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Creating a Customer Value Proposition for District Heating Contractors

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PREFACE

Receiving the advertisement for Metropolia’s Master’s program back in 2013, I wondered whether I would be able to get in and most importantly handle the studies while working at the same time. Looking back I can honestly say that these studies really have been worth the effort. Although the road has sometimes even been bumpy, the benefits overcome the sacrifices easily. As an old Finnish saying goes “Ei oppi ojaan kaada”. And as a bonus I have gained new friendships during the studies that will last for the rest of my life.

I would like to thank everyone who supported me during the studies and especially in the making of this thesis. I would also like to take this opportunity to thank Dr James Collins for supervising my work and guiding me to the right direction when I was lost. I also want to thank all the teachers at Metropolia, especially Dr Marjatta Huhta and PhL Zinaida Grabovskiaia for supervising our studies during the fall 2013 and the whole Thesis process.

I would like to thank Development Manager Jouni Kivirinne for his help in surfacing the idea for the thesis. I had had the idea in my mind earlier but you helped me find the right perspective for it. I would not have made it this far without my manager Roland Westerberg pushing me to my limits. I would also like to thank everyone else who showed their interest to my studies and especially in the making of this thesis. Thank you also to Antti Hölsä (Fortum), and Timo Vattulainen and Pasi Roos (Vantaan Energia) for sharing their knowledge and understanding regarding the topic.

Extra special thanks to Annika, for sharing your love, support and wisdom during my learning process. I would not have made it here without your help.

Tuomas Ojanperä,
Helsinki 6th May 2015
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The objective of this Master's thesis is to create a CVP for district heating contractors, who are an important partner for the case company.

Action research approach was utilized because of its ability to accommodate the participant into the role of a researcher, implement the planned action into practice, and then reach to and evaluate the initiated change. It was also chosen because of its ability to do iterative reflection on the results during the research process.

The outcome of this thesis is a customer value proposition developed for district heating contractors. The research benefitted the case company significantly as a contractor survey and benchmarks from other turnkey offering district heating companies' helped to gain understanding about contractor needs and offering turnkey service that had not been reported before. Based on these results the customer value proposition for the contractors was proposed, validated and finalised. The study also suggested practical and managerial implications as to what should be done in the future if the company is to continue on planning the introduction of turnkey service to their district.

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1 Introduction

Living in the customer-oriented age, companies are looking for ways to provide more value for their end customers. The on-going transformation in the energy sector has made the large energy companies notice the need for more customer friendly approach in their product based business in order to achieve better competitive advantage. In addition, companies might not be able to offer certain services themselves and therefore it is important to consider partnerships with other suppliers in order to answer for the needs of the end customers. Turnkey solution, wanted by the market, would offer the case company a way to answer to the needs of the end customers and develop their co-operation with district heating contractors. Therefore, in this case, it is important to understand how the district heating contractors would feel if the case company would start offering district heating as a turnkey service. This challenges is tackled in this Master’s thesis.

1.1 Key Terms in this Study

District heating is a large system for producing and distributing heat generated in a centralized location. It is mainly used in residential and commercial buildings, and it can be used to heat spaces and hot water used in the buildings. The heat is usually generated in cogeneration plants (Combined Heat and Power, CHP) by using fossil and biomass fuels. The benefit of using CHP is higher efficiencies and better emission control in the production than is the case for localized boilers. The heat can also be obtained from heat-only boiler stations, geothermal heating and heat pumps, as well as nuclear power. District heating produced by CHP is, according to some research the cheapest method of cutting carbon emissions. About 50% of the total heating market in Finland is provided with district heating, out of which 80% is produced in CHP plants.

End customers, in this study, mean the smaller house owners or the users of the end product, which in this thesis is district heating. The potential end customers usually have water circulated heating systems that typically use oil or electricity as the source of heating. New constructions are also a potential market for district heating. The benefit of heating with district heating is competitive energy price, effortless use, operational reliability and cost effectiveness. District heating is also very price competitive for larger houses and commercial buildings.
Contractors or certified private contractors, in the context of this study, are the suppliers and installers of the equipment, such as heat exchanger and therefore should be seen as an important factor in keeping present and gaining new end customers. This thesis aims at creating an appealing CVP for the contractors in order to start offering a turnkey service for the end customers. The focus of this thesis is directed at contractors; therefore in this study contractors are the focal 'customer' for the customer value proposition.

Customer value propositions (CVP) are the reason why customers choose one company over another. CVPs combine a distinct mix of products and/or services that render value to the customers. CVPs consist of a benefits versus sacrifices aspect of viewing products or services, where value is always characterised by the customer.

A turnkey service is a project or solution where the provider is responsible for overseeing the execution from order to completion. The customer only needs to order the service and turn the proverbial key to have everything functioning as it should.

1.2 Case Company Background

The case company of this thesis is one of the largest energy companies in Finland, Helen Ltd. It serves over 400,000 electricity customers in Finland, over 90% of the heating demand of Helsinki connected to the district heating network, and operates the third largest district cooling system in the world. Therefore, its main products/services are electricity, district heating and district cooling. Currently, the case company employs over 1100 employees. The thesis is scoped around the district heating department of the case company. This unit is responsible for delivering district heating and district cooling to its customers.

1.3 Business Problem

Currently, one of the biggest challenges related to sales and marketing is that a turnkey service, wanted by the market (as evidenced by a customer survey reported later), for district heating is missing. The case company might have an interest in offering a turnkey service but the present understanding is that the certified private contractors do not want the case company to have anything to do with the in-house installations, as this would impact their own offering. Since the contractors are an important factor in keeping the present end customers and gaining new end customers, it is important to understand the
requirements for the contractors at the same time as being interested in offering such a new service. That is why the scope for the new CVP concentrates on producing a CVP for the contractors.

1.4 Research Objective, Question and Methodology

In the present highly competitive market, it is important for the case company to develop the present product/service in such a way as to react pro-actively to increased competition. This way of working will help to maintain the high market share that the case company has built up over its history. Presently, this would not be possible to do without the help of certified private contractors that participate in keeping the existing end customers and acquiring new end customers.

The objective of this thesis is to create a CVP targeted at contractors. Therefore, the research question was formulated as follows:

| Would contractors be interested in offering turnkey service in co-operation with the case company? And what kind of service arrangement would be most appealing for the contractors? |

This study is written in six sections. Section 1 introduces the topic as well as the research problem and objective. Section 2 presents the research approach and the methods and material used in the research process. Section 3 discusses the best practice for designing CVPs. Section 4, presents the analysis and results for designing CVPs are introduced. Based on the knowledge introduced, section 5 presents the initial proposal, followed by its validation and revision to a final proposal. In section 6, the research is summarized and practical implications are outlined.
2 Research Method and Material

This section overviews the execution of the research process and use of the research methods, as well as data collection and analysis, and the methods that assure the reliability and validity of the research.

2.1 Action Research Approach

Action Research approach aims at taking action and creating knowledge of the action in question. The outcomes are both action and research (Coughlan & Coghlan 2006: 220).

AR is defined to consist of four elements. First, it is said to be research in action, together with the persons involved with the issue at hand. AR is a four-step cyclical process of planning, taking action, evaluating the action and leading to further planning. Second, it is participative, as the persons involved actively participate in the process. Third, research is concurrent with action, which aims at gathering scientific knowledge and at the same time making the action more efficient. Finally, AR is a series of events and a problem solving approach. It comprises of cycles of gathering data, presenting it to persons involved, analyzing it, planning action, taking action and evaluating, which leads to further data collection and so on (Coughlan & Coghlan 2006: 222-3). The steps of action research cycle presented in Figure 1 underneath.

Figure 1. Action research cycles (Coughlan et al. 2006: 233).
This Thesis applies action research as the main research approach. It was chosen because of its ability to accommodate the participant into the role of a researcher, implement the planned action into practice, and then reach to and evaluate the initiated change. It was also chosen because of its ability to do iterative reflection on the results during the research process (Figure 1). The AR approach helps in developing new actions and therefore the researcher has the permission to make presumptions and even try them into practice. Therefore, the path of the research needs multiple steps of data analysis, action planning and stakeholder involvement, as these steps minimize the risk of presumption affecting the final results and also strengthens the reliability and validity of action research.

2.2 Research Design and Material

In this Thesis, the action research cycle consists of 6 stages. The research design of this study is shown in Figure 2 below.

Figure 2. Research design applied in this thesis.
As seen from Figure 2, first, the business problem, the scope of research are defined to focus the Thesis. The second stage introduces the best practice of CVP design, and based on the findings from them, the conceptual framework is built around the best practices to build CVPs, forming partnerships and evaluating CVPs. In the third stage the present knowledge is combined with new information from the conducted contractor survey, this stage also includes the analysis of the current state. The fourth stage explores the benchmarks that help in understanding other companies that have solved the turnkey service offering process and their experiences. In fifth stage, a draft of the CVP is designed around the best practices of CVP building and the conducted contractor survey and benchmarks from other companies. This proposal is then reflected in the sixth stage by interviewing internal stakeholders. And finally in the seventh stage, the CVP is revised according to the internal feedback and the final proposal is created.

2.3 Data Collection and Analysis Method

This Thesis contains three phases of data collection. The first (Data 1) phase collects the existing data from various sources as well as a conducted research questionnaire held to a group of contractors. This data is needed to build the current state analysis. The second (Data 2) phase consists of the feedback collected from the benchmarking interviews. The third (Data 3) phase consists of the feedback collected from the internal stakeholder interview. Table 1 describes phase 1 more closely.

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As seen from Table 1, Data 1 consists of relevant information needed to understand the current state of the case company and their contractors’ needs. The data used to determine the current state was gathered from both internal (Data A1, F1) company documents and external (Data H1) documents on the same field, internal (Data B1, C1, D1, G1) interviews and brainstorming, and as response to the contractor survey via Email (Data E1). The notes collected in the interviews and benchmarks were reviewed and corrected by the interviewees for any misinformation.

Data 2 collection was organized to understand how other companies have resolved the problem of designing turnkey service. Data 2 consists of notes gathered from similar service/product providers’ experiences working in other regions also referred as benchmarks. Table 2 describes phase 2 more closely. The data used to evaluate external (Data A2 and B2) interviews can be in section 4.5 As can be seen from Table 2, the objective of the interviews was to gather experiences form other companies that have turnkey service on offer. The feedback gathered from the interviews was used to draw ideas on the experiences other companies have ran in to. The notes collected in the interviews were reviewed and corrected by the interviewees for any misinformation.

Finally, Data 3 collection gathered data from internal stakeholder interviews to verify insure the reliability and validity of the research and verify the results of the Thesis. Table 3 below shows this more closely.
Table 3. Phase 3 of data collection (Data 3).

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As seen from Table 3, the validation session was held with four internal stakeholders. The main aim of this interview was to introduce and test the CVP design created in this Thesis. The interview was recorded and field notes collected during the interview session. The results were reviewed by the interviewees for any misinformation.

The three rounds of data collection (Data 1, 2 and 3) include wide range of data. The types of data included in these iterations are summarised below.

A. Interviews, Brainstorming and Discussion

The interviews were utilized in all three phases of data collection. All of the interviews were held in Finnish and the texts were later translated to English. The first group of interviewees included: the director of the Heatingmarket; a specialist; a three person group of specialists that included Group Manager, Product Manager and Inspector. As soon as the responses were recorded and field notes gathered, the researcher summarized them for approval to the persons interviewed.

A group brainstorming was conducted to develop the survey questions with three selected persons inside the company. In the brainstorming session, many different topics were raised, from which a selected group of questions was chosen. By selecting just a chosen set of questions the researcher aimed to insure that the survey would have a simple and tempting outline in order to receive as many replies as possible. The selected questions were then formed into a comprehendible and interesting form to insure the integrity of the survey. Another meeting was held with the same group to test the questions before sending the survey to the contractors.

