

Current State and Development of Customer Experience in the Delivery Process of Electricity Connection

Case Company Lappeenrannan Energia Oy

Abstract

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	Number of pages 62	
Title of Publication Current State and Development of Customer Experience in the Delivery Process of Electricity Connection- Case Company Lappeenranta Energia Oy		
Degree and field of study Bachelor of Business Administration, International Business		
Abstract <p>Companies of all sectors and industries have started to pay more attention to customer experience in their operations and strategic choices. Several studies identify good customer experience to increase the number of satisfied and reference customers. The priority of customer experience has been accepted as a competitive advantage especially in a technically developed and complicated business environment. At the same time, customer experience is established as a strategic factor allowing the company to develop its business operations and industry.</p> <p>The purpose of this thesis is to study the current state and development needs of customer experience in distribution system operator Lappeenranta Energia Oy's internal connection processes. Research methods for the thesis were literature review, customer interviews, and direct observations by working at the Technical Customer Service. In addition, process-related documents and results of customer satisfaction surveys were used as research material. Regarding Lappeenranta Energia's connection processes, the study focused on the delivery process of new electricity connections. The interface between Technical Customer Service and customers was chosen as the focus area, where most direct and indirect customer encounters occur. However, the study also considers background functions that support the customer interface, such as the role of the contractor in terms of the delivery process.</p> <p>The study consists of two parts. The theoretical part is a literature review, which introduces the concept of the customer experience, the formation of customer experience as well as the importance of customer experience in the value-creation process. The theoretical part also opens the business environment of the electricity network company and acquaint the regulation model.</p> <p>The empirical material of the study was collected by interviewing Lappeenranta Energia's connection customers. The results of the study provided a current state analysis of the customer experience in the delivery process of the electricity connection, its most important touchpoints, and development needs. The final results showed that the development of customer experience is important also in the monopolized electricity distribution business.</p>		
Keywords customer experience, electricity network company, customer experience development, regulations		

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Appendix 1. Interview frame for the customers

FOREWORDS

This Bachelor's Thesis is conducted in cooperation with Lappeenrannan Energia Oy during the autumn of 2021. My supervisors on behalf of the company were Customer Account Manager Jussi Selenius and Team Leader Sampo Suhonen. The topic offered by the company was meaningful for me as it offered me a chance to combine my work and studies with a very current customer-oriented topic. The fact that the similar study on the topic does not currently exist, and the results are valuable for the company increased my motivation. This project was inspiring, very demanding and in the end, extremely educational in many ways. The whole thesis process was a large entity, and sometimes it felt really challenging to adapt together the thesis process, work, hobbies and personal life. What helped me was a pre-planned schedule and good time management skills developed over the years of studying and working at the same time.

I want to thank my thesis supervisor Anu Kurvinen, who guided me on the way and gave valuable ideas and suggestions to develop my research. I am also grateful to the company Lappeenrannan Energia and my supervisors for the support and trust they have addressed to me during this project together. I felt gratitude that my thesis idea was welcomed with enthusiasm, and my vision and opinion of the implementation were trusted. Finally, I would like to thank my family and friends, who have supported and encouraged me in my studies and during this thesis process. This Bachelor's thesis brings to an end one significant period of my life and I am eager to head towards my future, whatever it may bring to me.

In Lappeenranta, 10.11.2021

Rosa Nupponen

KEY PROFESSIONAL TERMINOLOGY

Electricity connection	as the name implies, electricity connection is connection to the electricity network. The electrical connection is ordered from the local electricity company. Through the electricity connection, consumer can use electricity, the amount of which is measured by the electricity network company with electricity meter. In practice, the electrical connection is a cable between the electrical network and consumer's metering centre.
Electricity contracts	an electricity sales agreement is made with selected electricity company. Without a valid electricity contract, electricity cannot be used in the property, even if an electricity connection is acquired. The electricity contract specifies who pays for the electricity and to what exact address it will be delivered.
Electricity connection contract	a written agreement is always made with the owner of the electricity connection. Contracts determine for example the owner information of the electricity connection, the main fuse size (A), and the delivery time of the connection.
Connection point	the connection point of an electrical connection is defined on the connection contract for each connection. The primary connection point is at the border of the plot and the connection point is, depending on the structure of the network, a distribution cabinet, a ground cable at the border of the plot, overhead line trunking, or transformer. The connection point for larger subscriptions is usually a transformer.

1 Introduction

Customer experience has emerged as a central element in strategic assets and a significant cause of development for companies today. Successful and great customer experience is recognized as one of the biggest competitive advantages in companies, especially in technically developed and complex business environments (Juuti 2015). It is very difficult to gain a competitive advantage in terms of mass efficiency, logistical efficiency or information technology because such competitive factors can be easily copied. Instead, it is impossible to copy the customer experience and service culture created by the company (Tuulaniemi 2011). It is an ascending trend and a strategic factor that allows industries and business operations to develop towards customer-centred business logic. Competition strategies and decision-making processes are dominated by the customer's era, and by focusing on the customer experience can company achieve the maximum profit from its operations. (Löytänä & Korkiakoski 2014, 21)

Assumably, a company operating in a monopoly position has little need to invest in developing the customer experience as there is no direct connection between the customer experience and the number of customers. The monopoly of the electricity network company is the most economically sensible solution, as it guarantees equal access to electricity for everyone, regardless of geographical location, as well as the framework and quality criteria for electricity distribution (Toivakainen 2014). This framework often leaves customer experience in the shadow of other strategically important objects of development. Failed customer encounters, ineffective operating manners and poor quality of work can cause both direct and indirect undesired costs for the company. In addition, customer satisfaction has an indirect effect on regulation, that is, control of activities in the regulated electricity grid business (Linden 2016, 1).

This research examines the concept of customer experience in a regulated, service-based monopoly organization. The study is done on behalf of the electricity network company Lappeenranta Energia Oy. The purpose of this bachelor's thesis is to determine the present state of customer experience in the delivery process of an electricity connection and align the development needs in order to improve the customer experience in the future. One element of this study is also to understand the meaning of customer experience in a regulated monopoly-based business environment and to justify its importance in terms of the company's operations.

1.1 Company presentation

The company is a limited liability company operating in Lappeenranta and fully owned by the city. The Group consists of the parent company Lappeenrannan Energia Oy and the subsidiaries Lappeenrannan Energiaverkot Oy and Lappeenrannan Lämpövoima Oy. The company produces and sells water and energy services and manages and develops distribution networks for electricity, district heating, natural gas, clean water, and wastewater. Lappeenrannan Energia Oy manages network services and the electricity connections in its operating network area that covers municipalities of Lappeenranta, Lemi, Taipalsaari, and Savitaipale. At the beginning of 2020, the total number of permanent employees in the group was approximately 105. The company transferred the electricity sales to the associated company Väre Oy at the end of 2018. (Lappeenrannan Energia 2020a.)

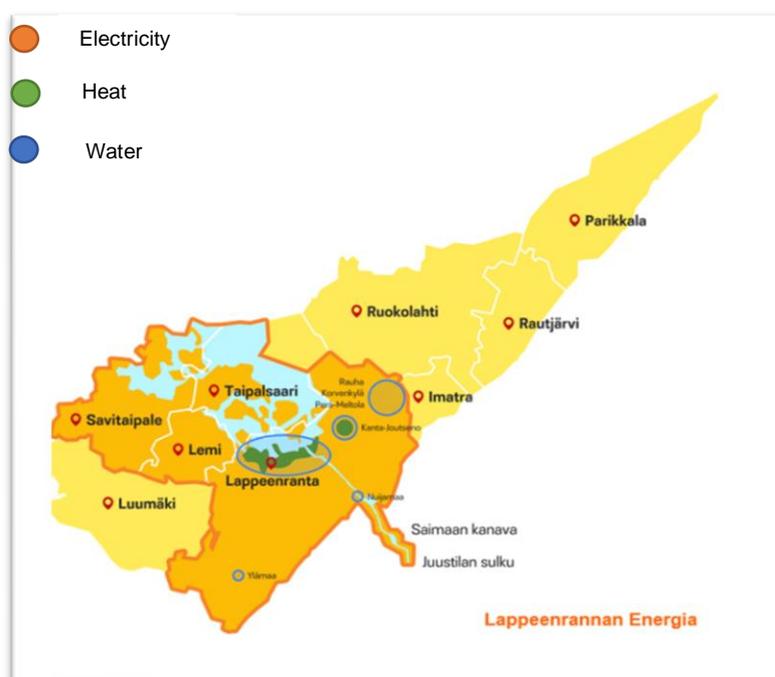


Figure 1. The network area of Lappeenrannan Energia Oy (Lappeenrannan Energia Oy, 2020a)

In the centre of all operations is the supply of high-quality and uninterrupted energy and water to customers economically and with environmental considerations in mind. The main priorities are network design, construction, operation and maintenance. The company builds the electricity network and electricity connections together with its partner companies and sends energy data on its customer's electricity consumption to electricity seller companies. (Lappeenrannan Energia Oy 2020a.)

The company has four core values and promises to be fulfilled in their future strategical goals: smart and safe networks, the best water in the world, the first carbon neutral energy company in Finland and a provider of authentic customer understanding (Lappeenrannan Energia 2020a). The new Electricity Market Act entered into force on 1 September 2013. It requires that the electricity distribution network must be designed, constructed, and maintained in such a way that damage to the distribution network due to a storm or snow load does not cause an interruption of electricity distribution to customers in the town plan area for more than 6 hours. Outside the town plan, the corresponding time limit is 36 hours. These requirements will come into full force on December 31, 2028. To be able to fulfil these requirements, the company is investing to build weatherproof electricity networks that are smart and safe. This is one of the strategic goals for the future. (Lappeenrannan Energia 2018.) The weather safety of smart grids is at the level required by law and voltage fluctuations can be monitored at any time thus the quality of electricity is uniform, high quality, and safe. Compensation for power outages, time spent on troubleshooting, and the amount of work spent on repairs will be significantly reduced. (Lappeenrannan Energia 2020a.)

In addition to the security of supply and smart and safe grids, Lappeenrannan Energia has a desire to succeed in service development. In strategical future goals, customer satisfaction has grown steadily to be in the centre of business values. The company has invested in systematic communication, customer engagement with services, and digital presence. Currently, customers have access to information about their electricity consumption digitally in the MinunEnergia service, and the company serves its customers not only by telephone and network services but also with the new chatbot called "Leo". This research is conducted to support the company to achieve authentic customer understanding by investigating the current state of the customer experience in the delivery process of electricity connection.

1.1.1 Introduction to the delivery process of an electricity connection

Lappeenrannan Energia's Technical Customer Service is responsible for the delivery of electricity connections by the agreed contract terms such as schedule, costs, and the connection point. The connection process includes the delivery of new electricity connection, changes to existing connection, network connection and installation of electricity meter. This research focuses only on the delivery of the new electricity connection.

The connection process starts when the customer contacts Lappeenrannan Energia's Technical Customer Service. Currently, the company pursues to channel customers to order an electricity connection through the MinunLiittymä online service. The service allows to track

the progress of the delivery in real-time, and for example, make a digital signature to expedite the process flow. At this stage, necessary details such as the exact location of the plot, registration details, the main fuse capacity, and the electrification schedule must be provided by the customer. These are essential in order to determine the price and delivery schedule for the electricity connection. Based on the given details, the customer receives an offer. Connections are priced on a zonal basis depending on the location and the distance between the connection point and existing distribution substation. (Lappeenrannan Energia 2020b.)

