Development of imaging tools that create awareness (e.g. thermal imaging on a city level, fine dust measurement using cell phones)

Table 1: PEST analysis

3.2 Six Forces Model: competitive arena

As part of the One Stop Shop research project, the competitive arena of newly established or potential new business models for holistic renovation of single family houses was studied. The Six Forces model was used as an important tool for identifying opportunities and threats for each pilot (see WP4 final report). The model is an extension of Porter's five forces model (suppliers, customers, competitors, potential competitors and substitutes), with an added sixth force: complementary actors[2]. It also defines a company's offer (service and/or product) with respect to the customer's "real needs" (see Figure 1).

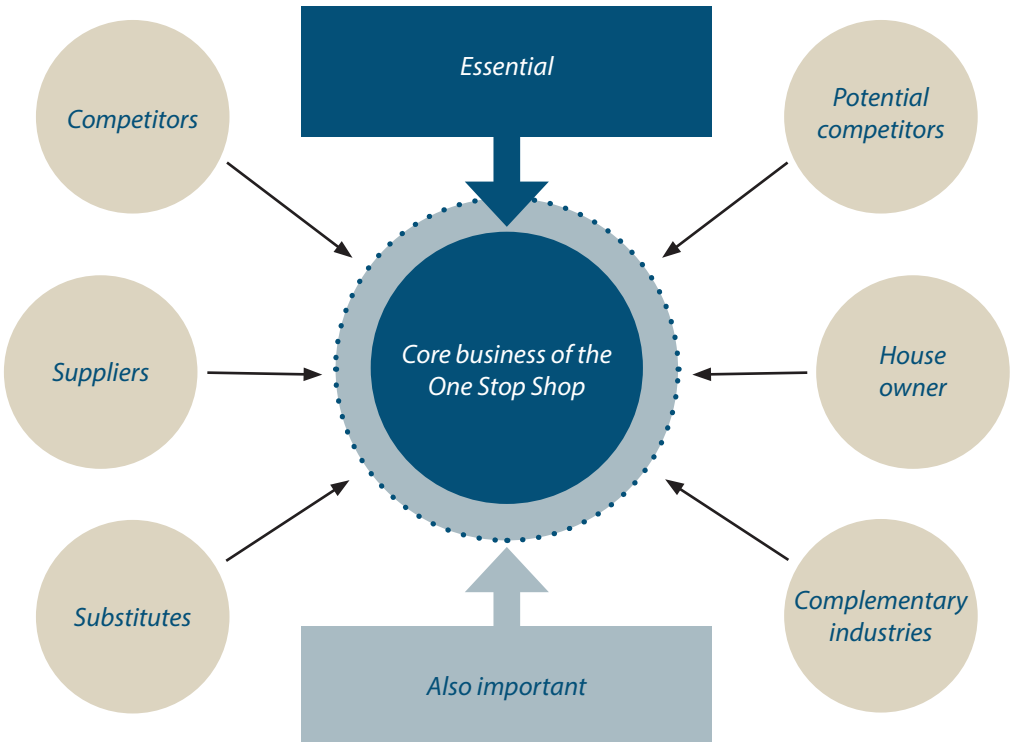


Figure 1: 6-forces model (general, how to read)

Setting up a Six Forces model is very useful in order to identify potential partners for a holistic service for the renovation of single-family houses. The results of the analysis are shown in Figure 2.

Discussions with the company led to the definition of the business idea of offering custom services for sustainable renovation of single-family houses, in addition to the existing ideas and implementations for larger projects. The possible core business for the innovation was defined as an integrated renovation service offering to unburden customers through project management services and tools (thus using the available knowledge and tools to organise the work in a cost-effective way). At the same type the company would seek collaboration with competent firms who can offer the practical

1
The five forces were originally identified and developed by Michael E. Porter while working for Harvard Business School and the Boston Consulting group. Porter's five forces that drive competition can be defined as:
1. Existing competition
2. Threat of new market entrants
3. Bargaining power of buyers
4. Bargaining power of suppliers
5. Threat of substitute products (including technology change)
See also:
Michael E. Porter, "The Five Competitive Forces that Shape Strategy", Harvard Business Review, January 2008, p.86-104
Michael E. Porter, "Competitive Strategy. Techniques for analysing industries and competitors", The Free Press, New York, 1980.