Finally, the validation session was held in the form of an interview with internal stakeholders. The interview was conducted as a group interview. The selected group of interviewees consisted of four persons inside the company that were the company Sales director, product manager, head of district heating business and group manager. The draft of the proposal was presented in the beginning of the interview which helped in introducing the purpose of the meeting and helped the interviewees to understand the
findings so far. The interview was held as a formal discussion. The researcher had a recording device and held notes during the interview. The purpose was to find out the views that the professionals had on the topic and the ideas they thought was missing from the proposal.

B. Customer Survey
In 2013, a customer survey was organized to help the R&D department to find new product and service concepts that would support the demand of district heating. The goal was to also test these new concepts with the end customers. By the end of the project a draft of a turnkey service was created. The question that “How would the district heating contractors feel if the case company would start to offer turnkey service?” was then raised which led to the realization that there was also need for a contractor survey.

C. Contractor Survey
The contractor survey was conducted by the researcher with the help of the professionals working at the case company. It was conducted to get turnkey-related information from the contractors. The contractors were approached with a web based survey, which was open for answers from 7th February to 7th March 2014, and had 9 questions (Appendix 1). Four out of nine questions were background questions and 5 were multiple choice questions with open feedback field for open opinions on the subject. The open field questions were voluntary to be answered. The survey was held in Finnish and it was sent out to 235 contractors in total, out of which 49 replied. The response rate has thus made approximately 21%. One contractor that felt this was not sufficient enough to tell his opinions and sent an email giving his views and arguments more extensively. The emailing contractors’ views do not show in the analysis of the quantitative survey, but the views were taken into account in the qualitative analysis. Out of the 49 survey responses, two contracting firms gave two different persons views, which were considered as separate views. One email was also received from a contractor which was taken into account.

D. Benchmarks
Benchmarks were conducted by the researcher by visiting the companies (Vantaan Energia and Fortum) and collecting materials. Benchmarking interviews were kept open-question conversations. Vantaan Energia, later VE, benchmark was fruitful as it helped the researcher understand the various difficulties that the company had met and solved. It also gave first ideas of the turnkey service design and execution. Benchmarking Fortum also benefited considerably, as several assumptions were concretized as well as
new findings was made. The findings made in the interviews were sent for the interviewee for checking for any misinformation. Benchmarks were held in Finnish and translated into English after the interviewee check-up.

2.4 Reliability and Validity in Qualitative Research

To understand the meaning of reliability and validity in qualitative research, several definitions from different perspectives need to be presented.

2.4.1 Reliability

Reliability makes an important attribute characterizing the quality of studies in all kinds of research [Golafshani, 2003: 601]. A valid research can help in understanding a situation that otherwise would be cryptic or confusing [Eisner, 1991: 58]. Reliability is used to evaluate quality in quantitative research with a purpose of explaining, while quality in qualitative research has the purpose of generating understanding [Stenbacka, 2001:551-2]. Patton (2001) states that reliability and validity are factors that qualitative researchers should be concerned while conducting and judging the quality of the research [Patton, 2001]. Reliability and validity are important criterion for quality in quantitative paradigms, but in qualitative paradigms the terms credibility, neutrality, dependability or consistency and applicability are essential to quality. Lincoln and Guba (1985) refer to dependability in qualitative research, which matches the reliability referred to in quantitative research [Lincoln and Guba, 1985: 300]. The concept of dependability is also endorsed with the concept of consistency, or reliability in qualitative research. Consistent data can be achieved by verifying the steps of research through examination of raw data, data reduction products and process notes [Golafshani, 2003: 601].

Examining trustworthiness is also essential in ensuring reliability of qualitative research. “Trustworthiness of a research report lies at the heart of issues conventionally discussed as validity and reliability” [Seale, 1999: 266]. In contrast, Stenbacka (2001) argues that since reliability needs measurements, it is not relevant in qualitative research [Stenbacka, 2001: 552]. But since there can be no validity without reliability, demonstrating validity in a study, the reliability can be achieved [Lincoln and Guba, 1985: 316].
2.4.2 Validity

Concept of validity is described by many features in qualitative studies. It is “a contingent construct, inescapably grounded in the process and intentions of particular research methodologies and projects” [Winter, 2000: 1]. Some researchers argue that validity is not applicable in qualitative studies, but also recognize that some kind of qualifying measure is needed. Some researchers emphasize that validity can be affected by the researchers perceptions and assumptions. Because of this, other concepts of validity have been developed by researchers, such as quality, rigor and trustworthiness [Golafshani, 2003: 602].

Seale (1999) reminds that the terms validity and reliability should be reconsidered in qualitative research [Seale, 1999: 465]. Stenbacka (2001), on the other hand, argues that for qualitative research the concept of validity should be redefined. She also points out that in order to do qualified research, the quality concept needs to be solved [Stenbacka, 2001: 551]. The term rigor appears in the discussion about validity and reliability. Rigor should be used differently in qualitative than in quantitative research as there is a quantitative bias in the concept of rigor. Reconception of rigor can be done by exploring subjectivity, reflexivity and the interaction of interviewing [Davies and Dodd, 2002: 281]. Trustworthiness of a research can be achieved by making the research defensible and by establishing confidence in the findings. By testing and increasing the reliability, validity, trustworthiness, quality and rigor the research can distinguish from invalid to valid research [Golafshani, 2003: 602].

In this study, validity is ensured by explicitly describing the data collection and analysis and presenting all the collected data in detail, and always reflecting the results on the original results of the data. All the collected data is also checked by the interviewees before making any conclusions. Reliability of this study is established by using multiple data sources in different stages of the research. This also includes using different data collection tools. Triangulation offers multiple methods of data collection and analysis. Established theory from other studies and researchers also help in ensuring the reliability of this study. A case study that was carried out in the form of contractor survey also made an important impact in ensuring the trustworthiness of the results. The collected interview and research notes also offer an important way of presenting the reliability of this study.
2.4.3 Testing Reliability and Validity

Credible and defensible results, which lead to generalizability, can be obtained if validity or trustworthiness can be tested. Quality of a research is linked to generalizability of the results and hence, to the testing and increasing validity or trustworthiness of the study. Triangulation offers an important methodological way to naturalistically and qualitatively control bias and establish valid proposition [Golafshani, 2003: 603]. The triangulation is used in this study by doing the data collection is several stages and using different methods.

The use of triangulation strengthens a research by combining several kinds of methods or data, both quantitative and qualitative [Patton, 2001: 247]. Reliability of a research can be strengthened by using multiple data sources, different data collection tools, applying established theory from an area to another, collecting data at different time points and using different researchers at different points of research (Quinton & Smallbone, 2006: 130). To test the validity and reliability, the methods chosen in triangulation should depend on the criterion of the research. This research applies all of the methods introduced in this section.

This section introduced the methods needed to be understood to make this research credible. The next section discusses the best practice for designing customer value propositions.
3 Best Practice for Customer Value Proposition Design

This section presents the best practices for customer value proposition design and then introduces the conceptual framework of this Thesis. First section introduces customer value propositions to the reader. Second section is combined as profiling customers is divided into four subsections that include customer jobs, benefits, sacrifices and ranking of benefits and sacrifices. Third, mapping the value of designed CVP is introduced. In fourth section, partnerships are introduced to understand the importance of co-operation. Fifth section presents a way to build the proposal. Sixth section introduces the evaluation of CVPs. Finally, the conceptual framework of this thesis is drafted upon the best practices introduced earlier.

3.1 Customer Value Propositions

There are several definitions for customer value (Woodall, 2003: 2). Two of the most distinct in the literature are – derived by the customer from the supplier (value received or perceived by the customer), and derived by the supplier from the customer (value of the customer, or customer lifetime value) (Zeithamel, 1988: 4). In this view, suppliers do not deliver value, but offer propositions that have the possibility to co-create value in interaction with customers (Kowalkowski, 2011: 278). Or as Ballantyne and Varey defined it: “reciprocal promise of value, operating to and from suppliers and customers seeking an equitable exchange” (Ballantyne et al. 2006: 334-5). In this thesis we focus on the value the customer receives (benefits) versus the value the customers have to give up (sacrifices). As mentioned earlier the “customer” in this Thesis are the contractors that represent an important party for the case company.

Service marketing aims at supporting customers’ value co-creation process. Reciprocal value creation is considered to be the base of the business where the customer is the value creator, and supplier is the value facilitator. Value creation take place in interactions between customers and suppliers, in which the supplier may become a co-creator of value. Service providers not only make value propositions but also assist in value fulfilment. The introduction of co-creation of value have changed the thinking of value being treated as an embedded attribute of the product, to value being created in interactions with customers throughout the relational process (Grönroos 2011b: 15). Therefore, in this Thesis, it is important to do research on whether the case company could improve the value that the end customer perceives by increasing the co-operation with contractors, who in this case act as suppliers.
There is no generally agreed definition on the contents of a CVP, but there are several propositions on what it should contain. A commonly agreed fact is that the value should be specified by the customers and that CVP has a key strategic role in the organizations pursuit of competitive advantage (Anderson et al. 2006). Competitive advantage and customer value are independent but intertwined fields of science that can be utilized in identifying CVPs (Rintamäki et al. 2007: 622). For example, one definition for value proposition is “…the verbal statement that matches up the firms distinctive competencies with the needs and preferences of a carefully defined set of potential customers. It is a communication device that links the people in an organization with its customers, concentrating employee efforts and customer expectations on things that the company does best in a system for delivering superior value. The value proposition creates a shared understanding needed to form a long-term relationship that meets the goals of both the company and its customers” as described by Webster (Webster 1994: 25). It can be said that value propositions are the reason why customers choose one company over another.

CVPs solve a problem or satisfy a need that the customer currently has. Each value proposition consists of a bundle of products and/or services that respond to the requirements of a specific customer segment. Therefore value proposition is a combination of benefits that a company offers to customers [Osterwalder and Pigneur, 2010: 22]. Customer value is created through value propositions to different type of customer segments by offering distinct mix of elements that respond to the needs of the segment in question. These values may be quantitative (price, speed of service) or qualitative (design, customer experience) [Osterwalder and Pigneur, 2010: 23]. It is important to understand the needs of specific customer segment to offer propositions that render value to the customer. By understanding the customer thoroughly the company can offer specified CVPs and gain advantage compared to the companies competing in the same area of business.

Definitions of customer value range from recognizing product attributes to understanding the consumption experiences consequences. One customer might appreciate the low price, when another would compare the gained benefits versus the needed sacrifices (monetary or non-monetary costs). Attributes-based definitions are efficient because they show in real life, the way the customers use the offering. When gained benefits are larger than sacrifices, customer value is created (Rintamäki et al. 2007: 622-623). By understanding the different elements between benefits and sacrifices that the customers
experience, companies can reshape their CVPs and try to create unique value for their customers.

Customer value and competitive advantage are linked together through value creation. This should be reflected in the value proposition as superior performance is achieved through sustaining and developing competitive advantage. The emphasis today is that the competitive advantage is on capabilities to continuously deliver superior value, rather than market power, economies of scale or a broad product line, as it ones used to be (Rintamäki et al. 2007: 623). Customer value is always defined as customers’ perceptions and evaluations of the total customer experience, where on the other hand competitive advantage is defined by company skills and resources to offer customer value. Therefore CVP is a strategic management decision to offer such product and/or services that the company believes the customers value most and that it has the capability to offer in a way that creates competitive advantage (Rintamäki et al. 2007: 624). It is important for the companies to be involved with the customers in order to understand their interest. Customers evolve all the time so companies cannot afford to become satisfied with their market position. This urges the company employees also to evolve with the customers and their needs.