Main fuse size	Zone 1 (€)	Zone 2 (€)	Zone 2+ (€)
3x25A	2100	3460	5910
3x35A	2620	4400	7590
3x50	3410	5800	11 450
3x63A	4090	7010	13 380
3x80A	5190	8800	
3x100A	6320	10 780	
3x125A	7630	13 140	
3x200A	11 560	20 220	

Table 1. Electrical connection prices (Lappeenrannan Energia 2021)

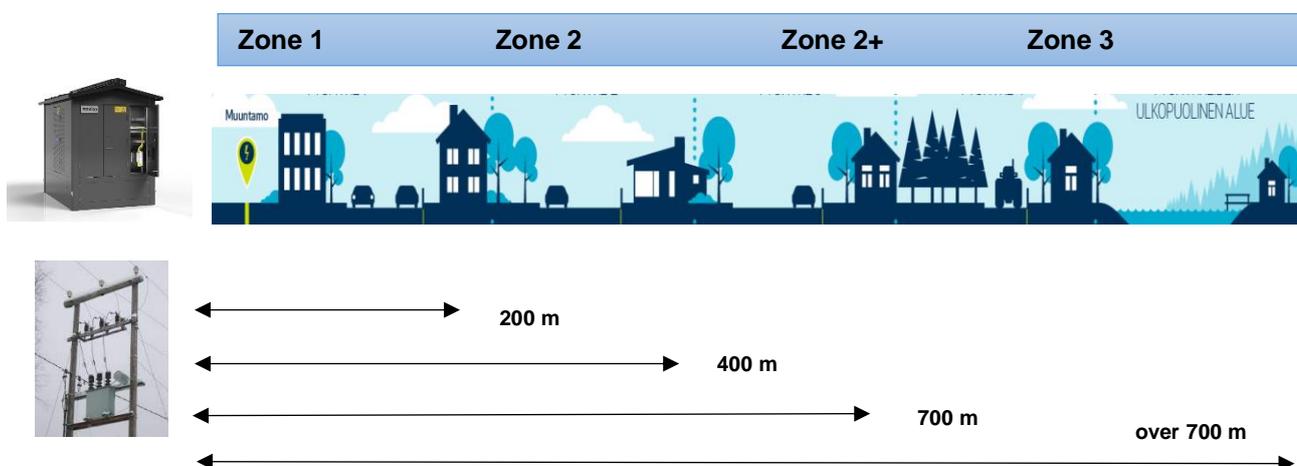


Figure 2. Connection point and the zone (Elenia Oy 2021)

By customer accepting the offer, process moves to the electricity designer that determines the crucial details for the connection contract. Design takes time based on the individual nature of the case and requirements for the terrain planning, land use agreement and other permits. Once the electricity design is completed, the connection contract is created and forwarded to the customer for signing. In case the electricity connection requires network construction work, it shall be ordered at the point when the customer has signed the connection contract. Lappeenrannan Energia has outsourced the construction of the electricity network to the partner contractor, that builds an electricity connection to the agreed connection point. Partner contractor also installs the electricity meter and connects the electricity connection to the network. In addition, the terrain design and a notable part of the electrical design are under the responsibility of the partner contractor company. (Lappeenrannan Energia 2020b.)

Before the electricity can be connected, customer must agree on the selling contract of the electricity. Lappeenrannan Energia is the owner of the electricity network and takes care of the transmission of electricity, but company does not sell the electricity. Therefore, customers are free to tender out electricity suppliers and agree on the selling terms. The connection process finishes when the new electricity connection is connected, meter is installed, and supply of the electricity can begin. An overview of the process is presented in Figure 3.

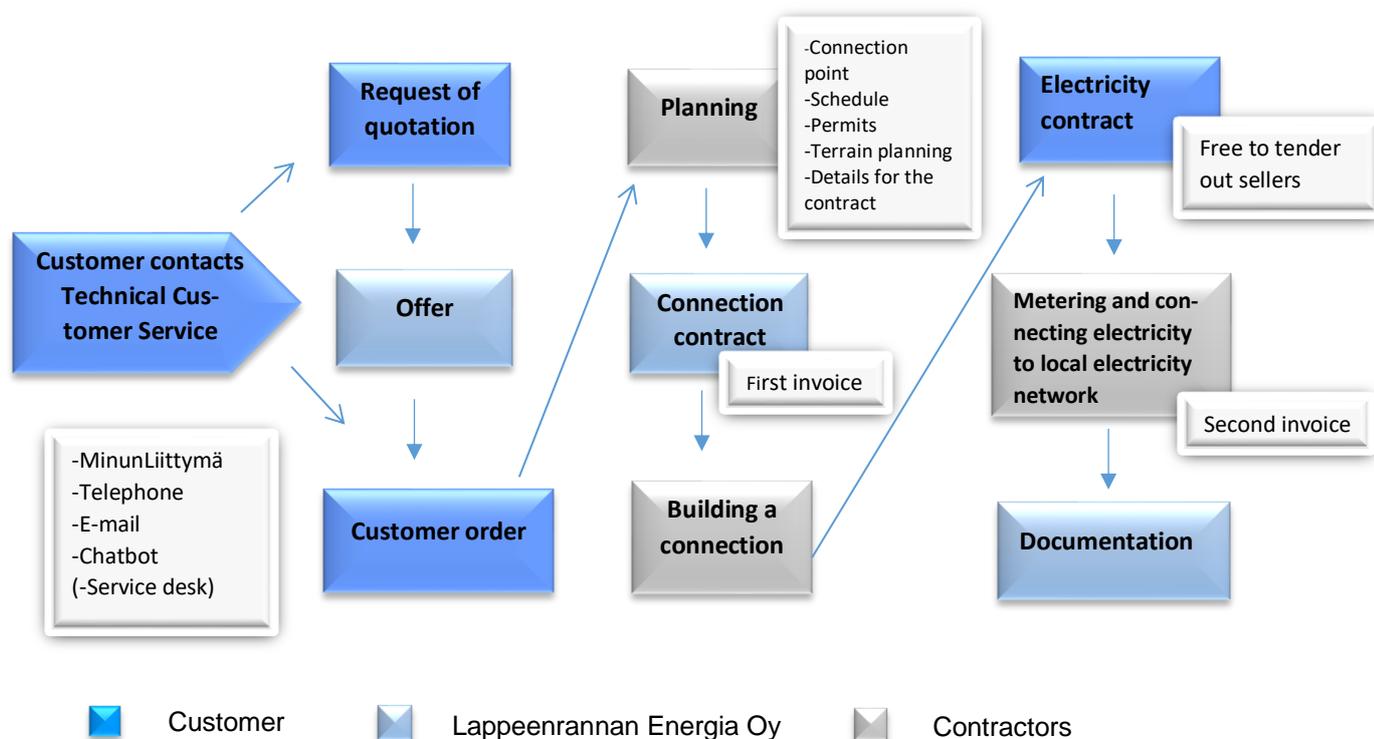


Figure 3. Delivery process of the new electricity connection (Lappeenrannan Energia 2020b)

1.1.2 Division of responsibilities

The process map in Figure 3 presented in the previous chapter recognizes committed parties such as the customer, contractors, and the network company. The responsibilities regarding the acquisition of an electricity connection between the committed parties are further described in Table 2 below.

Customer's responsibilities	Customer's electrical contractor responsibilities	Lappeenrannan Energia's and its contractors' responsibilities
Select the contractor and the electrical designer	Acquire the metering panel and the connection cable	Design and build the connection up to the connection point
Request a quote and place an order	Perform the installation work onwards from the agreed connection point	Install the electricity meter
Contact an electricity supplier of choice and acquire an electricity supply contract	Meter installation and connection of electricity request in Urakoitsija Online service to Lappeenrannan Energia	Connect customer's electricity connection to the electricity network
Cable line excavation and covering	Grounding and surge protection, connection cable protection	Documentation of the connection to the network map

Table 2. Division of responsibilities (Lappeenrannan Energia 2021)

1.2 Theoretical framework

The theoretical framework determines the perspective of the research and guides the structure and progress. The purpose of the theoretical framework is to distinguish the main points from the phenomenon under study and to form an understanding of the relationships between them. The theoretical framework that the author chose to guide the study is based on the customer experience formation in different touchpoints during the customer's journey. Touchpoints refer to those critical moments when customers interact with the organization and what it offers before, during and after the purchase. Löytänä & Korteso (2011) define touchpoints as the places and situations where the customer encounters with the company. Meyer & Schwager (2007) the definition adds representatives of third parties, including other customers. This study is approached from the perspective of customer experience formation in all the major touchpoints between the customer and the company during customer journey. Verhoef & Lemon (2016) conceptualize the customer's journey which the customer goes through during the purchase process. That cycle has multiple touchpoints in different stages of pre-purchase, purchase and post-purchase, and the study focus on analysing the customer experience based on the theoretical framework of customer experience formation.

1.3 Research background and methods

This research is carried out as a commission for network company Lappeenrannan Energia Oy during the autumn of 2021. Execution is a research-based development work where the research part of the thesis has a qualitative nature. Data collection methods include customer interviews, customer satisfaction survey and direct observations of the current process. The results from the interviews are analysed by using different qualitative methods.

The research focus on the responsibilities of Lappeenrannan Energia and its contractors regarding the electricity connection process. It is important to recognize responsibilities in the process between the committed parties in order to identify critical touchpoints where the customer experience is studied and analysed. Research particularly seeks to take a stand on the customer experience that is formed in the customer service and connection sales of Lappeenrannan Energia's Technical Customer Service. However, the development needs of customer experience arising from field operations and contractors must not be ignored, as these also play a very central role in the delivery process of the electricity connection.

1.3.1 Objectives and delimitations

The purpose of the study is to determine the current state of customer experience in Lappeenranta Energia's electricity connection process. In addition, aim is to recognize existing problems in the connection process in order to increase great customer experience in the future. To be able to achieve the objectives of the study, author defines the most critical touchpoints where the customer experience is formed in the delivery process of electricity connection.

Research is delimited to focus only on the delivery process of electricity connection. Lappeenranta Energia's connection processes include the delivery of electricity, water and heat, and the company manages and develops distribution networks of all three products. The reason why author chose to focus only on the delivery process of electricity connection is that all three products have different process flows and stages, and the results could not be analysed based on one process chart. Author chose to limit the research to have focus on the most valuable product by the number of customers and company's turnover. Chart 2 below clearly indicates the majority of electricity customer between the different product categories.

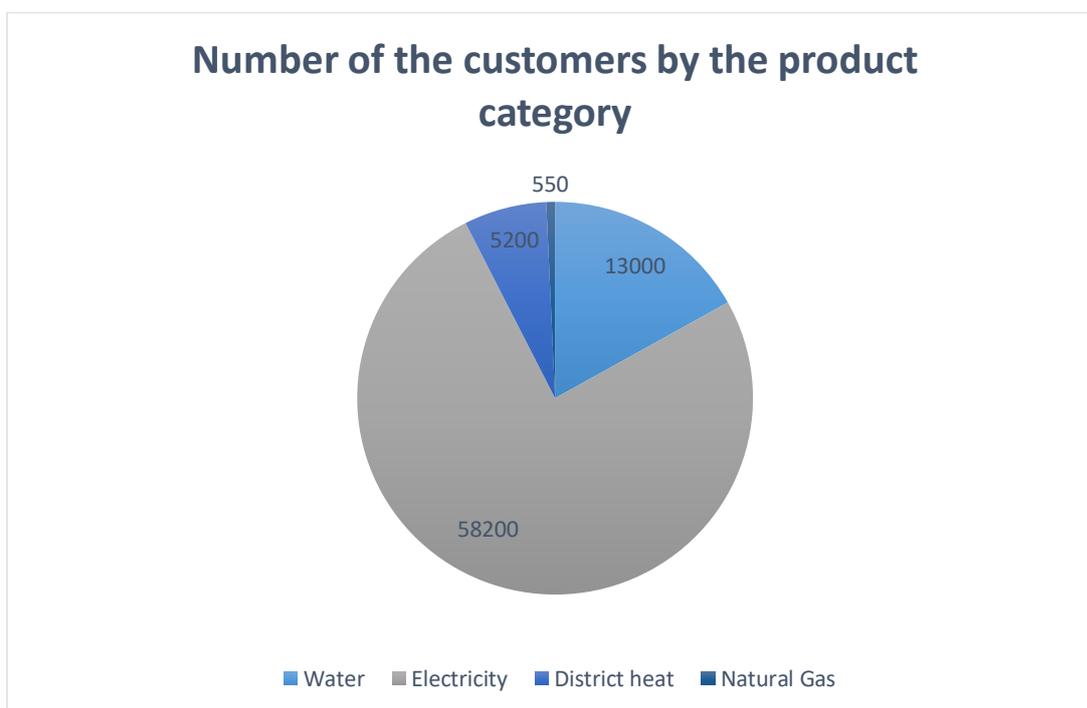


Chart 2. Division of customers by the product categories (Lappeenranta Energia 2020b)

The research is limited to the interface between Lappeenrannan Energia and its electricity connection customers. Study is based on the customer experience that is formed when the customer is in interaction with the Technical Customer Service or the cooperative contractor. Partner contractor shall not be excluded since they are a critical part of the delivery process. Figure 3 provides the process map that helps to identify the critical steps in the process and Table 2 identifies the division of responsibilities between the committed parties

1.3.2 Research questions

Research questions are created based on the purpose and objectives of the study. The study is determined to find answers to the following research questions:

The main research question:

- What is the current state of customer experience in the delivery process of electricity connection?