2
Grove, A.S. 1996, Only the Paranoid Survive: How to Exploit the Crisis Points That Challenge Every Company and Career, Doubleday, New Yourk

services, which should include renovation of the building envelope (insulation, windows, materials, HVAC systems, etc.).

The light yellow area represents additional services/added value: a response to customer wishes such as additional knowledge and quality assurance. Within the framework of the discussion on additional services, an idea emerged that these additional services could include, for example, personalised e-learning services that offer more technical information to the client. For example, a low-key web application can be consulted for free by clients who appoint the company for the project management services, but similar information could also be sold in a more specialised format as a tool for contractors to aid professionals with costing, technical specifications and management. In a later phase, the company also planned to outsource service delivery: after a successful launch, PB calc & consult would focus on educating new project managers, who would want to use their services and tools ("train the trainer").

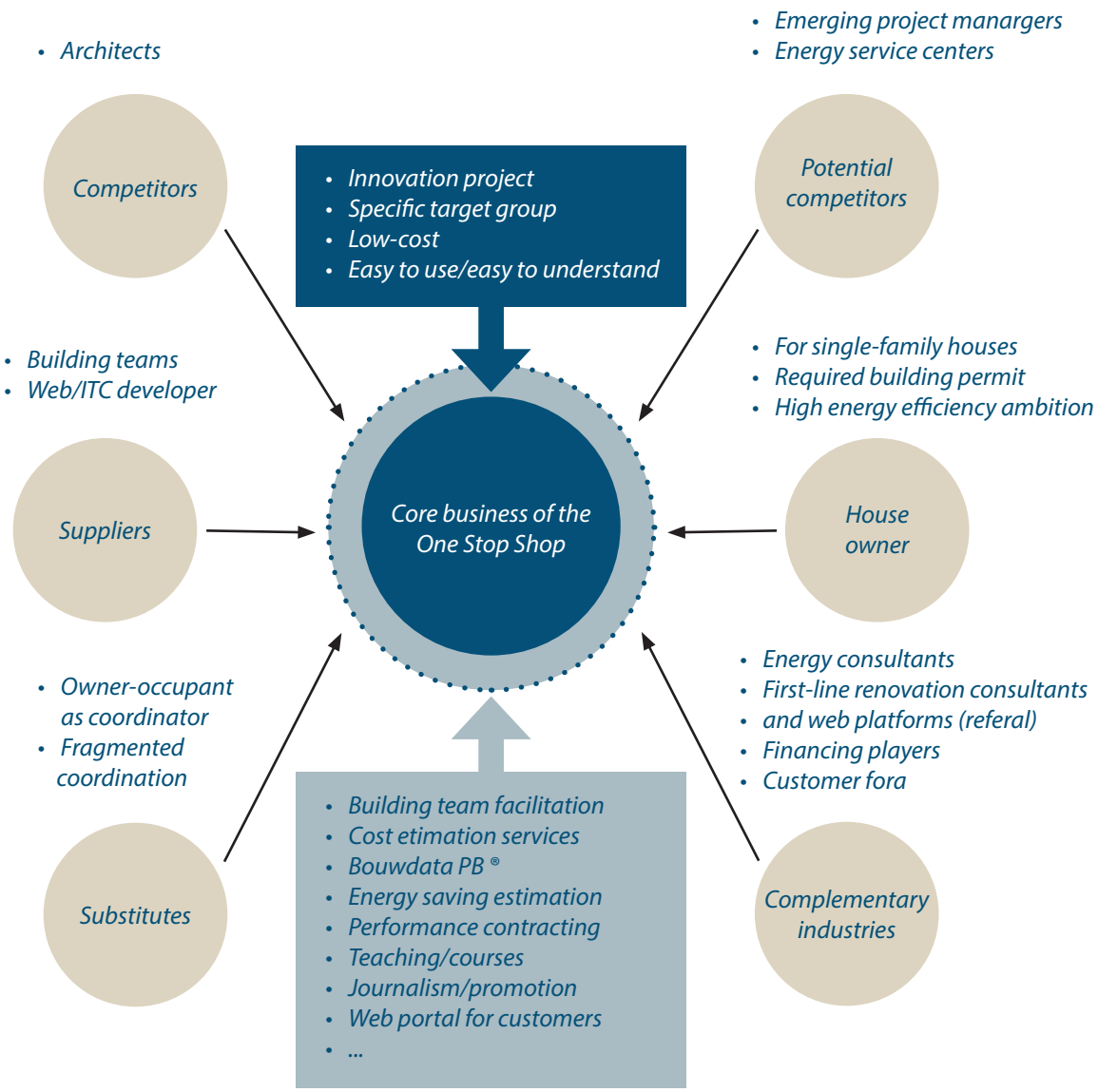


Figure 2: Six Forces model (PB calc & consult bvba)

3.3 SWOT analysis

Strengths	Weaknesses
• Project management experience with larger housing projects • Availability of an integrated material, object and project development coding system • Current project management services allow standardisation of renovation management and LCC • Current project management services make it possible to define short questions and answers to allow easy access to customers and build trust • Scope to integrate energy consumption estimates into project management services	• The firm currently involves only one active person with limited financial resources • Limited experience with single-family housing renovation • The coding system does not include a tool to estimate energy consumption • System based on short questions and answers does not necessarily lead to integrated renovation • Estimation of energy consumption is needed for various energy-saving technologies, available innovations and on a project level
Opportunities	**Threats**
• Innovation funding from IWT, good experience with previous application • Standardisation of project management services • Development of services for a large market of single-family housing renovation • Company can find a way to enter the single-family housing renovation market • Shift of renovation towards high energy efficiency • Emerging building teams for highly energy-efficient housing (e.g. passive houses) • Quality assurance system existing for energy performance • Collaboration opportunities with complementary market players • Creation of ad-hoc building teams allows for more creativity and involvement of different architects and different contractors • BIM might be available in large enterprises • New IT allows fast