To summarize CVP should:

- increase benefits over sacrifices that the customer feel relevant
- develop the skills and resources that the company utilizes efficiently
- Stand out from competition with uniqueness, and
- result in competitive advantage

3.2 Profiling Customers

Customer characteristics can be assumed, observed and verified in the market. Observing your customers could gain important knowledge of the wanted customer segment. By profiling customers the selected segment can be described in a more structured and detailed way, which can be enhanced by breaking them into its customer jobs, benefits and sacrifices [Osterwalder et al, 2014: 6-9]. Customer segmenting offers a way of focusing on the preferred customer group. This helps in understanding the underlying interests of different type of customers. By understanding the things that the customers are trying to accomplish and finding out the benefits and sacrifices in them, the company could gain important information about their customers.
In business to business transactions, value propositions associate several stakeholders who affect in search, evaluation, purchase, and use of a product or service. They can influence in the purchasing decision in one way or another. Identifying the most important stakeholder helps the company to understand and influence the purchasing process. The end customers’ value propositions may also associate several stakeholders in the search, evaluation, purchase and use of a product or service (Osterwalder et al, 2014: 50-51). To build appealing CVPs, it is important to understand the end customers purchasing processes and recognize the involved stakeholders. In order to offer value to a certain stakeholder it is important to also understand the stakeholders’ processes.

Figure 3. Profiling customers to jobs, benefits and sacrifices (Osterwalder et al, 2014).

A. Customer Jobs

Customer jobs relate to the things that your customers are trying to get done in their lives. The jobs could be problems, tasks or needs that the customers are trying to solve, complete or satisfy. It is necessary to take the customers perspective when examining the jobs. It is always important not to jump to conclusions as the customers might feel or think differently from their point of view. Customer jobs often might differ depending on the context when they are performed. The importance of jobs also need acknowledging as not all jobs are as important to them as others, and therefore it is necessary to categorize them between important and insignificant [Osterwalder et al, 2014: 12-13]. In order
to be able to solve the jobs that the customer is trying to overcome the company needs to engage into dialogue with their customers. The jobs were studied in this Thesis as part of the contractor survey which is presented in section 4.

B. Benefits

Benefits represent the results or the benefits that the customers are interested in. Some of them are required, expected or desired, but some might surprise them. Such benefits include functional value, social gains, positive experiences and savings. There are four types of customer benefits that can be identified: required benefits, expected benefits, desired benefits and unexpected benefits. A solution would not work without a required benefits, where expected benefits might work but would not offer the things that were expected of it. Desired benefits are expectations that go beyond the things that are on offer, where unexpected benefits are something the customer could not even think of. Relevance of benefits are also important to categorize as the customers see features that are between essential and nice to have [Osterwalder et al, 2014: 16]. Understanding and offering certain benefits helps in creating CVPs that are appealing to the customers. It is also important to acknowledge the required and expected benefits to keep up with the competition.

C. Sacrifices

Anything that annoys the customers before, along or after trying to get something done can be regarded as sacrifices. Also risks related to unwanted outcomes can be regarded as sacrifices. It is important to identify the undesired outcomes, problems and characteristics which can be functional, social, emotional or ancillary. Obstacles could prevent the customer to even get started with a job. Risks are the potential undesired outcomes that the customers are afraid that could go wrong. It is important to find out the seriousness of the sacrifices the customers experience, and categorize them also between extreme and moderate depending on their severity [Osterwalder et al, 2014: 14]. By understanding and overcoming the obstacles that the customers see in the company CVP, they can relieve the pain of acquiring a product or service.

D. Ranking of Benefits and Sacrifices

Ranking benefits and sacrifices is important in order to design CVP that answer to something that the customers really care about. It is hard to exactly understand the customer
preferences, but the understanding should develop on every encounter with the customers. The process can be started out by guessing the ranking at first. The most important factor is to strive to test and develop the ranking until it truly is something that the customer wants. The level of gain should be found out precisely, and what kind of decrease should there be to really categorize it as a pain. The pains should have barriers set up so that it would make it difficult to get the job done. Also the risks of not getting the job done at all should be listed in the pains. It is also important to ask “why” several times during the process until understanding the customer preferences and needs accurately. To truly understand it is needed to understand why a customer wants to get a certain job done in the first place. The underlying interests that drive the customer need to be understood before making any conclusions [Osterwalder et al, 2014: 20-25]. It is important to rank the benefits and sacrifices as it is then easier to understand what should be prioritized as the most important part for development.

3.3 Value Map

Customer value propositions can be designed around the benefits that attract the customers. By focusing on delivering benefits of the products and services the company can create value to the customers. Describing the elements of value by using value map, products and services, benefit creators and sacrifice relievers can be broken into more structured pieces [Osterwalder et al, 2014: 6-9].

![Value Map](image)

Figure 4. Value map (Osterwalder et al, 2014).
A. Products and Services

Listing the products and services the company has to offer to the selected customer group helps the customers to understand what the company has to offer. This set of products and services helps the customer complete functional, social, or emotional jobs or satisfy their basic needs. It is important to understand that the products and services do not create value alone, but in relationship with the identified customer segments jobs, benefits and sacrifices. Products and services can be tangible, intangible, digital or financial. It is always important to recognize the relevance between products and services and categorize them between essential and nice to have [Osterwalder et al, 2014: 29]. In order to answer to the needs of the customers, the company products and services should answer to the ones desired by their customers. The understanding of the needed products and services in this Thesis are based on the knowledge created from the contractor survey.

B. Benefit Creators

Benefit creators tell how the products and services create benefits for the customers. They accurately describe how the company is thinking of producing outcomes and benefits that the customer expects, desires, or would be surprised by. These include functionality, social benefits, positive emotions, and savings. Benefit creators do not need to answer every benefit identified earlier when profiling customer. Important thing is to focus on the most relevant ones to the customer and where the company can influence in [Osterwalder et al, 2014: 33]. It is important to focus on the most important benefit creators to the customers as they decide what should be important. Each benefit creator should answer to at least one or more benefit or sacrifice.

C. Sacrifice Reliever

Sacrifice relievers tell how the products and services eliminate or ease the customers’ distinct sacrifices. They accurately describe how the value offering company is going to alleviate or ease the features disturbing the customers before, during or after trying to get a job done or restraining the customer from doing so. Successful value propositions focus on the sacrifices that matter the most to the customer. Customers do not need a reliever for every sacrifice, which no value proposition can address. Most successful value propositions focus only on the correct few sacrifices which they address exceptionally successfully. Therefore it is vital to categorize the sacrifices between essential
and nice to have, in order to address on the correct set of sacrifice relievers in the value proposition [Osterwalder et al, 2014: 31]. Sacrifice relievers accurately describe how the product or service should ease the customers’ sacrifices. Each sacrifice reliever should answer to at least one or more benefit or sacrifice.

3.4 Partnerships

As demonstrated earlier also in this study, the relationship between customer and supplier is changing rapidly. This change can be managed by forming partnerships with different operators.

“Partnership is a long-term commitment between two or more organisations for the purpose of achieving specific business objectives by maximising the effectiveness of each participant’s resources” [Burnip, 1999: 2].

Long term strategic alliances also known as partnerships or contracting are recognized to provide exclusive benefits for the parties involved in them. The long term commitment and continuous improvement, when correctly executed lead to security of business operation. The idea lie in splitting complex processes to smaller sections for different operators to manage. The synchronisation of these sections create them easier to manage that should create common benefits for all the participants. Every relationship does not need to be a partnership. Partnerships are strategic decisions that are needed to determine the wanted co-operation method. Partnerships require understanding the needs, wants, benefits, commitment and togetherness of the parties involved. Evaluation is also needed to oversee desirability and feasibility at any time [Burnip, 1999: 1-3]. Partnerships are always strategic decisions for the company directors to make. Partnerships should be regarded as long term and the benefits should be divided to all the parties involved.
Figure 5. Benefits of partnerships to suppliers (Burnip, 1999).

Evaluating the partnership consists of needs and wants of both the customer and the supplier. Customers are usually looking for benefits such as security, stability, quality and value, when on the other hand the suppliers are looking for security, stability and streamlining (Presented in Figure 5). There are also common benefits that go beyond needs and wants, which are the operations that build trust and bring closer the parties involved. This results in commitment which needs to come down from the top management of every organisation involved. To measure the success the targets need to be mutually agreed and regularly followed. Targets such as reductions in time or increases of quality need to be followed at least annually. Measuring the correct targets can then result in continuous improvement. Continuous improvement needs to be systematic and also require discussion, implementation and reporting. Problems require to be analysed together and recommendations need to be established upon the results. Partnerships are dynamic and to achieve continuous improvement, they must evolve during time. Therefore the partnership need to be aimed at recognizing the needs of both parties [Burnip, 1999: 4-6]. It is important for all the parties to understand the benefits of the parties involved. In order to gain long term benefits the partnership needs to be monitored and evaluated. It is also important to result in continuous development.

### Table: Benefits of co-operation (supplier)

| Security     | • Exclusivity through Partnership  
|              | • Continuous improvement |
| Stability    | • Guaranteed workload  
|              | • Improved planning  
|              | • Optimum resource utilisation  
|              | • Agreed commercial terms  |
| Streamlining | • Reduction in bureaucracy |

3.5 Building Proposal

Company can achieve so called fit in their value proposition when customers become interested in it. This can be achieved by addressing important jobs, creating wanted benefits and easing sacrifices that are important to the customers that the value proposition is directed to. Fit is hard to find and maintain and therefore the process should be ongoing all the time. Customers expect and want a lot from products and services, but also
know that they cannot get everything. They also have a lot of pains and do sacrifices that no company is able to answer to all of them. Therefore it is important to focus on the most important benefits and sacrifices that would make the most difference. Customer is the one who judges the CVP, and will be merciless if it is not fit [Osterwalder, 2014: 42-43]. The proposal should consist of all the elements presented earlier. This way it is possible to create propositions that the customers care about. The created proposal should also be tested and revised according to feedback. The process is ongoing and therefore the testing should be ongoing process.

Figure 6. Checking fit in CVPs (Osterwalder et al, 2014).

Checking the results can be done by verifying if the value map features respond to the customer profile qualities (Figure 6). This can be done by going through each of the benefit creator, sacrifice reliever and product and service, and check if they either respond or do not address any or some of the benefit, sacrifice and jobs [Osterwalder, 2014: 44-47]. It is important to go through every aspect one by one to make sure that every possibility is being verified.

A. Problem-solution Fit

Problem-solution fit takes place when the value proposition is drafted on paper and there is evidence to show that the customer might have interest towards it. At this stage there is yet any true evidence that the value proposition would raise interest among customers.
[Osterwalder, 2014: 49]. This is when the understanding of the most relevant jobs, benefits and sacrifices should be pursued, to truly understand what the present situation for the customer is.

3.6 Evaluating Customer Value Propositions

Steps of a Framework for identifying CVPs were proposed by Rintamäki et al. (2007: 624).

1. Identifying the key dimensions of customer value
2. Developing the value proposition; and
3. Evaluating the value proposition for its ability to create competitive advantage.

The evaluation process is presented in Figure 7. In this framework the value dimensions are organized and combined into a customer value matrix. Value dimensions range hierarchically from more objective to more subjective, concrete to abstract etc. CVPs that express utilitarian value are generated through minimizing sacrifices: reducing prices, saving customers time and effort, and to help customers make decisions. These dimensions are called “economic value” and “functional value”. More subjective and abstract propositions, that create atmospheres that stimulate the customers senses, and brands that help them express their personality, are called “emotional value” and “symbolic value” (Rintamäki et al. 2007: 624).

A. Economic Customer Value Proposition

Price still is one of the most important drivers of economic customer value. Smith and Nagle (2005, p. 41) define economic value as “products objective monetary worth to a customer adjusted for the availability of competitive substitute products”. Alternatively it could be lowest price or best exchange between quality and price. The customers are different; some buy simply on the basis of price and are not willing to make sacrifices for higher quality. On the other hand, customers who appreciate quality might upgrade to a more expensive product, if the customers conceive the benefits in quality more significant than sacrifices in price. Competencies and resources based on economies of scale are usually required to offer economic CVPs (Rintamäki et al. 2007: 627). Economic value refers to the price and the quality of the service or product. Price is usually the most important factor in choosing a product or a service but by offering value for the money, another product might become more appealing.
B. Functional Customer Value Propositions

Customers searching for functional value are usually motivated by convenient solutions. Sheth et al. (1991) defines functional value as “perceived utility derived from an alternative’s capacity for functional, utilitarian or physical performance”. Alternatively it can be defined as using as little effort as possible to find the wanted product. Products meeting the customer needs and processes that increase the convenience are needed in creating functional value (Rintamäki et al. 2007: 627). Products or services that are easy to use and understand, usually appeal to the customers. This kind of products or services could make the customer to use the product or service again and more frequently.