Sub-questions:

- What are the current problems in the customer experience in Lappeenrannan Energia's processes?
- What can be achieved by developing customer experience in Lappeenranta Energia's processes?
- What is the role of customer experience in a regulated service business?
- What are the critical touchpoints to form the customer experience in Lappeenrannan Energia's processes?

The purpose of the research questions is to support to achieve comparable results, which can be used in order to develop Lappeenrannan Energia's processes towards the best customer experience in the future. The purpose is to identify objects for customer experience development, so that Lappeenrannan Energia, Lappeenrannan Energia's contractor and customers can benefit from the study results. In addition, the aim is to prove that the development of the customer experience is also important for the business in a monopoly position and justify the claim based on the theoretical background.

2 Business environment of the electricity network company

This chapter provides a theoretical background for the empirical part of the work on the business environment of an electricity network company in Finland. It is important to understand the effects of the business environment on the electricity network company's operations, customers, investments as well as their implementations in order to further interpret the study. The chapter briefly introduces electricity network operations in Finland, the monopoly position of the electricity network company and the regulation, that stand for the control of operations.

2.1 Electricity network operations and regulation model in Finland

The term of electricity network business generally refers to distribution network companies and their business operations which comprises the following sub-entities:

- business planning and implementation
- design of electrical networks
- construction of electricity networks
- operation and maintenance of electricity networks
- energy measurements, balance services as well as customer service
- administrative support services.

The entity above can be called the electricity grid business (Muttonen 2015, 10).

The electricity network business was separated from the electricity sales and production in the 1995 electricity market reform. That was when the electricity sales and production were freed up to competition, but electricity transmission operations maintained their monopoly position. (Honkapuro et al. 2010.) The control of network companies' business operations is based on the Act of the Electricity Market and the Act of Electricity and Gas Market Surveillance. The practical implementation of the supervision is carried out by the Energy Agency, Energiavirasto in Finnish. The Finnish Energy Agency's most important tool in supervision is the so-called regulatory model / EV 2015 /, which is used to determine the annual value of each network company's maximum allowed turnover. (Partanen et al. 2020, 5.) Electricity network operations are licensed activities, the performance of which requires a permit from the Energy Market Authority. The electricity network license for each distribution company defines the geographical area of responsibility in which the distribution company has a monopoly position that sets them accountable of selling electricity transmission

services to those in need for a reasonable compensation within the limits of network transmission capacity. Sales prices and the criteria which they are based on should be fair and non-discriminatory for all networks users. (17.3.1995/386 Sähkömarkkinalaki.)

As a business unit, the electricity distribution company is unique. What differs them most clearly, like many other business units, the main goal of the electricity network company business objectives is not to pursue maximum profits. As mentioned above, Energy Agency determines and regulates the maximum allowable operating profit for each network company on the annual level (Energiamarkkinavirasto 2014). In general, the main business objectives of the electricity network company are to deliver low-cost energy to customers as cost effectively as possible, to create and main a smart grid, and to secure weatherproof and reliable electricity transmission capacity (Toivakainen 2014, 40). The pressures to achieve these goals comes from a variety of sources, the most important of which are customers, society and officials (Haakana et al. 2012).

2.1.1 Monopoly position of the electricity network company

Electricity networks, like water services and rail services are so called natural monopolies, situations in which the most economically efficient state is achieved by a single producer. The natural monopoly does not arise by law, but for technical reasons; for example, the owner of the electricity transmission network is in a dominant market position, therefore it is not profitable for competitors to build a parallel electricity network alongside the existing one. (Toivakainen 2014, 47; Linden 2016, 8.) In the natural monopoly environment of electricity network operations, there is only one potential supplier of electricity for every consumer. There is also no substitute product available, the price flexibility is minimal, and entry of a competitor is impossible for both economic and legal reasons (Vanhanen et al. 2010, 6). Due to its monopoly position, electricity network operations are regulated by law and subject to the supervision of the impartial Energy Agency. Regulation has many advantages for consumers. The aim is to ensure reasonable prices for the customer, the quality of network operations and service, and to prevent possible abuse of the monopoly position. Example of such case is overpricing. It is obvious that competition cannot be expected to hold price at a socially optimal level, so the regulation helps consumers by managing the potential risks of monopoly pricing such as overcharging or poor quality of service. (Honkapuro et al. 2010; Toivakainen 2014, 47.) According to Vanhanen et al (2016, 6), non-economic reasons for regulation are operational security, guarantee of security of supply, public service obligation, environmental issues, and transparency of information and operations.

2.1.2 Regulation model

Regarding the electricity network companies, regulation guarantees the operating-area for the electricity network company and at the same time, it imposes a service obligation by the authorities. Regulation model determine a reasonable return for business operations and in practice the model focus on controlling the reasonable return on investment. The method used to determine the acceptable reasonable rate of return is the Weighted Average Cost of Capital (WACC) model. (Energiavirasto 2021.)

Regulation is carried out during fixed monitoring periods:

- 1.1.2005 – 31.12.2007 First monitoring period
- 1.1.2008 – 31.12.2011 Second monitoring period
- 1.1.2012 – 31.12.2015 Third monitoring period
- 1.1.2016 – 31.12.2019 Fourth monitoring period
- 1.1.2020 – 31.12.2023 Fifth monitoring period (Current).

Monitoring and regulation of network companies are carried out during the mentioned time periods, during which an assessment is made of the reasonable return for the company. At the end of the monitoring period, the Energy Agency calculates the number of years as reasonable output for the entire monitoring period surplus/deficit for each network company (Energiavirasto 2021). The regulation also gives network companies incentives that make an impact on the actual adjusted result. These incentives are investment incentives, quality incentives, cost-effectiveness, security of supply incentives, and innovation incentives to support business development. (Linden 2016, 9.) The current regulation model is presented in Figure 3 below.

1.1 SUMMARY OF THE REGULATION METHODS

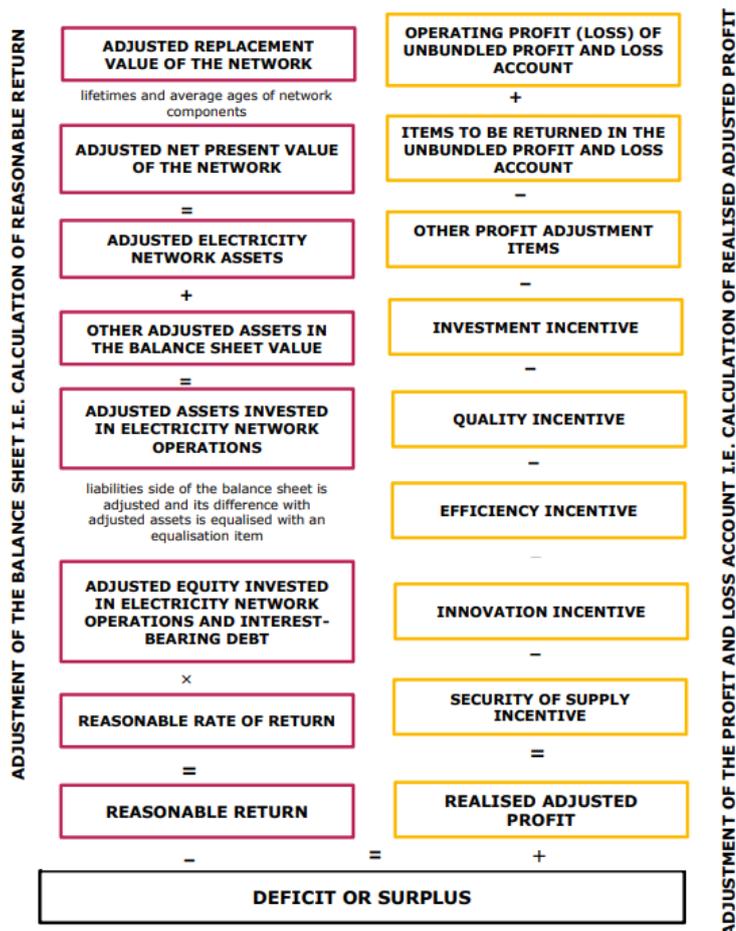


Figure 3. The current regulation models. (Energiavirasto 2021)

During the monitoring periods, the Finnish Energy Agency collects information on electricity network assets, data of financial statement and annual technical key figures. Based on that, it determines each year the network company's actual adjusted profit and reasonable return for the previous year, as shown in Figure 3. The difference between the reasonable return and realised adjusted profit equals the deficit- or surplus of the network company. The network company must return any residue from the monitoring period to its customers by lowering transmission tariffs for the next control period and any deficit can be offset in subsequent control periods. (Toivakainen 2014, 48.)

Adding the customer-oriented approach to the regulatory model, it is fair to state that customer's opinions about the current state of network operations affect the operating regulatory model. If customers experience grievances in the operations, customer dissatisfaction is transmitted through the media to politicians and eventually to regulators, who considers whether the current supervisory model needs to be changed. (Elenia 2021.) As presented in Figure 4, there are several incentives to guide regulations, and in addition to existing

ones, a quality incentive related to customer satisfaction is planned to be implemented in the near future. This would be part of the control of reasonable returns and pricing of network companies, among other incentives. The customer perspective of regulation is illustrated in Figure 4 below.