communication with homeowners and cloud analysis	• Limited resources for innovation; economic crisis • Market probably not ready to go towards standardisation of project management • Market needs adapted low-cost services and tools • Market of project management for single-family houses is dominated by architects. • Energy efficiency is not the most important driver for renovation • Competition from business-as-usual, fragmented and phased renovations • Quality assurance system does not include cost assurance • Partners have to commit to joint effort and share innovation risk • Not all contracting parties are in-house, might make it difficult to manage responsibilities • Small projects are generally carried out by SMEs (which often do not have BIM) • IT applications still have to be developed and marketed (might be costly)

Table 2: SWOT analysis

4. Conclusion

We used the initial analyses, such as PEST and Six Forces, to help identify business opportunities and some of the SWOT factors. The SWOT analysis summarises the most important factors which have to be taken into consideration for further business modelling and defining strategies. The main conclusion from this case study was that further business model development was halted because some of the weaknesses/threats were found to outweigh the strengths and opportunities.

The company considered that business development would involve starting an innovative business focusing on small housing renovation projects and tool development focusing on lower cost, shorter project management contributions and application of e-tools. The company saw the opportunity of launching such a service for many housing renovation projects. Given the company's previous experience with a request for innovation funding, ideas were worked out up to the level of an application for a subsidy, which is vital to enable the company to cover R&D expenses.

Although the potential for market development was sizeable and the pre-existing project management solutions fitted well to (bigger) projects, the economic crisis and the fact that the company consists of only one active person with limited resources were the main factors determining the decision to abandon. The company had received financial support money from the Flemish innovation agency to

develop BouwData PB®. The support carried the condition that the company needed to attain a certain level of return. Due to the crisis and halt in the construction business, this return was not achieved. A spokesman from the innovation agency was contacted and the new innovation proposal was explained. However, the innovation agent stated that the chance of getting supplementary money from the government to pursue this new business model development was very slim (if not zero) because of the lack of a return on the first contract so far. As the company did not have any reserves left, business development was halted and the company focused on attracting its standard business.