C. Emotional Customer Value Propositions

Customers with the experiential aspect of consumption in mind are looking for companies that offer emotional value. Sheth et al. (1991) defines emotional value as: “perceived utility derived from an alternative’s capacity to arouse feelings or affective states”. Emotional value seems to have different dimensions of the experiential needs and wants. The shopping experience is valued, along with getting the needed products/services. An effective way of creating emotional value is using visual, auditory, sensory etc. clues in offerings. Emotional CVPs can be merged with functional and economic value. Experience that makes both emotional and functional value is aimed to be pleasurable and efficient at the same time (Rintamäki et al. 2007: 628). Emotional benefits appeal to the customers more personally than the previous economic and functional. They should create positive emotions that make the customer use the product or service again or more often.
Figure 7. A framework for identifying CVPs. (Rintamäki et al. 2007: 625).

Identify the key dimensions of customer value

Develop a customer value proposition

Evaluate the value proposition for competitive advantage

Step 1
Is economic value a key motivator for your customers?

Focus on price

Economic

Step 2
Is functional value a key motivator for your customers?

Focus on solutions

Functional and economic

Functional

Step 3
Is emotional value a key motivator for your customers?

Focus on customer experience

Emotional and economic

Emotional

Step 4
Is symbolic value a key motivator for your customers?

Focus on meaning

Symbolic

Symbolic and economic

Can you build your competitive advantage on offering superior symbolic value (or a combination)?
Figure 7 shows how the value progresses as the customers’ participation in value co-creation increases. Utilitarian CVPs are directly related to the core offering, while the more abstract and personal CVPs, differentiating and complementing, increase the value of the core offering (Rintamäki et al. 2007: 627). Value progressing demand the customer to participate in the value making process. Therefore to offer more sophisticated CVPs the company need to get the customer involved in the value making process.

3.7 Conceptual Framework of this Thesis

This Thesis is built around the best practices that need to be understood to get a comprehensive understanding of the topic in general. These topics are listed in table 4 below. This Thesis focuses on CVP design and to the fundamentals of it. First, the customer profile is built to understand the needs of the selected customer. Second, the value of the designed service is mapped according to the benefits and sacrifices it answers to. Third, the benefits of commercial partnerships and co-operation are introduced. Fourth, the proposal is built around the aspects introduced earlier. And finally the evaluation of the proposal can be done by categorizing the value aspect into categories of economic functional and emotional value as the value progresses.

The base of this Thesis is the conducted contractor survey. As many credible sources, and Rintamäki et al. (2007) in this case verify, by investigating the benefits and sacrifices involved in the value making process, the value offering company can influence in their CVPs by removing or easing the sacrifices and/or creating or strengthening the benefits. Therefore it is important for this Thesis to be built around this aspect. This aspect was also studied also by Österwalder et al. (2014) who took it even further by suggesting that ranking the known benefits and sacrifices, makes it easier to discover the truly important and insignificant features of value.

The comparison between the benefits and sacrifices is the basis of the CVP thinking and therefore the Thesis has been designed around this idea. The most important features that the contractors have expressed in the survey are the ones the created CVP should be designed around. The turnkey service would need the company to expand into co-operation with the contractors and therefore understanding regarding partnerships (Burnnip, 1999) needs to be improved.
The evaluation of the drafted model can be done with the help of the framework introduced by Rintamäki et al. (2007). It helps in reflecting the different aspects that the CVP holds. The aspects chosen for this Thesis are Economic, Functional and Emotional Value. These aspects are reflected in the interview with the internal stakeholders.

Therefore the selected best practices focus on creating understanding of the benefits versus sacrifices thinking that forms the basis of the CVP design. The conceptual framework is presented below in Table 4.

Table 4. Conceptual framework of this Thesis.

<table>
<thead>
<tr>
<th>Profiling Customers (Osterwalder 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Jobs</td>
</tr>
<tr>
<td>Products and Services</td>
</tr>
<tr>
<td>Co-operation</td>
</tr>
<tr>
<td>Fit</td>
</tr>
<tr>
<td>Economic</td>
</tr>
</tbody>
</table>

Therefore the path chosen to be executed in this Thesis, is to first introduce the topic and dig in to CVPs and designing them. Second, the customer profile is needed to understand the customer better and to design a CVP that they would be interested. Third, Value map will help the researcher to understand what would make the customers life easier. Fourth, the partnerships needs to be understood in order to recognize the elements of successful co-operation. Fifth, the CVP built around these aspects need to be reflected properly to make the proposition credible. And finally, the evaluation of the proposal will be done by reflecting it with the aspects of value. This CVP is then evaluated.
with the help of an internal stakeholder interview. The CVP is revised based on the reception and feedback and the final proposal is drafted. This is going to be the final result of this Thesis in addition to the suggestions of the next steps.

This section described the best practices of designing CVPs. In the next section the analysis and results for designing CVP are examined.
4 Contractor Survey and Benchmark Analysis and Results

This section presents the analysis and results of the design of CVP. First, the background of the case company and the needed information to understand the current state are presented. In the second section, the needed information to understand the contractors’ current situation are analysed. Third, to understand what the contractors would want from the turnkey solution, value map and concerning information is analysed. In the fourth section, the interest in co-operation with the case company is examined. And finally, the benchmarks from other companies are analysed and linked to the design process.

4.1 Background and the Current State Analysis of the Case Company

The case company of this thesis was established in 1909 to respond to the growing need of electricity in Helsinki. From 1953, district heating started to grow its network in the Helsinki district. Today it is one of the largest energy companies in Finland and it is responsible for selling and distributing electricity to over 400 000 customers, covering over 90% of heating demand in Helsinki with district heating, and to operating the third largest district cooling network in the world. The power production is based to cogeneration method where electricity and heat can be obtained from the same process, and by so the fuel efficiency is very high. The case company has been awarded many times for Excellency in power production efficiency, as the CHP production in Helsinki can utilize the used fossil fuels with over 90% efficiency rate. In 1. January 2015, the earlier municipality owned company became limited company as it was separated from the city of Helsinki. City of Helsinki owns 100% of the company shares. The case organization is responsible for operating, maintaining and expanding the present district heating network as well as the district cooling network in Helsinki. Case organisation employs around 120 persons.

A. Customer survey

Presently, the case company is looking for new ways of serving its present and new customers. The competition in heating market has increased due to emergence of the heat pumps as potential competitors for district heating. Heat pump companies offer their customers a pleasant and effortless way of getting a heating system, with a reasonable cost and with very little effort. Since the company was interested to find out the interests and service needs the different customer segments had, it conducted a customer survey
in 2013. From this survey, it was evident that the small house owners and small housing cooperatives were interested of a relatively easier way of becoming a customer. Based on the study, the question of whether the company should offer a new turnkey service was raised; if so, what the company could suggest as such a service specially targeting its contractors.

B. Tukalen Research in the Field of District Heating

The area of district heating has risen interested not only among the practitioners, but also among the researchers. One of the research projects conducted in the area was the TUKALEN project carried out by VTT, the Technical Research Centre of Finland. The results of this project are related to the topic of this Thesis.

VTT has led a project which aimed at doing research on the future of district heating business. A part of the project focused on “Future Services for District Heating Solutions in Residential Districts”. This research focused on broadening the district heating companies’ perspectives to deliver more service-oriented thinking into their business. This research also included interviews and questionnaire to build a comprehensive understanding of the customer preferences of house builders. [Ahvenniemi, 2014: 127]. The research was carried out in a different district to where the case company operates, but the results could to certain degree be generalizable to other districts.

The research revealed that the main emphases of district heating were easiness, comfort and affordability as the most important criteria for selecting a heating system. The research pointed out that same kind of easiness and ready-made solutions as in prefabricated and turnkey house solutions seem to exist in selecting heating system [Ahvenniemi, 2014: 136]. Based on the results, the main outcome regarding this Thesis was: (a) the raised interest of the end customers in turnkey delivery of heating system and (b) possibility to compare different heating solutions. Competing heating systems offer such features in their CVPs, and therefore it would be important to include such features to the case company CVP for their end customers.

It was known that other district heating companies that are located nearby offer such turnkey service to their end customers and therefore to find out the execution and experiences from offering such service a benchmark from both companies was needed.
C. Current State of District Heating Business in Helsinki

The current end customer CVP can be divided into acquiring (value-in-exchange) and usage (value-in-use) phases. This Thesis focuses on creating a CVP for the contractors which would enable the developing of the acquiring phase end customer CVP. The current acquiring phase, in Figure 8 below, is divided into two different sections from the end customer perspective, as the end customer needs to purchase the district heating connection from the case company as well as acquire the heat exchanger from a certified private contractor. Presently, the case company does not offer any turnkey service and it requires their potential and present end customers to see some extra effort in getting district heating, as the end customers need to find a certified private contractor that acquires and installs the heat exchanger.

Although the end customers may see the benefits of the total product, they might run into negative experiences in the acquiring phase as their presumption of the effortlessness may not meet the reality. This negative experience may relate to the multi-phased process of getting district heating and the end customer to being the supervisor of his own project. As a result, this negative experience might need a lot of repairing in the form of positive experiences during the usage process. Therefore, the current end customer CVP does not necessarily offer a tremendous starting point for a loyal customer relationship.

Figure 8. Present process of acquiring district heating. End customer needs to contract the contractor.
This thesis is based on the conducted contractor survey. The contractors form an important partner for the company but the contractors actually represent a certified private company working for the end customer. Therefore the contractors or their representatives were seen as the “customer” in this thesis and their participation and role are important to the case company, in order to commit the contractors in offering such a turnkey service. The contractor survey was aimed at the licensed contractors doing heat exchanger installations. The survey was conducted in 2014 to find out their interests and feelings for the turnkey service. The complete survey can be found from Appendix 1.

The first question of the contractor survey inquired the contractors’ feeling of the present competition and market situation. The results are presented in Figure 9 below.

![Figure 9](image.png)

Figure 9. Question 1: “In your opinion how do the heat exchanger instalment markets work at the present moment? (e. g. pricing, competition, quality etc.)"

The respondents that felt the market was functioning well had a share of 63%; 18,5% thought it was functioning poorly and 18,5% could not say. The main emphasis was positive, as 63% of the contractors expressed that the market is operating well, but some of the open field answers raised some notions of threats. It is possible that the threat of competition concern the contractors, which could causes doubts towards the turnkey
service among them. The open field answers are analysed in next section (4.2) to understand the contractor benefits and sacrifices in present process.

4.2 Contractor Survey Profile

The contractors were chosen to be the target in this Thesis as the case company does not know how they would have reacted to the turnkey service. Therefore the contractor survey was performed to understand the needs and the jobs that the contractors have for the present process. The collected information was supplemented with a phone call to validate the collected information regarding the jobs that the contractors presently execute.

A. Contractor Jobs

The contractor jobs, presented in Figure 10, were drafted from the contractor survey by the researcher. The results from this can be seen from Figure 10 below. The jobs were validated with a phone call to one of the contractors that answered to the survey.

![Contractor jobs](image)

**Figure 10. Present contractor jobs**

The contractor jobs were various HVAC contractor jobs. They divided between back office jobs such as sales, marketing, tendering and customer service, and HVAC work
such as design, scheduling and different kind of HVAC installation jobs. They also included warranty and maintenance responsibilities. The contractors were also asked to ground their choices of how the market is currently operating. These grounds can be divided into benefits and sacrifices. The most important jobs for the contractors are the HVAC installation work as it is their main skill. So by increasing the contractors’ time to do such installation work, they could get the most benefit from the designed service, and therefore the biggest benefit would be reducing the required back office resources such as sales, marketing etc. work from their daily routines.