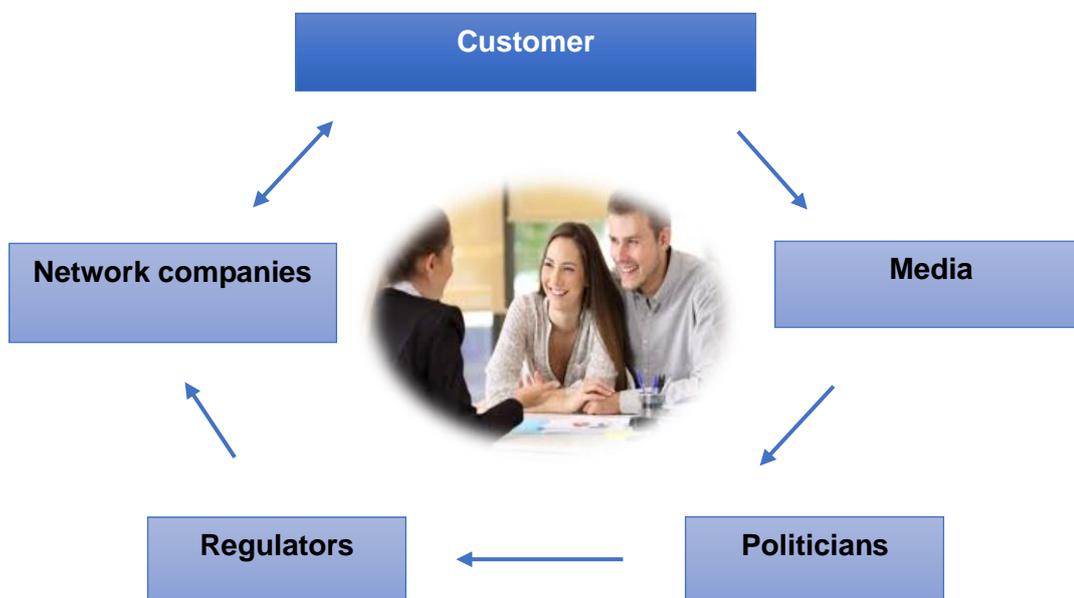


Figure 4. Customer incentive in the regulation model (Linden 2016)

As the chapter explained, regulation has a significant impact on the electricity network business and its operations. Current regulatory model encourages to operate efficiently and with high quality through various incentives that has a direct effect on businesses operating profit. Therefore, it is no coincidence that network companies spend millions of euros every year to improve their electricity networks and developing their business operations. Although the network companies are in the monopoly position and their business operations are controlled and regulated by the law, customer experience can have an effect on the regulation model. (Toivakainen 2014, 49.)

3 Role of the customer experience in business operations

Investing in creation of great customer experience is one of the most popular strategic tools among the companies today. It has become a major resource to stand out and build a brand value, and more companies acknowledge customer experience as one of the most important business strategies. It offers a guideline for companies to create mission and vision statements. (Toivakainen 2014, 35.) According to an article at Forbes (2018), the best way for companies to grow business is to invest in customer experience. Even 70% of all respondents in the article pointed out that the customer experience is as an important factor that affects their purchasing decisions. Studies confirm that the consumer that feels appreciated, understood and connected with the company tends to buy more, share their experience with friends and purchase again in the future (PWC 2017).

For a long time, an ideology that the ultimate goal for a business is to create value to its shareholders and owners guided the business strategies and decisions. Ultimately, the change in traditional value creation process and the dramatic transition of markets in the past decades has led companies to truly understand the value of their customers which introduced a new ideology, customer's era. (Löytänä & Korhikoski 2014, 21.) The customer era brings new challenges and opportunities for companies. Löytänä & Korhikoski (2014, 21) emphasize that in the customer era, companies must understand that the value creation for the customers is as important, if not more important, than the value creation for business owners, since without customers there are no businesses.

In 2011, research company Forrester Inc. introduced the Age of The Customer -model that has been introduced in Finnish by Löytänä & Korhikoski (2014, 14). The model summarizes the evolution in corporate competitive strategies that have taken place in the recent decades. In each of the eras presented in Figure 5, two main goals can be identified: gaining the strategic competitive advantage and improving company's productivity. In the customer's era, strategic competitive advantage is sought by serving the customer better than the competitor and through the great customer experience increasing customer loyalty. For companies operating under regulation, such like the case company in this study, strategic competitive advantage is not a significant goal. However, improving operations and productivity, increasing customer satisfaction and loyalty, as well as potential cost savings are desirable achievements for every company. Although, these objectives tend to rise on the more central role than a strategic competitive advantage in regulated monopoly businesses.

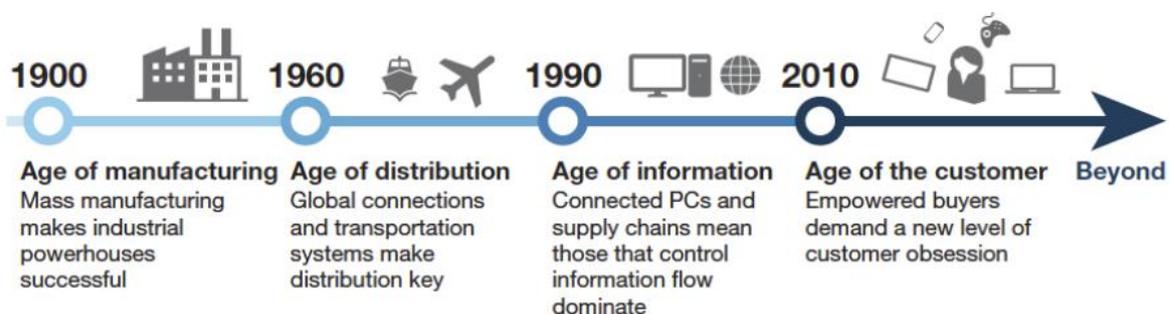


Figure 5. Era of competitive means for companies (Löytänä & Korkiakoski 2014, 15)

3.1 Breaking down the customer experience

The concept of customer experience is relatively new in the business world. Previously, companies' researchers had focused on measuring the quality of service and customer satisfaction rather than the customer experience. The first theories of customer experience were presented by Holbrook & Hirschman (1982) and Babin et al. (1994). The first theories acknowledged that there are experiential aspects to consumption in general. This can be seen as the beginning of customer experience thinking, where customers react to the company and what it has to offer with their feelings. Nowadays, there are several definitions of customer experience in the literature. One of the most recent one is by Löytänä & Korteso (2011, 11) where they define the customer experience as follows: "*Customer experience is the sum of encounters, images and emotions that are formed by the customer based on company's operations and actions.*" The theory emphasizes that the customer experience is the sum of individual interpretations made by people. Therefore, customer experience is not a rational decision so much as an experience that is strongly influenced by emotions and subconscious interpretations. Consequently, it is not entirely possible for companies to influence on the kind of customer experience is formed, but companies can decide the type of experience they pursue to engender in their customers.

Customer experience can also be defined as the internal and subjective response that customers have to any direct or indirect contact with a company. Direct contact is usually initiated by the customer and generally occurs during purchase, use, or service. On the contrary, indirect contact most often involves unplanned encounters between the customer and the company. These encounters occur with company's products, services, or brands, or take the form of word-of-mouth recommendations, criticisms, or advertising. (Meyer & Schwager 2007.) Likewise, Gentile et al. (2007, 397) state that the customer experience is a personal response formed by the interactions between the customer and the company.

To conclude definitions of customer experience, Table 3 collects and summarize all theories used in this research.

Literature source	Definition
Löytänä & Korteso 2011	Customer experience is the sum of encounters, images and emotions that are formed by the customer based on company's operations and actions.
Mayer & Schwager 2007	<i>"Customer experience is the internal and subjective response customers have to any direct or indirect contact with a company"</i> .
Holbrook & Hirschman 1982	Customer experience is the entire event that a consumer encounters while interacting with a certain company. That experience mostly affects the emotions of the customer. The whole experience occurs when the interaction takes place through the stimulation of goods and services consumed.
Gentile et al. 2007	The customer experience is a personal experience that arises when a person interacts with a company or with its product
Kotler et al. 2013	Customer experience is adding value for customers buying products and services through customer participation and connection by managing all aspects of encounters, the so-called touchpoints.

Table 3. Definitions of the Customer Experience

The concept of customer experience is not completely univocal, but despite its ambiguous nature, a lot of similar features can be found from the different definitions. Primarily, customer experience is seen to be a subjective and personal experience formed by the customer's expectations, feelings and perceptions. In this study, customer experience refers to

the holistic customer experience that is formed for the customer as the sum of all emotions, images and encounters with the company's electricity connection processes.

3.2 Formation of customer experience

Formation of customer experience likewise the term of customer experience is a multidimensional construct with many interpretations in literature. This chapter examines the formation of the customer experience from different perspectives and seeks to create a consensus between the different approaches. Verhoef & Lemon (2016) conceptualize the customer experience as customer's journey which the customer goes through during the purchase process. That cycle has multiple touchpoints in different stages of pre-purchase, purchase and post-purchase. Tuulaniemi (2011, 78) views the customer experience formation as a process timeline that separates three stages of pre-experience, core-experience and post-experience. Before the actual purchase, customer already has a prior experience from the company that has formed based on the events outside the actual core-experience, which however are the results of existing need or a desire that a customer has. Touchpoints refers to all places and situations where the customer interacts with the company. (Löytänä & Korteso 2011, 59.) These touchpoints can be either direct encounters between the customer and the company or occur passively when the customer has an indirect contact with the company. All the theories concerning the formation of customer experience are combined and presented in Figure 6. Figure illustrates the customer journey during which all the customer experience is formed in several touchpoints.

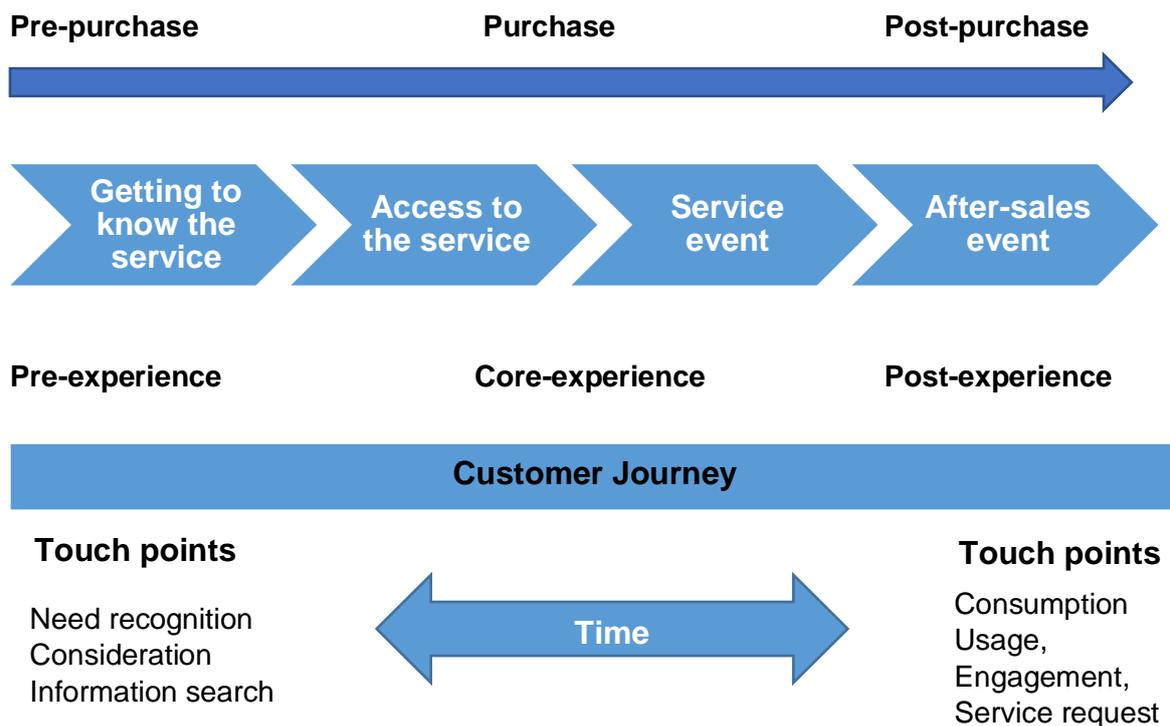


Figure 6. Customer Journey (Tuulaniemi 2011, 79; Löytänä & Korteso 2011, 58)

In addition to previous theories, Verhoef et al. (2009, s. 33) states that the formation of customer experience is always affected by at least some situational and customer variables. Situational variables observe factors that are depending on the occasion of customer encounter. Such factors are for example the communication channel (phone versus the physical premises), location of the customer encounter, seasonal changes, economic situation or cultural factors. Customer variables instead covers the mental state or spirit of the customer and their personality and aspirations. Löytänä & Korteso (2011, 51-55) consider the corresponding situation and customer variables from the company's perspective by dividing the customer experience into three levels in terms of how the company responds to these variables. The three levels are: casual experience, anticipated experience, and derived experience. Casual experience allows little or no attention to variables and therefore the customer experience varies completely based on time, place and especially person. Second level of anticipated experience pays more attention to such variables and follows a pre-planned formula, although does not achieve any added value for the customer like in the third level of derived experience. The derived experience systematically considers the variables, creating time- and place-independent customer experiences that add value to the customer.