Moreover, architects have a dominant position in Belgium. The profession of architect is protected in Belgium and every project that needs a building permit is required by law to have an architect. The architect is considered to do the job of project manager. In larger projects, the extra cost for an external project manager/cost controller/building team coach is starting to be perceived as an asset, but only very slowly. It was found to be too early to develop a similar business for privately owned houses.

The example confirms the hypothesis that, in order to succeed in a One Stop Shop development, innovation funding or strong capital is needed (in the Norwegian example, Bolig Enøk is owned by a big insulation company). Where innovation funding is obtained, recipient companies must fulfil the requirements as to a return. The example is also relevant for the One Stop Shop project, since it tells us that if national governments want One Stop Shop developments to happen, they must adopt the appropriate measures.

Appendix 4

Sub delivery WP 4 – One Stop Shop business models for holistic renovation

Financing Models

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Synnøve E. Aabrekk , Trond Haavik Segel (Norway)

1. Introduction

There are two main aspects to address regarding financing in a business model for sustainable holistic renovation of single family homes;

a) Seen from the customers' perspective
b) Seen from the key actors creating the deliverables in a One Stop Shop

In the next paragraphs we will discuss relevant options within each of these perspectives.

2. Financing models for the customer

In deliverable 3.1 "Report on possible financing schemes for one-stop-shop" in [1], the financial barriers for the home owner to go for sustainable holistic renovation is discussed. It also list different optional financial models:

a. Homeowners' own resources
b. Mortgage refinancing
c. Flex-loan (type of mortgage)
d. Personal loan (without collateral)
e. Financing by the one-stop-shop service providers
f. Preferential loans (financed by public bodies)
g. Subsidies/grants
h. Credit card and other consumer financing
i. Financing through funds received from energy savings: the EPC and ESCO concepts

When developing a One Stop Shop business model by the Osterwalder methodology [2], what to include in the value proposition for the customer will be discussed. The pilots studied in the One Stop Shop project [3] adopted different approaches regarding financing. On the one hand, K-Rauta/Rautia include finance as they have established co-operation with a bank. On the other hand, Bolig Enøk does not include finance as part of their service to date. However, both cases do provide assistance with filing applications for public subsidies for the project.

The options listed above as point d) and h) are not to be recommended as they will be very expensive. Regarding point i), at this stage of market development, the EPC and ESCO models, which give some sort of guarantee as to energy savings, appear to be unrealistic for single-family houses. This is both due to the complexity of a renovation project and to the fact that the savings also depends on the occupants' behaviour.

A good approach for a One Stop Shop service to address the financing issue for the homeowner could be to:

a. Keep completely updated on the subsidies available in your country and region/city. Note that there may be local incentives which could be better than national subsidies, as is the case in Oslo (Enøketaten). Based on this knowledge, the One Stop Shop should arrange the necessary applications for the house owner. This should include both subsidies and preferential loans which may be available in countries such as Finland and Norway.
b. Consider including a financing service by involving a bank as one of the key partners. What is not covered by the customer's own resources and the funding granted in point a) above will then be financed by a mortgage loan
c. Decide the terms of payment from the customer. This affects directly the cash flow for both parties.

3. Financing issues on the supply side

3.1 From the standpoint of the key actor in the One Stop Shop

In the Guideline for developing a One Stop Shop [3], the cash flow is discussed as part of the business model by defining the canvas. On the one hand, the cost structure in the canvas illustrates the structure and how the internal and external (suppliers and involved partners) costs arise. On the other hand, the revenue stream (mirroring point c in previous section) should ideally be synchronised. This would reduce the financial risk for the One Stop Shop. Some companies in the construction industry demand payment of a percentage of the contract be paid within a few days after signing the contract. Further invoices are issued on the basis of progress of the project. A minor percentage is left until the project is completed and quality assured.