B. Contractor Benefits and Sacrifices

The contractor benefits and sacrifices were received from the open field answers of question 1. The open field question was voluntary and only 15 out of 49 contractors gave an answer. Many of the responses contained several of the categories. The results were categorised between the benefits and sacrifices and ranked by the frequency of the category.

![Benefits and sacrifices of present contractor jobs.](image)

Most of the contractors felt that the market situation is healthy as 63 % thought it was operating well. The benefits introduced by open field questions were free competition, fast delivery, reasonable price and well-functioning service. The contractors informed that low prices (16%) make the competition hard (10%) which leads to bad quality (8%) and results in low profit. The results are therefore ranked by the importance that was shown in the survey (Figure 11). It should be bared in mind that as most of the contractors
did not have an opinion on the subject the results should be seen as directional to the true results. This on the other hand is the result that this Thesis is based upon.

4.3 Value Map

The next phase of the CVP building in this Thesis is value map, which helps in understanding what the customer of the designed CVP also known as contractors would want the service to include. The contractors were asked to describe their view of the contents of such a service. The second question of the contractor survey was a multiple choice question. Figure 12 below reveals the contractor feelings of the service contents.

![Value Map Diagram](image)

Figure 12. Question 2: “What should the turnkey service contain?”

As presented in Figure 12, the heat exchanger, instalment and coupling to present network had a share of 96%, installing the in-house heating grid 59% (Priced separately), removing the oil/heat storage tank 51%; and maintenance agreement 47% and the alternative open field question 20%. The open field questions pointed out that the contract limits should be defined precisely, so there would not be any ambiguity for the customer of the service contents. The alternative open field question (20%) also gave some ideas on possible additions as comments contained such ideas as *inspection of the in-house grid service/renewal need, doing the required designs* and the recognition that every
case should be considered as unique. Based on the results the heat exchanger, installment and coupling to present network is a natural choice for the design of this CVP for the contractors.

The third question inquired the contractors benefit creators and sacrifice relievers they see in the turnkey service. The question was a voluntary open field question. The benefits received 24 answers, out of which 7 were general negative comments on the subject and 2 could not say, and the sacrifices 21 answers, out of which 2 were general negative comments. Most of the answers included several notion into different categories. The ranking of these benefits and sacrifices can be seen from Figure 13 below.

<table>
<thead>
<tr>
<th>Benefit Creators:</th>
<th>Sacrifice Relievers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Constant workflow</td>
<td>1. Case Company does not get involved with pricing</td>
</tr>
<tr>
<td>2. Developing operation</td>
<td>2. Effective scheduling, project leader</td>
</tr>
<tr>
<td>3. Scheduling easier</td>
<td>3. Case company responsible for the process</td>
</tr>
<tr>
<td>4. Better quality</td>
<td>4. Case company does not get involved with the competition</td>
</tr>
<tr>
<td>5. Additional sales opportunities</td>
<td>5. More tendering</td>
</tr>
</tbody>
</table>

Figure 13. Question 3: Contractor benefit creators and sacrifice relievers of offering turnkey service.

The third question of the contractor survey was to find out the benefits and sacrifices that the contractors see in turnkey service. The benefits and sacrifices are presented in Figure 13 above. The benefits were divided into such categories as constant workflow, developing operation, easier scheduling, better quality and additional sales opportunities. The sacrifices that were mentioned divided into categories of case company not getting involved with the pricing; effective scheduling which could be achieved by introducing a project leader to the service; case company would take the responsibility for the whole process; case company would not get involved with the competition; and the increased possibilities to tender more projects.
Constant workflow raised most interest from contractor perspective. Emphasis was that it would help them to improve their business as constant workflow would help to organize their work and resources and therefore develop their operation. Second, the contractors also recognized the possibility to develop their operation as they could make long-term plans. Third, scheduling was seen to be easier, and fourth, the quality was also seen to increase as the contractors would specialize in such instalments. Finally, some also recognized the additional business opportunities that the contractors might get when they get into contact with the end customers. The order of the benefits should be seen as connected as constant workflow would increase their security and enable the contractors to do long-term plans and therefore develop their operation. This on the other hand would lead to easier scheduling and increase in quality.

The sacrifices relievers, presented also in Figure 13. Main emphasis was that the pricing should be reasonable and that the case company should not get involved with it. Second, the contractors felt that in order to gain effectiveness in scheduling the projects should have a leader that supervises the project. Third, case company should also be the responsible party for the process. Fourth, the case company should not get involved with the competition as the contractors felt that the competition is already moderately tight. And finally, the contractors felt that by getting involved with more tendering it would also benefit the customers for getting the service for the right price.

The conducted benchmarking interviews recognized the importance of the working cooperation between the company and the contractors. Fortum emphasized the importance of working partnerships especially on larger commercial buildings. The proposed minimum content for the service should be the instalment of the heat exchanger and piping of the primary network. Fortum is also willing to do the excavation work for all of their end customers, regardless of the size of the end customer. This might be needed in the offering as the end customers expect to get all the needed work in the service. This responds well to the information received from the contractor survey seen in Figure 12.

Both of the benchmarked companies offer fixed prices for the small houses, although Fortum has limited it just for the heat exchanger renewers. Both companies also emphasized the importance of the engineer visiting the end customer. This has been seen to influence in the amount of offers accepted. Therefore the possible time used in the visits should not be regarded as wasted time but necessary service which helps in increasing
the customer satisfaction. This also offers the company to be in charge of the project. The benchmarks pointed out too that the annual contracts on heat exchangers should be considered depending on the amount of instalments done annually. By letting the contractors deliver the heat exchanger the contractors might be more interested in the co-operation. In the case of annual contracts the contract limits should be agreed with the contractors as the contractors set the boundaries that the service is supposed to deliver. Also the warranty and maintenance issues should be agreed. Fortum also emphasized that although the contractors are responsible of the warranty issues they want to be informed about them and make them come through them. The issues presented by the benchmarks respond to the benefit creators and sacrifice relievers presented also in Figure 13, and should be seen to strengthen the survey results.

4.4 Partnerships

The fourth question was to find out the contractors interest in co-operation with the company to offer turnkey service. Figure 4 below shows the interest in offering such service.

![Pie Chart](image)

Figure 14. Question 4: “What is your view/your company’s view in co-operation with the case company? I am/my company is interested to get involved with delivering turnkey service with the case company:”
As presented in Figure 14, almost 82% of the answers were either somewhat agree or better, out of which 20% were totally agree. Somewhat disagree or lower got only 12% of the total answers. Therefore the results indicated that the speculation of the contractors’ interest to offer such service had been somewhat wrong as the results showed positive indication. In the open replies contractors emphasized such benefits as scheduling being easier in cooperation, as well as the quality of the instalments being better. Some contractors even recognized the benefit for the end customer as they could get the whole package as a service from a single operator. A few contractors informed that the contractors are already doing such service in co-operation with other companies and would be interested to share their knowledge with the case company. The main worry that some of the contractors expressed was the possibly lower income that it might lead to. A couple negative comments was received as some contractors felt that the case company should just focus on delivering the energy.

4.5 Benchmarks

It was evident from the contractor survey that other districts offer such service and therefore it was needed to create an understanding of some companies’ experiences.

A. Vantaan Energia Benchmarking Background

In the beginning of 1990, the connection to VE district heating needed the end customer to do the excavation work and order the heat exchanger instalment. At that point VE started to consider offering an eased connection process to the end customers. The result of this project ended up in the situation that the case company is at the moment, where the new constructions still need to do the excavation work, but the switchers of heating system can have the excavation work included in the price. This helped, but did not remove all the needed effort from the end customer. VE wanted to develop their process more customer friendly so VE decided to examine more the total offering of turnkey service.

B. Fortum Benchmarking Background

In the year 2000, earlier company started to test the service first time in Tuusula Housing Fair area. The service was offered mainly to small houses. As Fortum came along, the operation of the company expanded to several other cities. This caused challenges especially in the smaller districts as the company did not yet have an operating district
heating network. The contractors in these smaller districts were suspicious for their business and were not interested in cooperation with Fortum. Therefore Fortum had to bring their own contractors that helped in developing the turnkey service. The operation continued until 2012, when Fortum gave up the smaller networks. Fortum wanted to bring a total offering to Espoo as the company wanted to offer their end customers more options. The end customers wanted to know the total cost in the early stages, as other competing heating system providers usually offer. The end customers do not necessarily know how to or want to use their own time in bidding and choosing a reliable contractor. The most important customer group was recognized to be the existing end customers as Fortum thought that it was needed especially for them. Also some of the new constructions, who have already chosen their HVAC contractor which do not have the needed certificates to do the district heating installations, want the service preferably from one counter.

C. Vantaa Energia Turnkey Execution

In the end of 1990 VE started testing the designed transformation with test buildings. The planning focused on small houses, as heat exchangers in such cases are bulk products, and do not need that much designing work beforehand. Larger buildings, on the other hand require more knowhow and design work, which VE did not think to have resources for. The option of acquiring some HVAC company was considered, but the idea was not examined later as the service was limited to smaller houses that do not need extensive planning.

The service was offered to all of the small house customer groups at first, but after gaining some experience VE decided to abandon the existing end customers outside the service, as it was not seen to deliver any added value to the end customers. It also required a VE employee to visit at the premises, which resulted in a lot of wasted work done, as only about 2 out of 10 offers resulted in a deal done by VE. Also the heat exchanger contractors that do only heat exchanger renewals have told that they are very interested in such contracts as the contracts are pleasant indoor work for them and therefore are willing to compete with lower prices. The service is still available for new constructions, who still need to do the excavation work which is not seen as disadvantage as there is always other excavation work needed, and heating system renewers, who are understood to get the biggest benefit from the service as the customers are very often aged.
The service contains the instalment of the heat exchanger and the piping of the primary network. The metering unit was decided to be integrated in the heat exchanger for the new constructions, as it was easier install and needed fewer space. The only challenge was finding out the handedness of the metering unit, because the handedness is case sensitive. This can be easily solved so it was not seen as a big challenge. VE piping contractor delivers the heat exchanger with integrated metering unit for the new constructions from the company storage while doing the primary piping work. In the case of heat system renewals the heat exchanger comes from the heat exchanger contractors’ storage and the metering unit is installed afterwards. Heating system renewers can also get the excavation work from VE.

VE have fixed prices for the service so the total cost is well known for the end customer. The service was designed so that VE gain some profit from the service. This has been believed to be the reason VE could not compete in heat exchanger renewals because they did not want to dump the prices. Warranty issues usually fall to VE in some way although the contract limits have been agreed so that the contractors take care of them. This causes some extra work for their employees as the company employees need to direct the end customers to turn to the heat exchanger suppliers or contractors.

VE ended up using an annual heat exchanger contractor and tender the acquisition of the heat exchangers from the supplier with about 2-3 year contracts. This was seen as a decent practice because development work requires long-term cooperation, which would be harder with shorter contracts. The benefits of this service for the end customer are that the end customers do not need a licensed contractor, because VE does all the needed licensed work in the primary network. Also the scheduling is easier, as there are no extra middlemen.

It was recognized in the interviews that VE perhaps had not wanted to solve in advance the possible problems with heat metering integration and their inevitable renewals. It is evident that VE need to install a new metering unit that needs space. Especially as VE do not offer the service for their current end customers. This should need some thought in the near future, but VE should also consider the amount of resources it is reasonable to use as the technical working life of the heat exchanger is around 20 years, in which the technology might develop quite drastically.
When using annual contractors the installing quality has been decent and VE hardly ever have to point any faults. Regardless of this VE have continued their inspections as earlier, just to be sure of the adjustments of the equipment and network. The inspections are seen as a positive thing as the end customers appreciate the engineers visiting their premises and the company feel these visits increase the offers accepted.