All factors and variables mentioned above have affection on the formation of customer experience that itself has multiple dimensions and stages. Companies must ensure and create conditions that allow good customer experience to occur in the first place. Therefore, it is crucial to pay attention to factors and variables that effects the customer experience. Once factors that the company can affect, such as the social environment, price and service encounters are on the top class, remains the role of customers. Customers have individual senses, emotions, lifestyles and social components, and unfortunately, these are primarily beyond the control of the company. However, understanding these dimensions and taking them into considerations while planning the business operations is a significant leap towards the great customer experience.

3.3 Great customer experience

In today's business world everything is moving fast and so are the consumers who are more impatient than ever before (Vaipuro 2019). Digitalization has allowed everything to be available and easy to get access to 24/7, and where the customers are so should be the company. Many companies struggle to generate great customer experiences simply because of the lack of time management. (Koivikko 2018.) It is challenging to be available around the clock and at the same time create emotional and meaningful encounters with customers. Sato's Customer Service Director Tiina Karvinen (2018) states that the customer experience is 80% of emotional feeling which equals trust, sense of security and customers interest towards the company. These emotions are extremely difficult to create for example while customers are communicating with the electronic chatbots that have become very popular among the companies. Still, most of the chatbots available are pre-described bots and interaction with them is a rule-based and pre-programmed dialogues from which the user must select questions and answers from pre-defined options. (Hupli, M 2018.) They can create a great value for the company, but most often they are unable to generate great customer experience that is based on the sense of trust and mutual understanding.

There are several theories that covers the characteristics of a great customer experience, and the one by Shaw (2007, ss. 43-46) states that the foundation of a good customer experience stands on its capability to evoke positive and meaningful feelings in the customer. Instead of faceless elements, brands should pursue to build an emotional connection with the consumer by providing an experience of shared sense, shared values and common benefits. Shaw and Ivens (2007, 40 - 43) represented the seven philosophies of great customer experience that highlights the emotional component and demonstrate how to utilize the great customer experience to increase company's success.

Great Customer Experience are:

1. *A source of long-term competitive advantage:* Successful interaction with the company makes the customer to come back and leading loyalty of the customer.
2. *Created by consistently exceeding customers physical and emotional expectations in areas that drive value:* Company is required to go beyond the customers' expectations that can be either physical expectations like quality or price, or emotional like feelings, thoughts, associations related to a product or communication with a company.
3. *Differentiated by focusing on stimulating planned emotions:* Neglecting customers emotions is the biggest mistake company can make, since the humans make most of their decisions based on their emotional conditions.
4. *Great customer experiences are achieved through good leadership, culture, and people:* One of the greatest assets for a company is enthusiastic and customer-oriented employees who are socially engaged with the customers and creates positive business culture.
5. *Outside-in rather than Inside-out- structure:* Making the internal aspects such as manufacturing more essential than the customers is a form of inside-out structure, and Shaw suggest that the desire and expectations of the customers should be most important corporate standard leading towards outside-in business strategy.
6. *Revenues and cost reduction:* Key aspect is trust and loyalty of the consumers that comes from the great customer experience. Great customer experience makes the customer to want to return and buy more, and that creates stable cash flow and even save of costs.
7. *An embodiment of the brand:* Brand makes a promise in the market, great customer experience delivers that promise.

Shaw and Iven's (2007) seven philosophies studies the good customer experience from the company's point of view and as a source of long-term strategic competitive advantage that consistently exceed customers' physical and emotional expectations. Many theories highlight the emotional aspects in great customer experience, and so does one by Löytänä & Korteso (2011, 43-49) by underlining four situations that are psychologically relevant to the great customer experience and directly connected to emotions.

Support the customers self-image	Great customer experience makes the customer to feel appreciated and capable of making professional decisions as a buyer. Company's job is to recognize customer's interests and thrive to build customers identity with their brand.
Surprise and create unforgettable experiences	Creating a powerful positive experience that involves, for example, joy, happiness, insight, or rejoicing as a strong emotion for the customer. Nothing ordinary or regular can create unforgettable experiences, and the stronger the feelings and images that the client develops, the stronger is also a customer experience; This works both positive and in negative sense.
To be memorable	Ordinariness, mediocrity and unexpectedness tend not to be remembered, so company should invest in creating a positive memorable experience with the customer.
Make the customer to want more	It is natural for a human to seek sources of pleasure. When creating a customer experience that delights, it is natural for the customer to return to seek the same experience again.

Table 4. Great Customer Experience. Löytänä & Kortesuon (2011, 48)

In addition to the emotional aspect of great customer experience, there is also a physical side that plays a significant role. At its simplest, the physical side means a good product that is available, delivered on time and include service and maintenance to create extra value for the customer. Even the most superior product or service alone is not enough to generate a great customer experience, customers simply expect more. The challenge in creating good customer experience is to be able to meet the customer expectations in both physical and emotional level. This means having a great products and service while at the same time, generating strong positive emotions for the customers. (Löytänä & Korkiakoski 2014, 45.)

3.4 Importance of the great customer experience for the company

As mentioned in the previous chapter, great customer experience has many positive effects and advantages for the company. It is important to recognize that the literature review in general identifies the concept of customer experience in free competition and market environment, where companies have a high competition on customers loyalty and trust. The significance of customer experience is easier to determine for a company in a free competitive position. When such company invest in customer experience it often gains more customers, more references and additional sales that creates competitive advantage for the company. (Löytänä & Korkiakoski 2014.) For companies in a monopoly position, the situation is not so simple. Unfortunately, the importance of customer experience for monopoly companies has very limited information in the literature.

As explained in the chapter two, the electricity network business has a monopoly position in Finland, meaning the customer is unable to change its regional electricity supplier. Therefore, the customer is automatically a customer of the network company based on whether they live on the company's network area. What is interesting in terms of this research that studies the current state of customer experience in Lappeenrannan Energia's electricity connection process, is to understand why it is also important to invest in great customer experience in the monopoly position. Such invests does not directly bring any additional customers, nor does a bad customer experience make the customer leave, but there are other benefits. Gerdt & Korkiakoski (2016) points out that a great customer experience can achieve a competitive advantage over other companies, regardless of their competitive position and industry.

Toivakainen (2014) studied the customer experience management in a regulated service business and focused especially to electricity network operations in a Finnish network company. According to Toivakainen (2014), it is rewarding to invest in customer experience in

monopoly business, since the customer experience is a similar strategic factor in a monopoly company as it is in a free competition company. Customer experience is an expression of the brand in a monopoly company, and it helps to develop the industry and company's business operations. The study also highlighted added financial value in terms of cost savings and efficiency in sales, increased customer and employee satisfaction and developed business operations.

Gerdt & Korhonen (2016) point out that the customer experience is a rather new concept in the sale and distribution of electricity. Today when the customer is in the centre of all business decisions, electricity network companies have also understood that a monopoly position does not mean that it is not worth focusing on the customer, and all activities and the service must meet the needs of customers. The case company Lappeenranta Energia has also recognized the importance of customer experience and underlined the authentic customer understanding in their strategic future goals. Customer experience has grown steadily to be one of the main business values, and company has invested in systematic communication, customer engagement with services, and digital presence of all time.

3.5 Customer Experience Management (CEM)

In literature, Customer Experience Management is seen as an ongoing process that must be a part of the business strategy in order to create value. It is a strategy that offers tremendous opportunities for companies since all companies create customer experiences through their operations (Visma 2016). In terms of the customer experience, most successful companies all share one similar feature in their management practices. Companies that succeed to generate great customer experience have a strong commitment and consistency in their customer experience management practices. (Löytänä & Kortesoja 2014, 51.) Concrete benefits of the customer experience management should be acknowledged by the companies while planning their future business strategies.

The aim of the CEM is to influence on customer experience which has a crucial role in consumer's purchase decisions and interaction with the company. Numerous studies confirm that the good customer experience increases customers willingness to invest money to the company. For example, according to the Customer Experience Index by Forbes (2014), 86 percent of the customers would pay more money for a better customer experience. One goal of the CEM is to create exceptional encounters between the company and its customers, and thereby earn the trust and satisfaction of customers. Satisfied customers tend to recommend the company and its products forward due to the positive experience they had. (Visma 2016.) The most important goals of the customer experience management are to

allow the company to deliver the promises made to customers and systematically produce customer experiences that exceed expectations (Löytänä & Korhikoski 2014, 37). Customer experience is an integrated process, and in order to achieve these goals, management must create shared operating models that support all the units in the company towards the common goal of great customer experience.

With the help of CEM, the company is able to determine the customer experience that they wish to produce for their customers (Löytänä & Korteso 2011). The starting points for that are identifying customer needs and providing and designing approachable products and services for the customers (Juuti 2015). Löytänä & Korhikoski (2014, 37) have divided the management of customer experience measures into three phases which are presented in Figure 7.

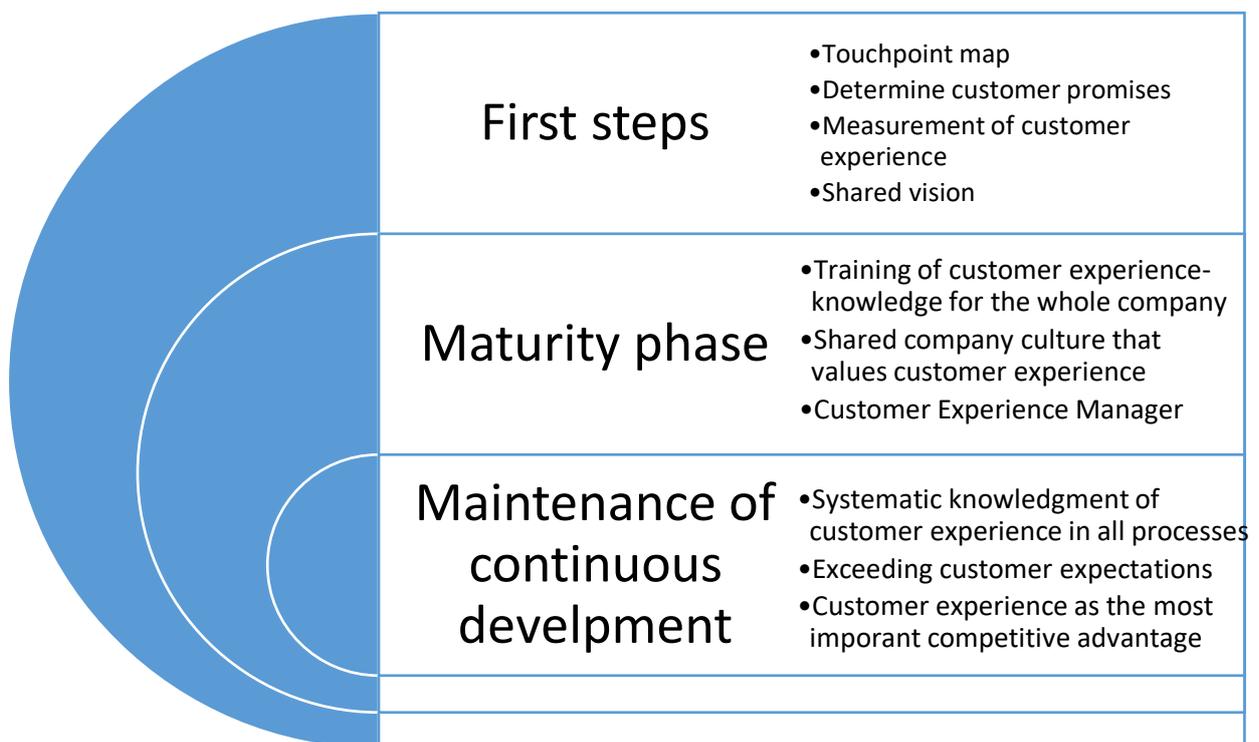


Figure 7. Steps in the customer Experience Management (Löytänä & Korhikoski 2014)

At the beginning when the company is taking its first steps in CEM, company determines customer promises that guides company's internal activities towards great customer experience. Company measures the customer experience, creates touchpoint maps and determine the shared company vision that guides all activities. It takes perseverance to manage

customer experience and often the results cannot be seen immediately but more likely in the long run. In the maturity phase, customer experience is observed in all company's processes and it guides the company's decision-making processes. Main characteristics in this phase are corporate culture that shifts towards customer-oriented approach, added investments to training and increasing of knowledge about customer experience. Companies that have achieved the maturity phase of the CEM have appointed Customer Experience Manager who leads the activities towards the integrated customer experience operations. In the final stage, company should continue to develop because the world and customer behaviour, needs and expectations are constantly changing. Ways to create value for the customer and exceed their expectations must be constantly considered in order to put customer experience as the most important assets in the competition.