3.2 From the standpoint of the partners in the One Stop Shop

Financing the operation of the One Stop shop

In the Guideline for developing a One Stop Shop in section 5.2.2.3, the legal issues related to a One Stop Shop service are discussed. One of the points listed is the definition of the terms of payment to suppliers.

Suppliers of materials, systems and services would normally expect normal terms, i.e. due within what is normal for the industry in the respective countries after delivery. As there will be several sub deliveries by the same supplier, more invoices would issued in line with project progress.

In some countries, the regulations on warranties for a given product differ between the b2b market (business-to-business) and b2c (business-to-consumer). If this is the case in your country, you might want to include this issue when discussing risk-taking and financing between partners.

Financing of development activities

The One Stop Shop concept is not well developed in any country, and such initiatives are welcomed by all national authorities which aim to address the climate challenge. Companies involved in development of a One Stop Shop should therefore survey the opportunities for possible grants to cover part of the development costs. As the public bodies in the partners' counties (Belgium, Norway, Finland and Denmark) are organised differently, we have limited our discussion here in order to encourage companies to check out both of these two main tracks of funding possibilities:

a) Public bodies which purpose is to motivate companies to innovate (in general)
   i. Norway:
      - Innovation Norway.
   ii. Belgium:
      - IWT agency for Innovation by Science and Technology
   iii. Finland:
      - Tekes – the Finnish Funding Agency for Technology and Innovation (http://www.tekes.fi/en/community/Home/351/Home/473)
        Companies can build their own development path to an increasingly competitive business by including the following areas of development in their projects:
        1. Customers and markets
        2. Business model and strategy
        3. Products, services and production
        4. Management and personnel
      - SITRA - The Finnish Innovation Fund (http://www.sitra.fi/en). Sitra does not grant subsidies to companies. It invests in shares and contributes to the development of companies as an active owner. (http://www.sitra.fi/en/capital-investment)
      - Finnvera. Finnvera provides financing for the start, growth and internationalisation of enterprises and guarantees against risks arising from exports. (http://www.finnvera.fi/eng)
      - Centre for Economic Development, Transport and the Environment. Regional funding on specific topics (http://www.ely-keskus.fi/en/frontpage/Sivut/default.aspx)
   iv. Denmark:
      - Vækstguiden
      - Fornyelsesfonden

b) Public bodies which have different incentives to encourage sustainability in the building sector
   i. Norway:
      - Enova and Husbanken. These bodies' subsidies are mainly directed towards the customer, but have some financial instruments for demonstration projects and sharing of knowledge.
   ii. Belgium:(Brussels Capital Region):
      - Brussels Environment (IBGE-BIM)
   iii. Finland:
      - The Housing Finance and Development Centre of Finland (ARA). ARA is a governmental agency of the Republic of Finland operating under the supervision of the Ministry of the Environment. ARA is an agency to implement social housing policy. ARA's main task is to finance state-subsidised rental housing production. The Centre has also other obligations such as to make grants for housing repairs and to supervise the granting of state guarantees on loans for owner-occupied housing (http://www.ara.fi/default.asp?node=679&lan=en). These bodies' subsidies are mainly directed towards the customer.
   iv. Denmark:
      - Teknologisk institut, through their energy adviser education (Energivejleder)
      - GoEnergi (energistyrelsen, Danish Energy Agency)
      - Some municipalities have initiatives like Energiby Skive or Bornholm Bright Green Island. Check your local municipality.

References

[1] SuccessFamilies 2012.Nordic project which studies business concepts for renovation services for single-family houses http://successfamilies.vtt.fi/downloads.htm, reports D2.1., D2.2., D3.1. and D3.2 are particularly relevant for this paper, retrieved 27 June, 2012

[2] OSTERWALDER & PIGNEUR 2009. Business Model Generation, Osterwalder A., Pigneur Y., 2009

[3]OSS 2012. One Stop Shop - From demonstration projects towards volume market: Innovations for sustainable renovation. http://www.one-stop-shop.org, accessed: 30 June 2012.

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