D. Fortum Turnkey Execution

As the service was being drafted, Fortum arranged an info meeting for their contractors. Fortum had not yet made any decisions at this point whether to offer the service or not, so the company got the chance to tell the contractors their ideas and options to avoid any misconceptions and to listen to their opinions and ideas regarding the service. Contractors were naturally afraid of the competition perishing and losing their work, but Fortum aspired to emphasize that the service was not meant for taking over the market, but only to offer the service wanted by the end customers. From the beginning, Fortum meant to use only local contractors in generation of the services.

The service contains the instalment of the heat exchanger and the piping of the primary network for the new constructions. All the other interested end customers can get the so called total offering, which can be customised to suit the customers' needs. Fortum also provides the service for larger buildings. Fortum aims at offering the data for the equipment dimensioning for all residential buildings, if the company know that there is no need for any in house heating grid adjustments or modifications. Therefore usage of an outside HVAC designer is considered case-by-case.

There is a fixed price for small houses heat exchanger renewers, but it is hardly ever used. Earlier Fortum was responsible for pricing, but the company experienced that it was better that the contractor is responsible for it. Visiting the building with the contractor, the necessary proceedings can be discovered. This also benefits the end customer as they are pointed out all the possible needed repair need. The sending of an offering always requires a visit with the contractor. Offers are always separate so the connection work and the contractors work are separated in the offering. The end customer still can find his own contractor if he chooses so. Fortum takes care of all the invoicing, and the contractor gets his share by invoicing Fortum.

Fortum connection fees include the excavation work in all cases. The new constructions need to take care of the inlets. The service essentially covers all the work needed from
the main network to the heat exchanger. There have also been cases when the end customer has wanted to renew some part of the in house heating grid, and has therefore asked to get even the tiles installed with the offering. This kind of service would not be possible without a well working co-operation with the contractor and the willingness to serve the end customers.

Fortum has not done any annual contracts with the heat exchanger suppliers, as the quantities have been relatively small. This is why every heat exchanger is ordered on occasion. The current trend has been towards contractor doing most of the work, which includes the acquiring of the heat exchanger. This is one of the reasons that Fortum has not considered on integrating the metering unit with the heat exchanger. It was first considered in the beginning, but it was not seen offering any benefits and therefore it was abandoned. The space is anyways needed in the heat distribution room and lack of it might lead to additional costs in the future.

There are annual contracts with the contractors, which set the boundaries that make the service work. Fortum uses regional contractors in the different districts that the company operates in. In Espoo there is only one contractor at the moment, although it was first considered on using several. The quantities have so far been relatively low, so there has been no need yet for more. The contractors answer to Fortum from the projects, and therefore also to the end customer. The contractors are also responsible for the warranty and maintenance issues, but Fortum wants the information to go through them so the company are informed with the possible repair needs.

Fortum recognized that the scheduling with the contractors and the end customers might get complicated, but the experiences tell that it has not become an obstacle. The end customers want to be in contact with the person from the energy company, because the end customers feel that they are getting the service from the company. These visits have been fairly important in this sense too.

One of the factors that also encouraged into designing of the service was the busy work situation that the contractors often have, and because of it the contractors might not have time to offer any district heating instalments. At times the busy work situation also effects to the magnitude and the differentiation of the offers. Fortum wanted when designing the service so that their end customers could always get the heat exchanger installed under the same conditions.
The heating system renewing property owners have been in the largest role in using the service. Especially smaller housing companies need this kind of service, as they do not necessarily have a professional property manager. Heat exchanger renewers (or existing end customers) have recently emerged increasingly. The service is inquired relatively much. It has not actually been marketed ever, but the topic seems to be very current.

The need for inspections has not decreased according to Fortum and the company still inspect every installing as earlier. Transferring the work requires anyway a visit at the location when the company employee can do the inspection at the same time. This requires some resources, which are however seen as customer service.

E. Key Findings of the Benchmarks

VE suggested that the concept should be simple, as when things get complicated it could hamper the end customers understanding and therefore influence the customer experience.

Both companies tested the service concept with test buildings which the companies experienced as a practical way of learning new things. VE has ended up in offering the service to only new small house end customers but Fortum has decided to offer it to everyone who is interested. Both companies recognized the importance of the working co-operation between the company and the private contractors. Fortum emphasized the importance of working partnerships especially on larger commercial buildings.

The proposed minimum content for the service is the instalment of the heat exchanger and piping of the primary network. Metering unit divided the companies, but the emphasis was that VE might be driven into challenges when the integrated metering units need to be replaced. This is evidently going to have some influences because VE does not offer the service for the heat exchanger renewers. Fortum is also willing to do the excavation work for all of their customers, regardless of the size of the customer. This might be needed in the offering as the end customers expect to get all the needed work in the service.

Although VE does not offer the turnkey service to heat exchanger renewers, the Fortum experiences showed that it is important to have such service on offer as the existing end
customers feel that they should be able to renew their heat exchanger as easy as possible. The interest towards the service has increased although it has not been marketed in any way.

Both companies offer fixed prices for the small houses, although Fortum has limited it just for the heat exchanger renewers. Fixed prices might be worth considering as the end customers want to learn the total cost of the service before making decisions. On the other hand fixed prices might need the installations to be done by the piping contractor that installs the primary piping to the premises. This might lead to complicated process of execution as the installer and acquirer of the heat exchanger would change depending on the customer.

Both companies have been using annual contracts regarding the contractors that do the installation work. This should be considered as the benefits of close co-operation and information sharing is the only way to develop the operation. This is also needed to address the problem raised by Fortum about the possible challenges in the scheduling. The annual contracts on heat exchangers should be considered depending on the amount of instalments done annually. By letting the contractors deliver the heat exchanger the contractors might be more interested in the co-operation. In the case of annual contracts the contract limits should be agreed with the contractors as the contractors set the boundaries that the service is supposed to deliver. Also the warranty and maintenance issues should be agreed.

VE interview pointed out that house packages might already contain a heat exchanger that the end customer might not be aware of. This might lead to unnecessary orders and deliveries. Therefore it might be reasonable to cooperate with the house package delivering companies.

Both companies emphasized the importance of the engineer visiting the end customer. This has been seen to influence in the amount of offers accepted. Therefore the possible time used in the visits should not be regarded as wasted time but necessary service which helps in increasing the customer satisfaction.

This section presented the analysis and results needed to understand the aspects that are needed to form an understanding and create a proposal of the initial CVP. In the next
section the initial CVP is created, reflected, revised and evaluated according to the facts presented in earlier sections.
5 Building Customer Value Proposition for District Heating Contractors

This section presents the building of the initial CVP for the contractors, reflection of it, presenting the revised final CVP and the evaluation of it. The first section presents the last survey question and summarizes the best practices and the collected data 1 and 2 from contractor survey and benchmarks, and the initial CVP is created. Second, the initial CVP is reflected by internal stakeholder interview, and third, the CVP is revised and the final CVP is presented. Finally, the final CVP is evaluated.

5.1 Elements of Building Customer Value Propositions

CVPs are promises of value. The target group of these CVPs make decisions based on the value the customers would receive versus the sacrifices the customers would have to make. Therefore the selected method in this Thesis was to investigate the benefits and sacrifices of the turnkey service to the contractors. Prioritizing these benefits versus sacrifices offers a way to focus on the most important factors that needs to be taken into account when proposing a turnkey service for them.

Secondly, it is also important to understand the contractor perspective, as middlemen, and their preferences in their field of business. By gaining understanding of their business, needs and wishes, the case company might be able to offer them value that has not been possible before. The value can only be created through co-operation as the contractors determine the things that they value the most. Understanding these elements helps in building the initial proposal and therefore get the iterative process of value creation started.

Thirdly, by identifying the key dimensions of customer value, the proposal for CVP can also be evaluated effectively. These key dimensions consist of Economic, Functional and Emotional Value (presented in Figure 7) can be used to evaluate the dimensions of the CVPs.

The construction of the CVP follows the logic of accommodating these three keystones into the new proposal.
5.2 Initial Customer Value Proposal for Contractors

The initial CVP will be drafted with the help of the results presented earlier and with the last survey question results. The last question of the contractor survey inquired about the most appropriate arrangement for offering turnkey service by the contractors. Figure 15 underneath views this more closely.

![Graph showing contractor survey results]

Figure 15. Question 5: “If the turnkey service drafting goes forward, what would be the most appropriate arrangement for you/your company?”

As seen from Figure 15, the interest for different arrangement was as follows: the single time offering (59%), annual contracts (45%), increasing quiet time supply (29%) and fixed prices (16%). Single time offering was ranked as the most appropriate arrangement of the implementation of the turnkey service according to the contractors, but the annual contracts had a decent interest as well. This information is needed to form an understanding of the products and services that the CVP should have, presented in value map in section 3.3.
As pointed out earlier in section 4.2, the designed service would benefit the contractors mostly by reducing their back office operations and therefore they could focus on their primary skills of doing the HVAC installations. The way of offering the service presented two alternative ways of execution, single-time offering, which was preferred by contractors and annual contracts that both of the benchmarked companies have deployed and which was the second most preferred in contractor survey (Figure 15). Both of these have been therefore taken into account when considering the proposal for the contractors. The benefit creators that responded best to the customers profile were the easier scheduling, constant workflow and developing operation. The sacrifice relievers were more tendering, case company not getting involved with pricing and case company responsible for process. The results indicated that annual contract benefits were the main benefit creators of the proposed proposal. Then again the single-time offering benefits were the sacrifice relievers of the proposal, which is interesting as it indicates that the single-time offering might offer a compromise to offering the turnkey service. The initial proposal is presented in Figure 16 above.

The benchmarks informed that both companies have been using annual contracts regarding the contractors that do the installation work, which also gives these contractors constant workflow. This should be considered as the benefits of close co-operation and information sharing is the only way to develop the operation. This is also needed to address the problem raised by Fortum about the possible challenges in the scheduling. The understanding gained from the benchmarking interviews seems to suggest that the benefit creators would respond more to the annual contracts arrangement and on the other
hand the sacrifice relievers would respond to the single-time offering arrangement presented in Figure 13.

The results for the contractor survey and the benchmarks presented earlier can now be connected to the best practices of building CVPs. This can be done with the help of profiling customers and value map presented in section 4.2 and 4.3. By filling the customer jobs, benefits and sacrifices, and products & services, benefit creators and pain relievers, the initial value proposition can be built by assessing the resulting fit.

Figure 17. Customer profile, filled with the information gathered from the contractor survey and the benchmarks.

As mentioned earlier in the Thesis (section 4.3), the contractor benefits and sacrifices were ranked by the relevance of them to the contractors. This information was received as part of the contractor survey. These results are transferred to customer profile above
in Figure 17. To assess the fit between the customer profile and value map, the value map will be completed next.

Figure 18. Value map, filled with the information gathered from the contractor survey and the benchmarks.

The value map (Figure 18 above) can be completed with the results displayed in section 4.3. These consisted of the heat exchanger, instalment and coupling that the contractors felt the service should contain and the benefit creators and sacrifice relievers that they mentioned in the same contractor survey, as part of finding out the benefits and sacrifices in the designed service (section 4.3).

By combining these two, value map and customer profile (Figures 17 and 18), the important features can then be evaluated by comparing how the elements of value map (products and services, benefit creators and sacrifice relievers) answers to the customer profile (present jobs, benefits and sacrifices) that exist in the present situation. This comparison is presented in Figure 19 below.
The features that should raise the contractors’ attention in the results were compared to the way they answered to the present customer profile features. These features either support the present jobs and benefits or ease the present sacrifices. The comparison between these can be seen from Appendix 2. The contractor survey indicated that single-
time offering was the most interesting way of executing the service but as benchmarks informed that both companies are using the annual contracts and therefore it has been taken into account when designing the initial proposal. The proposal can be reflected to the supplier benefits presented in Figure 5 (section 3.4) to evaluate the benefits that the contractors would receive from it.