Success in Customer Experience Management has many positive advantages for the company, and these benefits according to Löytänä & Korkeasuo (2011, 13) are for example:

- strengthened customer commitment
- increased customer satisfaction
- increased number of recommendations from the customers
- longer customer lifecycle
- raised brand value and image
- committed personnel and management
- decreased number of negative customer feedback
- decreased number of lost customer relationships
- decreased costs of customer acquisition.

Today, the technology is constantly evolving, and digitalisation and new innovations are shaping the service environment. At the same time, the customer's needs and expectations are constantly changing. In order to have successful CEM, company's management must always be on the top of the situation and aim to create meaningful and expectations exceeding customer experiences. Commitment towards the CEM allows the company to win the trust of customers now and in the future. (Juuti 2015.)

3.6 Measuring the customer experience

There are numerous ways to study and measure customer experience. The goal of measurement is to produce useful information to support management and company's decision-making processes. Peter Drucker (Prusak 2010) has stated the following "*Only what gets measured, get managed*", that leads to an interpretation that the measurement of customer experience is a crucial step before company can truly manage the customer experience. Four sub-areas that must be considered while measuring the customer experience are who, what, when, and where the information is asked since that can substantially affect the results (Gerdt & Korhonen (2016, 161). The obtained information should be utilized in process- and product development, and measurement should only focus on areas that has a relevance in development and management of business towards greater success. Still in many companies, this is not the case and numerous of irrelevant "zero-research" are continuously implemented that offer little or not any relevant information to support management in the decision-making. (Löytänä & Korhonen 2014, 138.)

According to Löytänä & Kortesoja (2011, 187) there are two perspectives relating to customer experience measurement:

1. Purely customer experience-related measurements.
2. Measuring the impact of Customer Experience Management.

Löytänä & Kortesoja (2011, 188) also divide the measurement of customer experience into passive and active ways depending on whether the information is obtained by actively asking or studying, or whether the customer provides the information on his or her own initiative. Table 5 collects examples of passive and active ways to measure customer experience. As it can be seen from the table, some measurements are objects of both passive and active methods.

Ways to measure Customer Experience	
Passive	Active
Spontaneous feedback from the customer	Customer satisfaction panels and focus groups inside the company
Feedback form-or boxes in the store	Biometric measurements by the company
Analysis of reclamations	Mystery shoppers hired by the company
Following the social media	Continuous feedback surveys on different channels that are always available
Customer satisfaction surveys and studies	
Analysing the customer encounters	

Table 5. Ways to measure customer experience (Löytänä & Korteso 2011, 189)

In both models by Löytänä & Korkiakoski and Löytänä & Korteso, the fundamental idea and end results are the same regardless of the different approach to view the issue. The theories have similar interest to pursue information that support strategic decision-making processes. Löytänä & Korkiakoski (2014, 136) state that traditional customer satisfaction surveys do not serve the development of the customer experience and therefore, companies must build their own way to increase customer understanding. That should not be outsourced to a research unit because it requires the effort from the entire organization to be prepared and eager to listen the customer, and based on that, develop the business operations. In addition, it requires the courage to engage with the customer through different channels both actively and passively. (Löytänä & Korkiakoski 2014, 136.)

To conclude, there should always be a reason, a clear interest on why something is studied and measured. There are several tools to measure customer experience. Before the company can measure anything, the company should have a clear vision on what questions they seek to find answers to, and how they are planning to utilize the collected data. It is impossible to cover the entire customer relationship with one measurement, and focus should be in the particular customer encounter and its touchpoints. Theoretical background

supports author's choice to focus on measuring the customer experience that has formed between the customer and Technical Customer Service during the electricity connection process. The electricity connection process is a multidimensional entity that in addition to the case company, both the company's own contractor and the customer's own electrical contractor closely participate. It would be difficult to cover all aspects that the customer experiences before they have an electricity connection, and the author chose to focus on touchpoints that are presented in chapter 4.

3.6.1 Net Promoter Score

Net Promoter Score (NPS) is the leading indicator of growth, and in general, experts around the world consider it to be the best measurement tool to survey the customer's experience. It provides a simple and fast solution for customer experience management and predicts business growth (Filenius 2015). The basic idea is to ask the customers "How likely would you recommend the company or service to your friend/family/colleague?". Customers respond with a single value that fits on the scale from 0-10, zero meaning that it is highly unlikely that the customer would recommend the company and ten, respectively, means a highly probable recommendation. Respondents are divided as follows based on their answers (Filenius 2015).

- Promoters (score 9-10), loyal customers who are likely to keep buying and refer to others, increasing the company's growth.
- Passives (score 7-8) satisfied but unenthusiastic customers who are vulnerable to competitive offerings.
- Detractors (score 0-6) are unsatisfied customers who can damage your brand and affect growth through negative word-of-mouth.

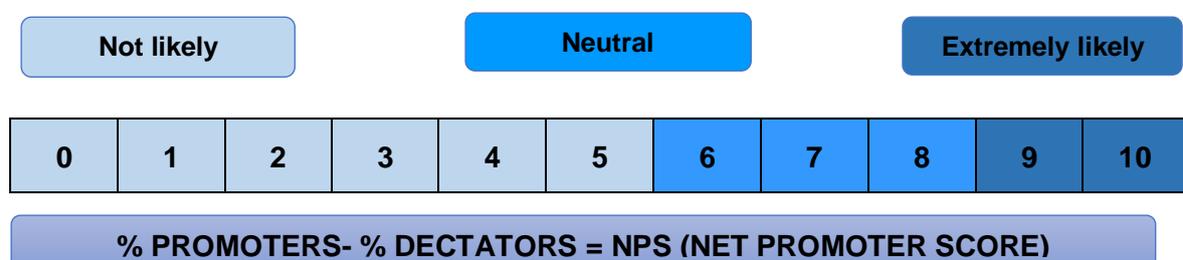


Figure 9. Net Promoter Score. (Satmetrix 2021)

As it is indicated in Figure 9, the Net Promoter Score is calculated by subtracting the percentage of detractors from the percentage of promoters and the given value can range from 0-100 (Satmetrix 2021). The advantages of NPS are that it is straightforward, fast to conduct, and easy to interpret (Löytänä & Korhikoski 2014, 59). The meter is especially useful for a long-term use when the company is researching the development of the customer experience. The disadvantages of the meter are that it does not directly answer the reasons for why the recommendation happens or does not happen (Löytänä & Korhikoski 2014, 62). This problem can be solved, for example, with additional questions or menus attached to the meter that provides more information about the customer's feelings.

3.6.2 Customer Effort Score

Customer Effort Score (CES) is another commonly used metric to determine customer loyalty and happiness. It has very similar principle as the NPS as it likewise is based on one simple question to the customer; How much effort a customer had to put in with a certain interaction with a company. This measurement tool came to exist when companies have come to realise that measuring customer satisfaction is simply not enough anymore. The customer may be satisfied with the product, and yet they still may not be loyal customers of the company. If a customer must put too much effort into an interaction with a company it may cause them to choose a different company in the future. Therefore, companies have started measuring customer effort. (CustomerSure, 2019.)

Measurement of CES has a scale from 1 to 5, where one means interaction was very difficult and five means it was very easy. It is possible to use a wider scale and the question can be edited according to needs of the company. For example, in terms of the case company and this study, the question of CES could be "How much effort did you have to put into placing your order of electricity connection?" (Filenius 2015). The Customer Effort Score can be calculated as shown in Figure 10 by subtracting the percentage of easy interactions from the percentage of difficult interactions.



Figure 10. Customer Effort Score. (Linden 2014)

The most effective way to measure the customer experience is to use NPS and CES meters simultaneously and in a mutually supportive manner. These tools provide information about the customer's effort level and promotion willingness, which can help the company with customer loyalty and long-term engagement. Charts and graphs from the measurement results are often created to support the management to analyse the results. Continuance and systematicity is essential factor in measuring the customer experience and collecting feedback at all touchpoints of the customer journey. Traditional customer satisfaction measurements do not meet the needs of today's customer experience managers. These surveys provide only history-based information on how satisfied customers have been in the past. Today's managers require real-time, more responsive results. (Löytänä & Korteso, 2011,193; Filenius 2015.) The case company also utilize NPS and CEF to measure customer experience. The results of these measurements are regularly analysed and therefore they are not part of this study. As the theory implies, such measurements do not directly offer the reasons for why something is experienced and what affected on that numerical value. The objective of this study is to result in more responsive, descriptive data that can be analysed to determine the customer's individual emotions and experiences towards the electricity connection process.

3.7 Current state analysis of the customer experience

Managing the customer experience and creating a development strategy should initiate with a current state- analysis. At the beginning of improving the company's customer experience, it is necessary to analyse the current state, identify deficiencies, and focus on inclusive knowledge management to find opportunities to develop the organization. (Hensley, J 2021.) The company must have a clear strategy for customer experience planning, metrics for measuring customer experience, and committed management that values the development of customer experience. In the assessment of the current state of customer experience, it is important to understand at which points of contact the customer's experience is formed and what are the customers' expectations at different stages of the customer relationship. Gerdt & Korhikoski (2016) further point out that based on the current state analysis, company should set clear business objectives for the development of the customer experience so that the customer experience does not remain a so-called soft figure. These business objectives ensure that the development of the customer experience results in cost savings and increase in customer satisfaction.

The current state of customer experience can be analysed with the help of touchpoints between the customer and the company (Löytänä & Korteso 2011; Gerdt & Korhikoski 2016). These touchpoints form a path that the customer travel during the customer journey. That path forms a touchpoint map that collects all points where the customer is in contact with the company either directly or indirectly. The map can include markings of which points of contact are most critical to the customer experience as well as what points of contact should be developed from the perspective of the customer experience. (Löytänä & Korteso 2011; Gerdt & Korhikoski 2016). When companies understand the current state, they are able to identify challenges that need to be solved. This understanding translates into knowledge and into inclusive knowledge management inside the company. *“Your present circumstances don’t determine where you can go; they merely determine where you start”* (Qubein, N 2015).

3.8 The importance of customer experience in the monopoly business

This chapter is determent to justify the importance of customer experience in the monopoly position company, and to emphasize the priority of customer experience management in the company’s strategic decisions making processes. The research is studying the current state of customer experience in the monopoly position business, and therefore, it should be explained why it is also crucial to have focus on the customer experience in such business environment. As mentioned in the previous chapter, common assumption is that a company operating in a monopoly position has little need to invest in developing the customer experience as there is no direct connection between the customer experience and the number of customers. Chapter 2 explained the natural monopoly of the electricity network company, where customer experience can often leave in the shadow of other strategically important objects of development. Although, failed customer encounters, ineffective operating manners and poor quality of work can cause both direct and indirect undesired costs to the company. Toivakainen (2014) studied the importance of customer experience management in five natural monopoly business in Finland and the results advocated that it is as important as that for a company operating in competitive markets. Study pointed out many of the concrete positive outcomes that the companies had gained after invested in the customer experience and customer experience management in the long term.