Investigating the benefit creators more closely easier scheduling and constant workflow would bring stability to the contractors, and developing operation would bring security into their operation (Figure 5). These should be seen as benefits from close long-term co-operation and therefore it is arguable to link them with annual contracts. On the other hand, from the sacrifice relievers more tendering and case company not getting involved with price would also bring stability to contractor operation, when case company being responsible for the process would streamline the operation and reduce the bureaucracy of the operation.

Both of the proposals should be investigated thoroughly as they both seem to be quite possible ways of offering the service. As the benchmarks indicated, both of these are in use as VE had taken the annual contracts in execution and Fortum on the other hand had utilized both of them. Therefore it was important to consider both of them as they seem to work in practice.

5.3 Evaluation of the Customer Value Proposition

To evaluate the initial proposal two stakeholder groups were identified, the case company internal stakeholders and the customer stakeholders, in this case the contractors. Due to the limited time limit the evaluation of the initial proposal was done by interviewing internal stakeholder inside the company. They were presented with the background information about the conducted contractor survey, benchmarks and the best practices of designing CVPs. The results from previous were also presented and discussed. This was done to clarify the interviewees what had been done so far and what had been the outcome of these parts of the research. They were introduced to the benefits and sacrifices of the contractors’ present situation and the possible benefits that the contractors would gain by starting offering the turnkey service with the case company. The initial proposal was introduced after the background information was familiar to all of the participants as well as the progress of the research process. The proposal was also explained in detail to the participants which got the discussion started.
The main focus in the interviews was to find alternative views and validate the progress so far with the internal stakeholders. The main concern that the stakeholders expressed was the unknown reaction that the designed turnkey service would have from the contractors. This had been the main purpose of the contractor survey which had been fairly positive, but the emphasis still was that the execution should be discreet. Therefore the stakeholders believed that it was good to keep alternative options to approach the execution from different perspectives. They should be kept separate and therefore the proposition should view them apart from each other. They also felt that the level of co-operation would not be as high with single-time offering and it should be ranked as lower than in initial proposal. The stakeholder also felt that some parts were missing from the initial proposal as it was proposed that annual contracts include also the sacrifice reliever of case company being responsible for the process. They also introduced the possibility of case company taking the financial risk of the service, to increase security, and the contractors acting under company brand and delivering its message, to offer emotional benefit. Single-time offering would also offer the companies constant workflow that the companies could influence by themselves as they could tender more end customers.

The stakeholders also felt that it would be good to emphasize to the contractors that the case company has almost 15000 end customers, so there is a lot of work for many of them. They thought it would be good to investigate the matter more with the contractors, which would make it possible to develop the proposal even further. This could be done after this research was finished and the final proposal was ready for presentation. They also felt that the single-time offering would be possible to execute and a suggestion of a tendering cloud or portal could be possible to be introduced. This would make it easier for the end customers and contractors to meet and do business together. Single-time offering would also make it possible to service even the larger end customers. The internal stakeholders also raised the possibility to introduce fixed prices to at least the existing end customers as they felt it was needed to let the customers easily find out how much their heat exchanger renewing should cost. This should be investigated more as the contractor survey noted that the contractors do not want the installations to have a fixed price, as their costs depend on their work schedule.
5.4 Final Customer Value Proposition

Based on the internal stakeholder interview, the initial proposal raised some new ideas and topics that the stakeholders felt needing some more investigating. The final proposal and the suggested edit are presented in Figure 20.

The final proposal is divided into two possible proposals. The annual contracts would benefit the contractors by increasing the co-operation with the case company as well as savings on sales and marketing resources as the case company would take care of them regarding district heating installations. This would benefit the contractors by making the scheduling easier, giving them constant workflow which would inevitably lead to developed operation. It would also remove responsibility of the process to the case company. The case company could also take most of the financial risk from the service and the contractors would benefit from the case company brand by operating under their name and delivering their message.
Figure 21. Annual contract process

Annual contracts (Figure 21) could be offered to existing end customers whose installation costs are considerably well known. The process of annual contracts is presented in Figure 21 above. All of the orders would come through the case company who would deliver them to their annual contractors. Service should be fixed price or at least the price should be considerably well known in advance as the customers want to learn the total cost well before making a decision of acquiring the service.

The single-time offering would also reduce the sales and marketing effort needed from the contractors and to some extent also increase the co-operation between the case company and the contractors. This would benefit the contractors by offering them more constant workflow, by making it possible for them to tender more end customers. It would also mean that the case company would increase their responsibility for the process to the end customers’ direction and that the case company would not get involved with the pricing.
The single-time offering (Figure 22) could be executed by introducing a tendering cloud where the end customers and the contractors could get involved much easier than at present. This way the contractors and end customers could easily meet and communicate in a controlled environment.

The suggested proposals could be utilized separately or together, but the researcher proposes that annual contracts should be only considered for existing customers. The implementation should be started by testing the service by a few test customers as the benchmarks proposed. If the company does not want to invest into a cloud portal the tenders could be evaluated by the case company personnel also. This would require additional resources from the sales department of the case company. In this case the tendering process should also be reviewed and improved to streamline the operation.

5.5 Evaluation of the Final Customer Value Proposition

The evaluation has been made as part of the proposals but it is needed to reflect these results more thoroughly at this stage. The benefits that the contractors would get from offering the turnkey service depend on whether it is executed as annual contracts or single-time offering.

The annual contract benefits were divided into offering them stability, security and streamlining. As presented in section 3.6 the benefits in this Thesis would divide between
economic, functional and emotional value. The annual contracts would there for result in offering the contractors economic value, as they would get more constant workflow and therefore also increase in income. They would also offer them functional value, as the constant workflow would ease the scheduling, develop their operation and result in increased co-operation with the case company. Sales and marketing effort moving to the case company would result both economic and functional value as they could focus their resources in to their main operation of doing HVAC installations. It would also bring possible emotional benefits as the contractors could operate under the case company name and brand, which could possibly increase their status in the eyes of the end customers.

The single-time offerings on the other hand offered the contractors stability and streamlining. Single-time offering could therefore result in offering the contractors economic value, as they would gain constant workflow from tendering more customers, and by the case company not getting involved with the pricing. The sales and marketing effort moving for the case company responsibility would offer also in this case both economic and functional value. The functional value would also be gained from the possible tendering cloud or portal that would help the end customers and contractors to meet in a neutral environment.

As value progresses it develops from tangible to more intangible form. So it is also in this case as the developing value would offer the contractors stability and security in their business. Annual contracts would offer in the contractors more intangible features than single-time offerings, but as it was mentioned in the validation interview with the stakeholders, it would probably offer the intangible features to only a few of the contractors and therefore the execution of the service would need more investigating and starting the conversation and co-operation with the contractors. It could also be needed to keep two alternative proposals as the proposal, to keep the contractors from getting disappointed in the first place, if the company is still keen on offering the turnkey service to their end customers. This would be a compromise from both the case company perspective as well as the contractor perspective, and therefore it would benefit both parties in some extent. This way it would be possible to offer their end customers easier way of acquiring the heat exchanger, without causing too much discontent in the contractor side.
6 Discussion and Conclusion

This section discusses and summarizes the study, evaluates it validity and reliability, and suggests development steps for the case company’s heating market department in order to implement the contractor CVP.

6.1 Summary

The objective of this thesis was to create a CVP directed at district heating contractors. The earlier customer survey had indicated that the end customers are seeking an easier way to become customers and would like to do so without extra effort. This was also verified by the TUKALEN project which suggested that the end customers are interested of turnkey delivery and referred to the same kind of easiness and ready-made solutions on offer in prefabricated and turnkey house solutions. A turnkey service would eliminate many of the sacrifices that the end customers have at present. For example, it would help to understand better the total costs, the end customers would not have to worry about an unclear acquiring process and the complexity of having several contractors involved, and the end customers would have a person who would oversee the whole process and act as a trusted party for them. For this reason what was needed was gaining an understanding of whether the contractors would be interested in getting involved in co-operation with the case company to offer the turnkey service for the end customers. As part of the process gaining understanding of the benefits and sacrifices that the contractors felt existed in the designed service was also needed.

Action research was chosen as the main research approach as it allowed observation and analyse of the situation, adjusting and modifying it as part of the learning process and for the possibility to change the direction of the study if necessary. The data was collected from multiple sources, by utilizing multiple data collection tools in multiple rounds in order to secure research reliability and validity.

To achieve the research objective, this study conducted a current state analysis to understand the present situation in the case company. Forming an understanding from other experiences was also needed and therefore other companies were benchmarked. These served as data collection sources 1 and 2. This data was then organized in a structured way with a framework introduced by Osterwalder et al (2014). The results from this framework were also reflected with regard to the partnership benefits introduced by Burnip (1999).
The contractor survey indicated that many of the contractors have a positive attitude towards offering turnkey service to end customers. The survey also suggested that the most appropriate arrangement in offering such service would be accomplished through single-time offering, but annual contracts also raised some interest. The survey introduced the benefits and the sacrifices that the contractors feel that exist in offering such service. It was also evident that a turnkey service is available in other districts, which is why it was important to benchmark other companies offering such service and find out their experiences in getting started and offering the service. Value proposition design introduced by Osterwalder et al (2014) was utilized to build the initial proposal. Because of the survey results two different approaches in offering the service were examined, single-time offering and annual contracts. These two proposals were drafted, validated and finalised.

It is important to conclude that the current CVP is not sufficient for end customers, as there is very little on offer for the end customer in the acquiring phase, yet there is an interest from contractors to offering such service. Therefore the contractor CVP can be used as the basis to develop a separate CVP that is directed at end customers. This could be done only with the contractors involved in offering such a service and therefore as the result of this thesis the researcher suggests solving this problem by introducing two separate ways of offering the service: (a) annual contracting for the existing end customers or heat exchanger renewers, as they should get the service reasonably priced, and which are good work for the contractors and whose costs are considerably well known; and (b) single-time offering, for new end customers, introducing a cloud tendering service where the end customer and the contractors could meet in a neutral zone and the end customers could get district heating with less effort than at present moment.

6.2 Practical Implications

The designed CVP should next be presented to the contractors for validating the results. It would be appropriate to verify the ranking of the contractor benefits and sacrifices that they presently have and that the CVP would introduce, in order to make sure it correctly answers contractor needs. The CVP should be reviewed based on the reception and feedback from the contractors. It would also require better dialogue with the contractors in the future in order to solve issues around how to take care of visiting customer premises and any other problems that are encountered.
It would also require the case company to introduce a tendering cloud or portal, or optionally someone from the firm to go through the tenders. This would require more personnel and monetary resource and introducing an IT system that would take care of the contractors and end customers so as to engage in interaction.

The matter will require more research as the pricing of the service raised a lot of interest in stakeholder interviews. The end customers want to learn the total price of the service is as easy a way as possible and this should be the focus in the future research. The matter of the price is very delicate and it should approached discreetly.

6.3 Managerial Implications

In order to efficiently implement the suggested proposal in to action, it is important for the company directors to make the decision of whether to start offering the service for the customers or not. It is ultimately a strategic decision on whether to offer the end customers increased services. The benchmarked companies informed that the number of end customers using the service annually has not been very high. This is important to acknowledge when making the decision on whether to take the turnkey service further or not.

If the planned turnkey service is taken to action the researcher suggests following steps in the execution:

- Introduction of annual contracts. This should be done in co-operation with contractors and therefore the company should engage in discourse with them. It also requires case company to introduce turnkey process for their own staff and educating them to operate as planned. Naturally choosing contractors for the partnerships is essential.
- Experiences should be collected with chosen contractors by testing turnkey service with test customers. Based on the feedback from them trimming of operating process and contract limits can be agreed. Both parties need to be heard and following actions should be agreed accordingly.
- If annual contracts are set up just to serve existing customers the pricing of the service should be fixed and therefore the price of the service should be agreed.
If the case company decides to offer the service as fixed price the researcher suggests that the case company should also bare the financial risk from it.