- customer value
- competitive advantages in the industry
- increased brand value
- cost savings
- improved employee's experience
- satisfaction of the stakeholder's
- efficiency of operations
- increased employee satisfaction at work
- economical value for the company

“The significance of the customer experience is similar [to a monopoly company] to what it is with any company. It is short-sighted if a company does not want to develop its own customer experience” (Brand and Customer Experience Manager, Veikkaus.)

Increased positive customer experience allow companies to reach many competitive advantages. Assumption is that the monopoly business does not face competition, but monopoly companies consider competitive advantage on a larger scale than their own industry. Competition is held with representatives of other industries. Toivakainen (2014) presented a metaphor that the increased customer experience is like a snowball effect. Happier employees are more invested which decrease the need for recruitment, also satisfied employees creates better customer encounters which increase the customer experience, eventually, the business operations develop which leads inevitably to more satisfied shareholders. In order to have such invested employees, company must have effective customer experience management strategy. Moreover, studying customer experience in a monopoly business should not be considered any less important as it is in the competitive markets.

3.9 Blue Ocean's Strategy

The Blue Ocean Strategy is a term to describe a market under little competition or barriers standing in the way of innovators, as "empty ocean" of market options and opportunities. Blue Ocean's is a hybrid strategy where company simultaneously pursues differentiation and low cost in the markets. Combination of differentiation and low costs ensures that innovation is not just technology-driven and futuristic, but rather customer driven strategy concerning what really matters to the customers. (Yong, J 2021.)

The study applies Blue Ocean's Four Action's Framework to conclude actions to create value in terms of customer experience. Even though the electricity network business does not directly fall under the market conditions of Blue Ocean due to its unique business environment, strategy is the most suitable one to analyse value creation for the network company. Electricity network company does not have competitors, and in a pure blue ocean, there are no competitors so therefore the company is operating in a blue ocean.

The Four Action's framework by Kim & Mauborgne (2016) of value creation poses four key actions in terms of the case company in this study.

- Delete: Inefficient and unnecessary steps in the process that brings no value.
- Decrease: Inefficient operations and factors that the company should decrease in the process in order to create more value for the customer and increase positive customer experience.
- Improve: Areas that require improvement to gain more strategic value in terms of customer experience.
- Create: New innovative operating models that support the company to create great customer experience.

4 Basis of the empirical research

The theoretical framework explained the concept of customer experience, concept that has several interpretations in literature. In this research, the concept of customer experience is viewed as a holistic entity that has formed as the sum of all emotions, images, and encounters that customer experiences during the delivery process of an electricity connection. This process is the sum of all customer encounters and touchpoints from the very first interaction to the delivered and metered electricity connection. While studying customer experience in the monopoly position company like Lappeenranta Energia, the abnormal business environment should be taken into consideration since it can influence customer experience.

4.1 Research methods

Research part of the thesis has a qualitative nature, since the most valuable data in this case cannot be collected with the quantitative measures. Qualitative research methods are formatted in a manner that further supports revealing the behaviour and perception of a target audit with reference to a particular topic (Hirsijärvi & Hurme 2018, 15). In order to collect valuable data on customer's individual emotions and feeling, demands more open-ended survey questions to truly understand customers experiences and expectations. Author collects data from customer interviews to be analysed and furtherly utilized to recognize areas for development. Therefore, the results of the interviews will be the subject of qualitative analysis.

One of the most typical methods in qualitative research is interview research. Other commonly used qualitative methods are observation and surveys (Hirsijärvi & Hurme 2018, 27). For the purposes of this study, an interview provides the best opportunity to achieve the desired research results. In addition to interviews, as the research progresses, the author has made observations at various stages of the connection process and examined the results of previous customer satisfaction surveys and process development plans. The objective of the study was to form a deep and profound understanding of the current state of customer experience. Therefore, a basic survey would have been simply too restrictive and would not provide opportunities for deeper, more descriptive answers. To summarize, relying on just direct observation and existing survey results would not provide enough qualitative data to form a reliable current state analysis because the phenomenon under study is extensive and would not be adequately addressed with these terms.

Interview is a research method that enables to study the phenomenon interactively. It is also a tool to deepen and refine the respondent's answers to generate more valuable data. In general, interview research methods are categorized based on how structured the questions are and how much the interview is controlled by the interviewer. Different types of interview methods are for example structured or semi-structured interview, open interview, in-depth interview, and thematic interview. The author is applying the thematic interview on this specific research. Thematic interview offers more informal approach to conducting an interview than a fully structured framework. The method relies on semi-structured manners but is more open and leaves more space for the audience to speak up to their minds and emotions. The themes and questions in this study are based on the research topic and research questions. The interviewer, therefore, has a tool to deepen and refine the interviewee's responses and lead the discussion in the desired direction. (Oppariapu, 2021.)

4.2 Customer interviews

The author randomly chose suitable customers to be interviewed for this study. Eventually, 20 contacted customers agreed to participate to this research. Respondents consisted of both consumer and business customers, and they are all left anonymous. Interviews were profound, intense and time consuming, and therefore, 20 participants was the maximum amount that the author was able to include in the planned time frame. Interviews were conducted in October 2021. Customers that fitted the profile to be interviewed for this study had to meet these crucial factors.

- Electricity connection were delivered this year, justified by the fact that the customer has current emotional memory print from the experience.
- Location of the electricity connection was on the zone 1,2 or 2+.
- Electricity connection was a low-voltage connection.



Figure 11. Framework for the thematic interviews

All the interviews followed the framework presented in Figure 11. At some cases, the conversation naturally drifted between the themes, as for example, the customer was eager to comment on theme 3 before fully covering themes 1 and 2. Prior to the interview, respondents received emailed information about the study, its objectives and the implementation of the research. The body of the thematic interview was presented at the beginning of the interview or in advance by email. During the interviews, the author documented the main points from customers' answers and afterward completed the notes. Writing of the interview's material was done with particular care, but not verbatim word for word documentation, as complete word-for-word spelling does not achieve any additional value in terms of this research.

4.3 Existing Customer Satisfaction survey

In the final step in the electricity connection process, randomly selected customers receive satisfaction survey directly from the electrical process control system. The author chose not to base this study on the currently existing survey result since the questions only offer a chance for the customers to provide a numerical value from 1 to 10 on the given questions. Questions in the survey have a lot of similarities with the question that the author planned for the interviews, and the fundamental idea was to receive more in-depth information on the given survey results with the qualitative research method. The survey offers an idea on

what is the scale of customer satisfaction in the given matter, but an interview with a qualitative nature can offer more valuable data on the customer's experience than just a simple numerical value. Therefore, the basis of this study is the thematic customer interviews.

4.4 Data processing and analysis

Analytical and critical thinking skills plays a significant role in data analysis in qualitative studies. Therefore, no qualitative study can be repeated to generate the same results. Methods of the qualitative data analysing used in the research are following.

- Descriptive analysis - What happened

This data analysing method is the starting point of any analytic process, aiming to answer the question of what happened. It does this by ordering, manipulating, and interpreting raw data from various sources to turn it into valuable insights of business which is important to be able to present data in a meaningful way. (Carlson, 2021.)

- Discourse analysis- a method of analysis naturally occurring talk and all types of written text (BRM, 2021 a).

- Grounded theory

This method of qualitative data analysis starts by analysing a specific case in order to formulate a theory. Then, additional cases are examined to see if they contribute to the theory. (BRM, 2021 b.)

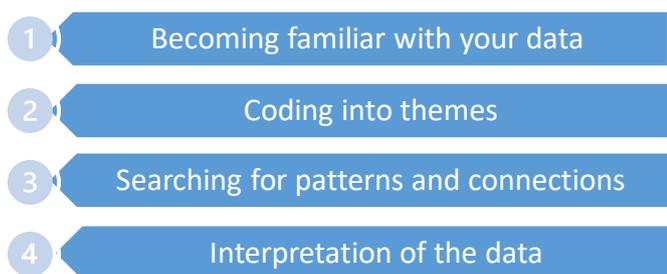


Figure 11. Steps in the qualitative data-analysing process (Intellspot n.d)

After the interviews were conducted, the author read the materials several times to ensure that the material is understood and examined in detail. Careful study of the materials is an important step in the data processing and analysing, since the level of knowledge and understanding data are one of the strongholds of qualitative research methods.

5 Current State Analysis of the Customer Experience in the electricity connection process

5.1 Touchpoint maps

As mentioned before, a touchpoint map helps to identify all the encounters between the customer and the company where the customer experience is forming. A single touchpoint occurs at any time when the customer is in contact with the company before, during, or after the purchase. Touchpoint mapping assists to outline what types of encounters result in customer experience, and how it happens. Moreover, identifying crucial touchpoints is only the first half. In order to improve customer satisfaction, company must ensure that each touchpoint leads to a good customer experience, and that the journey as a whole delivers on customer's expectations. (Survey Monkey 2021.) To be able to perceive the customer experience in the delivery process of the electricity connection, customers are interviewed concerning their individual experiences that has formed at each major touchpoint. The touchpoint map is also a guideline to follow during the customer interviews

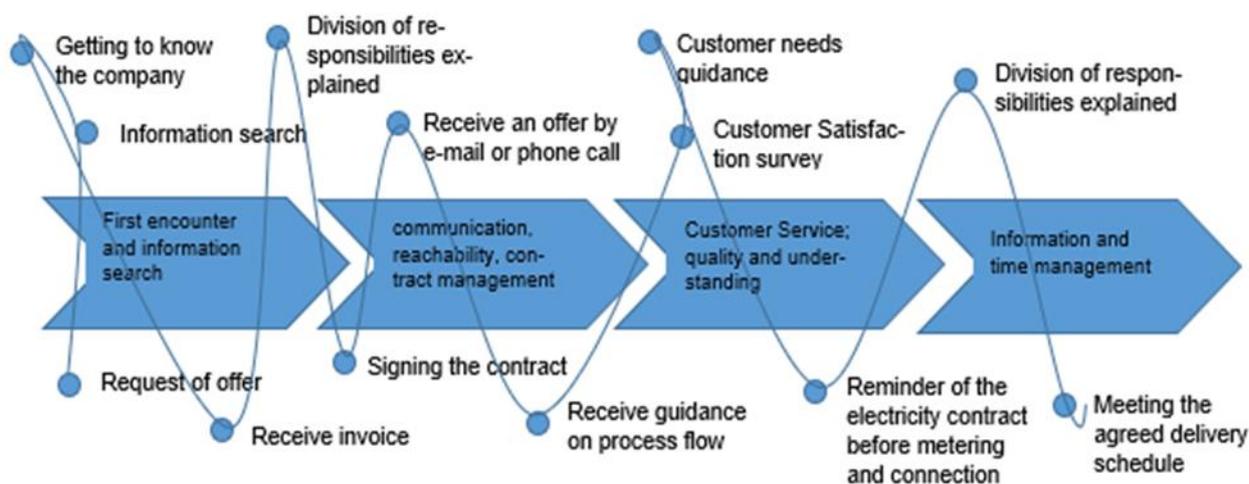


Figure 12. Touchpoint map of the electricity connection- Customer and the Technical Customer Service (Toivakainen 2014; Löytänä & Korteso 2011, 156)

Above, there is the touchpoint map that represents all the major encounters that the customer experiences with the Technical Customer Service during the purchase process of an electricity connection. As explained, the delivery process of electricity connection is not straightforward, since the customer is interacting with his/her own electricity contractor and Lappeenrannan Energia as well as their contractor during the purchase process. The study has main focus on the customer experience formed in the interaction with Lappeenrannan

Energia's Technical Customer Service. However, in order to result applicable data, customer experience that occurs between the customer and network company's contractor shall not be excluded. To be able to understand the entire process that includes the network company and its contractor, the touchpoint map would include also the following steps presented in Figure 13 below.