- Single-time offering should be introduced for new end customers as there is interest for the service. This would require either a tendering cloud or a person responsible for tendering the contracts for the end customers. Therefore resources (human and/or monetary) for offering such service should be considered. Single-time offering would also enable the company to engage into discourse with the contractors and increase the co-operation.

- The contractors should be allowed to acquire the heat exchanger in the future, as the cost savings would not be significant. This should be considered again if or when the operation has started and case company has gained experience of the interest and the annual volumes for the service.

- Continuous improvement requires constant tracking and/or reporting and the measuring points should be agreed with contractors.

6.4 Validity and Reliability in this Thesis

The objective of this study was to create a customer value proposition for district heating contractors. This matter was approached in a number of ways, including by organizing a survey for the contractors. The results of the study answer well issues related to the objective as the end result consisted as a compromise from both the case company and the contractor perspective.

Although the proposal would be a compromise, it should be seen as a win-win deal as the end customer of both the case company and the contractors would be the main beneficiary of the service. The data collection was conducted in several parts and from different sources, to ensure the reliability and validity of this thesis.
References


Contractor survey results

Mielipidekysely kaukolämpöurakoitsijoille

Kyselyyn vastasi 49 henkilöä

3.10.2014

Minkä kokoisessa yrityksessä toimit?
What is the size of your company?

1-2 persons/employees, 3-10, over 10, I can not say

3.10.2014
Mikä on yrityksesi etäisyys Helsingin keskustasta?
What is the distance of your company from Helsinki City centre?

Kuinka kauan olet toiminut urakoitsijana Helsingissä?
How long have you been contracting in Helsinki area?
Kuinka monta kaukolämpöasennusta olet suorittanut vuodessa Helsingissä?
How many District Heating installments have you done annually?

Less than 5, 5-20 pcs. over 20 pcs, I can not say

1. Miten lämmönvaihdinasiennusten markkinat mielestäsi nykyisellään toimivat? (esim. hintoihin, kilpailu, laatu tms.)
1. In your opinion, how do the heat exchanger installment markets work at the moment? (e.g. pricing, competition, quality etc.)
Appendix 1

### Perustelut:

- Kova hinta/illapu, joka johtaa osittain huoroon laatuun. Alalla meni tekijöitä jatkavat eihä osa teidä putkiasian kutsia.
- Urunoinnin hintataso on luoos eikä telemisen laatuu arvosteta riittävästi.
- Täytty siltä huolimatta että taustalla on silmä alalla tapahtuneet paljon, sodeta, että urakoidut arvoksi osallistaa painostaa sukuja ja toimivuutta todettuja organisaatiota- ja johdantomaillin muodollisuutta.
- Emme ole tärheet erillä kaukolämpöasemien (KLS) käyttöön, kaukolämpöytö tehdään projekti osana.
- Hinta-erot ovat suuret, suunnitellut eihän.
- Hinnanvaihto kevyiltä talia, mikäli osa osallistuu lämminvaihtimien vuokralaillapaatuale Helsingissä.
- Vuosi urakkoja, jolla te oikeassa lugemattavaa, kiiro ikinä on eihän ilman hintatasoa KLS työssä.
- Kilpailla on meidän eihän tehdä hintatasoa meidän, ilman hintatasoa urakkoja ilman hintatasoa, kun en halua tavoitella kaikkiaista.
- Alalla niissä yhteyksissä, joilla e oikeassa oikeassa eihän ilman hintatasoa, eihän ilman hintatasoa niin kaikista eihän ilman hintatasoa, kun niin kaikista.
- Johtavan markkinointitoreessa (kova illapu) hintataso spaanaallinen.
- Kilpailla komea, kattee huonot.
- En tunne Helsingin markkinointia kovikin levise. Olemme oikeassa sijalla kaukolämpöihin yhteyksissä Helsingin alueella.
- Kilpailla suuren tiukka, euroa pyörii, muttei ketetta.
- Toinnittiksi ovat rappata.

---

### 2. Mitä kaikkea "avainet kateen"-palvelun tulisi sisältää?

#### 2. What should the "turn key"-service contain?

Viitata useamman valikolle.

---

![Diagram](image-url)
Jotain muuta, mitä

- Kullastavien tarpeen tuotantoon mukautetut, määräystä
- Elin, liuvenemäntyyppi, välistäntä jne.
- Lämmintävihdikin, asennustyön ja ennaltaapureykkäys
- Määräaikavirtautu, ennen koeaatt
- Jotakin tai mikro jykeillä käytetään tapauskelvokset
- Sama vastaus kuin kokee
- Täteenkertoa tilityökaluja ja jenen jaomaaksiksi
- Emme suorita sankomarkoita
- Suunnitelmat

3.10.2014

3. Mitä mahoillisuksia/haasteen on ollut, jos "avaimet kätteen"-palvelua lähettäisi Helsingin Energian toimintaan tarjoamaan?
3. What possibilities/challenges do you see, if "turn key"-service would be offered by Helsingin Energia?

Mahdollisuudet:
- Paatostoinnituus泰州 toimintakäytössä tasasivumäärä ja työ ainoi
- Savanniksi asennusosa mahdollistaa kehittää erilaisia
- Tasoittaa tuotantoon liittyvät työ ja resurssien suunnittelu
- Varsinkin, lämmitystantoja vastaavissa asukkaita monesti saatavilla yhden tason
- Urakoittijoiden irtiyösavunattavuus mahd. korostuu
- En idejärjestelyä mahdollisviutta.
- Miettin syynä on, että jokainen tarvitsee, mikäli tuo muka
- Lisää maalapölyllä on ilmankiini, joka koskee yhden
- Laitteiden asennustyönä on onnistutettu sitä
- Täteenkertoa tilityökaluja ja jenen jaomaaksiksi
- Tämä on mahdollisuus
- Savanniksi asennusosa mahdollistaa kehittää erilaisia
- Jätteet ja kiinteä
- Savanniksi asennusosa mahdollistaa kehittää erilaisia
- Tämä on mahdollisuus

3.10.2014
3. Mitä mahdollisuksia / haasteita näette, jos ”avaimet käteen”-palvelua lähdetään Helsingin Energian toimesta tarjoamaan?

Mahdollisuudet:
- Lisää kannattavaa liivevaihda uusien teille
- Asiakkaamuistutus ei auta, koska tuotetta ei ollut yleisesti käytössä
- Helsingin Energian liivevaihdon suoritajien palvelut ulos aika ilman virheitä ja vahinkoja
- Edellytys on tarjottava ainoastaan Helsingin Energian palveluihin
- En ole valmis
- Muutuuko asiainmuutokset
- Jos tarvitsee vaatit, tulee ottaa yhteyttä

Haasteet:
- Kilpailu on jopa suuremmat
- Hinnat liikkeellä
- Tietyt osat on vaikeaa palveluttaa
- Huoltotuki on vähentynyt
- Tarjousten laajuus on liian pieni
- Hinnat on liian
- Tulee tarjota palvelua kaikkialla
- Erikoiset palvelut
- Asemalle painotettu
- Hinnat on liian
- Virheellinen hinta
- Tarjoukset on liian
- Hinnat on liian

3.10.2014

Finnish
3. Mitä mahdollisuuksia/haasteita näette, jos "avaimet kätteen"-palvelua lähdetään Helsingin Energian toimesta tarjoamaan?

Haasteet:
- Alketaulutukset
- Nykykustannus vähentäminen, yleiskäytäntöiset toimintarajoitukset
- Yhteydenotto edellytettä
- Valmennus- ja harrastetappi
- Palvelun laatu vastausreaktiivisyys
- Vähentäminen asennus- ja toimintakustannuksia
- Riippuen tilannesta voi olla haasteellista saada urheilu- ja yhteisöryhmien alkatäytteen

4. Mikä on näkemyksesi/yrityksesi näkemys yhteistyöhön Helsingin Energian kanssa? Olen/yrityksenimme kilpailunäyttävä ja olen mukannut "avaimet kätteen"-palvelun toimittamiseen Helsingin Energian kanssa:

4. What is your view/your company’s view in cooperation with Helsingin Energia? I am/my company is interested to get involved with delivering “turn key” service with Helsingin Energia:

3.10.2014

3.10.2014
Perustelut:

- Yhtiöalue on isommissa urakoissa ja pakettien vaihdolla (pintoitt) työllistetään läpinäkyvää huoltotyöntä edustusta. Mustoin toteutetaan isompien köljeitä ohtessa.
- Jos on kyse urakoista tai urakoista, joiden on tullut toimia tila-urakoisena tila-urakoisena liikenteessä.
- Olemme juuri vastaavassa yhteistyössä Vantaan Energiasta ja sillea aikaa on käynnissä Furtunin kanssa. Myytä niin kiitolla, että nuo on vastaavat urakoista ja niin on vastaavat urakoista.
- Suurin tarstatsyyhtiö: jättiläiset jättävät jättiläisen pois.
- Pelekkä että tämä joutuu samaan kuin Vantaalla. Eli Energiatomi hommasta pientalolaitteet ja nuowerismikserillä jotta käy "vakioitykkä" niin onomatapaa.
- Tänään on nykyisin kahden hengen jälkeen avustaa, että on kahden hengen jälkeen niin sanottu häneta.
- Pienen kotiessä ei ole yhtäkään yhtävaaranaita. Olemme kehittyneet suurempin urakoistin, mutta olemme tehneet myös niitä keskeisiä, mikäli urakoista avustaa on ehitustukiksi.
- Eihän tässä lämpöistiminnee jätä tila-urakoista ja niin on urakoista jo ammatissa.
- Avustin mahdollisuudet työn annamisen tila-urakoisella ilmatakaille ja uusiutun urakoistipaikka on paremitta asiantuntija urakoista ja kunnistettavat toimintaamia.
- Jos hirtää vasta pohjalevänä on mahdollista kelellä tätäkin nykyt.
- ULLA on monen vuoden kokemus vastaavasta konseptista Vantaan Energiasta kannsa. Niillä on tiedossa niitä mukulta arkituimeita tulee eten.

3.10.2014

Perustelut:

- Kaikillä lämpöilmausen tila-urakoissa asiakkailla yleiskkertiolompakko vaihtoehto.
- Kaikki elävät samalla virallisella. Niin suunnitteluennusteet on mukavasti niinkin urakoisilla ja niinkin urakoisilla.
- Tuotevalotus tavoitteena tulee initioimalla "Lähtöinen tila-urakoista" perustetuilla. Asuinoit lähdöön toimintatelineen huolimatta on mahdollista asiakkaan vihkimiseksi ja annattavatoisisa yhteensä rajoitettava.
- Jos hirtääasioissa, on kehittelyä urakoisilla, asiakkailla ja laadun prossiaine, turvallisuus on kyllä paljon kiihty.
- Tarvitset poikille kiihty.
- Jos urakoistipaikallistaan jotta katku erikseen niin kunnostus noussee.

3.10.2014
5. Jos "avaimet kääteen"-palvelua lähdetään jatko suunnittelemaan, niin mikä järjestely olisi sinulle/yrityksellesi sopivin?
5. If "turn key"-service drafting goes forward, what would be the most appropriate arrangement for you/your company?
Voit valita useamman vaihtoehdon.

- Annual contract (we guarantee a steady minimum amount of annual work load)
- Single-premium offering (contractors are sided case-by-case with the help of lifecycle Energy)
- Tarjousjärjestely (vaihtoehdot yhdistävät rakennusten ja energiaan)
- Fixed price/clearly defined scope (prices determined accurately/price)
- Suoritettavaksi varattu järjestely
- Kaupan mukaan suoritettavat
- Introducing "quiet time" supply (discounts would direct small houses to quiet times)
- Pyydettäisiin liikennettyä (esimerkiksi "hyökkäyshetki")
- Something else, what?

Jokin muu, mikä

- Vaihe käynnistää (suoritettiin yleisesti 2021.1.)
- Energialähteiden viihtyisissä asumussuunnitelmillä
- Emme tarjua skittitöitä laajempaan.
I am willing to answer additional questions, not willing

3.10.2014
## Comparing the resulting Fit of profiling customers and value map

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