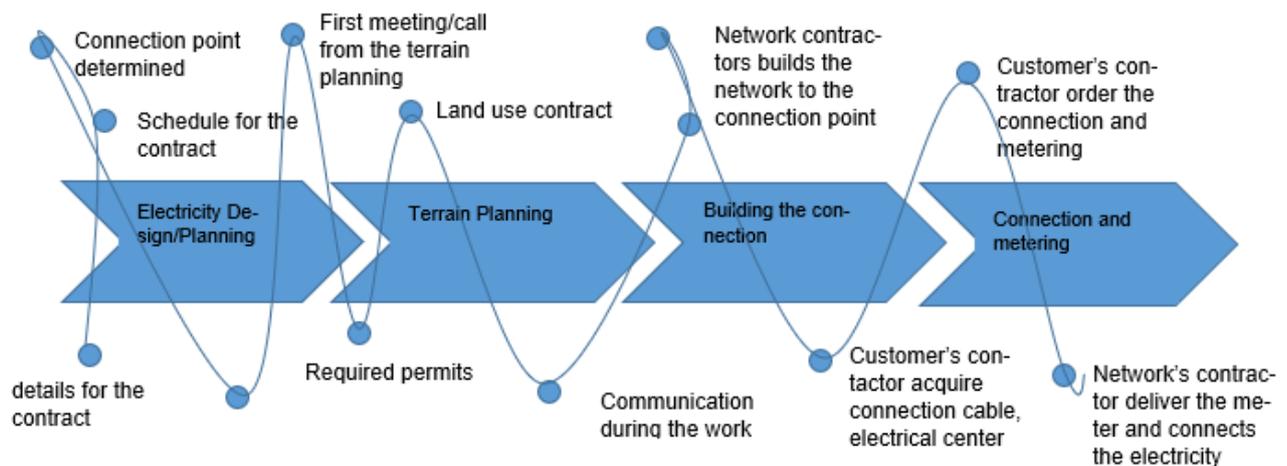


Figure 13. Touchpoint map between the customer and contractors (Toivakainen 2014; Löytänä & Korteso 2011, 156)

Figures 12 and 13 describes the average touchpoints that the customer experiences with Lappeenrannan Energia and its contractors, but sometimes different situations of clients may accumulate more encounters. For example, a delayed construction contract or permit processing also delays the schedule of the connection process and possibly causes more communication between the customer and Lappeenrannan Energia. Such delay has not originated by the actions of the Technical Customer Service, but for the customer, it often appears that way since they are unaware of the division of responsibilities. However, Lappeenrannan Energia is responsible for the actions of its partner contractor. Therefore, the customer experience generated in the touchpoints presented in Figure 13 must be acknowledged in terms of the study results. The customer experience in the electricity connection process is formed as a combined effect of Lappeenrannan Energia's own operations and those of its partners. The following chapters presents the results of the thematic customer interviews that forms a current state analysis of the customer experience.

5.2 Customer experience formation in all the major touchpoints

5.2.1 First encounter and information search

Touchpoints	Features
Information search	Customer gets to know the delivered company and other terms of the purchase process.
First contact	Customer contacts customer service via phone call, online chatbot, email or MinunLiittymä online service. During this research, service desk was closed, but currently it is possible to book a meeting with the customer service person.
Description of the process	Customer gets acquainted with the delivery process of electricity connection
Request of quotation or direct order	Customer leaves a request of quotation or in case they feel they have enough information regarding the process, they directly place an order.

Based on the study results, the very first touchpoint in the delivery process of electricity connection is often information search from company's web pages. The customer is getting acquainted with the company and searches information regarding the delivery process. Customers expect to find accurate information from the terms of the delivery, division of responsibilities, prices, company's contact details and channels. The study confirms that the first encounter can also arise by the direct phone call to the customer service, in case the customer is already aware of which company to contact. Sometimes the encounter was formed with the help of a third party, for example, a neighbour building on an adjacent plot advised on the acquisition of the electricity connection. Interviews confirmed the pre-assumption that the maturity of the interviewed customer are first time subscribers of electricity connection. The reason to assume so is that in general, the purchase of the electricity connection is something that the consumer customers must purchase one or maybe two in their life. Therefore, the procurement process is often unclear to customers due to its unfamiliar

nature. The study resulted in conclusion that majority of the participated customers have uncertainty towards the procurement process. Respondents addressed uncertainty towards the process, and to many it was unclear where to contact in order to acquire the electricity connection. Although, some respondents found it easy and effortless to come acquainted with the delivered company when they searched information online. One of the customers stated that the most important part in formation of customer experience during the first contact is to give a clear overview of the stages and progress of the connection project.

Research brought up that the clarity of web pages, especially the information regarding the procurement of an electricity connection was experienced insufficient. The customers that addressed this problem faced difficulties to find information from company's web page regarding the process. Especially, the price, division of responsibilities and general process description were experienced to be difficult or impossible to find from the site. Some customers all agreed that it was easy to find the contact details and basic information about the process, but for example, most of the respondents experienced it impossible to understand the price table on the web page which is also presented in Table 1 in this study. The price table divides connections based on the locating to zone 1,2,2+ or 3. For example, the zone 1 includes all the connections that have a maximum distance of 200 meters between the connection point and the distribution substation. The respondents highlighted that this tells little to a commoner who does not understand the determination process of the price and would like to know the price before ordering the product. To conclude, customers expect to find more general information regarding the delivery process of electricity connection, since they have no previous experience on such purchase. Customers have interest to determine the actual price before placing an order, and are required to contact the company before the order. Only a few weeks before the interviews, company published a guidebook for the connection customers: "This is how you acquire an electricity connection". In order to interpret the study results, this must be taken into consideration. Customers who had visited the company's website could have found the guidebook that is now available, and that would have possibly reduced the number of respondents who expressed the need for additional information about the procurement process.

In the touchpoint of first contact, interviewed customers divided approximately into three categories based on the first contacting channel which were phone call, e-mail or direct order from the online service. The author was interested to study the customer experience that formed based on the contacting channel and how it had affected on the general experience. The group that chose a phone call as the contacting channel experienced to have received enough information during the call and felt secured to place an order during or

immediately after the call. Maturity of the called customers did the order by themselves in MinunLiittymä online service out of the recommendation from the service person. The reason to recommend placing an order via online service is that the customer is able to include all the attachments and follow the process flow as presented in Figure 14 in the next chapter. Many of the respondents from the group of customers that approached the company via email required more additional information regarding the process. E-mailed customers in general experienced the need to call and further discuss about the process in addition to the first online encounter. What was often left unclear in email where the determination of price and the division of responsibilities during the process. E-mailed customers also felt the need to inquire about the delivery schedule and general information concerning the process flow. The third group of customers was the most aware of the process flow and placed an order directly via MinunLiittymä online service without calling or e-mailing first. These respondents felt to have found enough information directly from the web page or they had previous experience from the electricity connection process. To conclude, the best customer experience occurred among the customers that contacted the company by calling to the customer service. During the call, customers had received enough information to feel secure to place an order. In case of e-mailed customers, many of them called or searched more additional information regarding the process before placing an order.

5.2.2 Communication, reachability and contact management

Touchpoints	Features
Communication and guidance	How customers experienced the communication with the company
Reaching the customer service	Did customers experience it easy and effortless to be able to reach the company
Receiving and signing the connection contract	Was the connection contract and the terms of delivery clear and was it easy and effortless to receive and sign the contract.

In terms of the communication with the company, respondents had mainly positive experiences. Interviewed customers highlighted the fast response time by direct calling and call requests. Instead, in case of email contacts, responses were clearly more divided into those who felt they received quick response, and into customers who felt that the response was

either slightly- or distinctly delayed. Some of the respondents who addressed the dissatisfaction towards the response time by email had found the answer in their spam folder afterwards. The problem in question is unfortunate and not first of its kind. Actually, such inconveniences have occurred many times, and the company is currently unaware of why occasionally their e-mail responses end up into customer's spam file. Unfortunately, the fault can be a cause of customer's own email settings. Although the problem might not be company's fault, it caused decreased customer experience towards the company's response times by e-mail, and therefore requires further investigation. The problem is recognized, and the company is currently trying to solve what causes the problem.

In order to understand the next part, the online service operations are further described in terms of the electricity connection order. In case the customer places an order in MinunLiittymä service as unsigned customer, they will receive a link that guides them to associate the order with their personal user. If the customer does not do that, they are unable to track the process in their personal account. Many of the study respondents had place an order through MinunLiittymä service as unsigned customers and forgot to subsequently associate their user with the subscription. Perceived customer experience at the touchpoint of signing the contract is directly linked to the previously described conditions. At the system level, unregistered customers who had place an order online appear as web subscriber's, and in principle, they receive the contract for signing through this system. However, unregistered customers are unable to track the process online or sign the contract in online service. This is unless they attach the order afterward to the user via the link, or the customer service person does it for them. For the customer, attachment is only possible via the link provided with the order confirmation, and many respondents forgot to do that and were unable to find the link afterwards. Customers felt confusion, since they received an email that the contract is available for signing but could not find it anywhere. These customers had to call or email to the customer service, and this grievance led to a deteriorating customer experience in this touchpoint.

What was interesting based on customer interviews, the touchpoint of contract signing resulted both positive and negative customer experience. Customers experienced it positive to be able to sign the contract electronically either by VismaSign or through MinunLiittymä service, but also negative customer experience occurred in this touchpoint. Majority of the customers found it effective and effortless, but unregistered customers that had not attached the order to the user found it inconvenient as they had to reconnect the customer service and find out why they are unable to sign the contract. Two of the respondents expressed dissatisfaction, as it was not possible to sign the contract with OmaSäästöpankki

identifier via the MinunLiittymä service. Although, customers in question were able to sign the contract in VismaSign with the OmaSäästöpankki bank identifier. To conclude, customers in general experienced it is easy to reach the company, and fast response time resulted in positive customer experience. Technical problems in emailed responses caused decreased customer experience in case of some respondents. Contract signing electronically is experienced extremely positive, but some inoperative functions concerning the online service exist causing decreased customer experience in contract signing.

5.2.3 Quality of the customer service and level of the customer understanding

Touchpoints	Features
Professionalism	The level of professionalism in the customer service
Information and communication	Accurate, understandable and clear information from the customer service
Friendliness and customer understanding	The quality of the service, the customer experience that generated based on the customer service

For the most part, customers were pleased by the service they had received from the Technical Customer Service. The respondents experienced the service to be personal and professional. Especially the phone service received positive feedback due to its effortless nature, and customers felt it to be convenient way to do business with Lappeenranta Energia. In terms of the study, author survey how many of the respondents felt it inconvenient to do business on the phone. For the time being and the covid19 situation, physical service desk is closed. Customers can only contact the company via online channels or calling the customer service. Only one of the respondents would have hoped to be able to do business on the service desk. Currently it is possible to book an appointment to meet the service specialist at the service desk, but this is not expected to rise much popularity among the connection customers, at least based on the results of this study.

The quality of the customer service received mostly positive feedback. Respondents described the service as friendly, professional and understanding. Even though the feedback was mostly positive, few respondents felt they did not receive enough information and faced confusion at some point of the process. These customers stated that the information was

either not accurate, understandable or clear enough, especially this came up among the customers who had approached the company via email. These customers had difficulties to perceive the timeline and felt the need to receive more information about the future steps in the process. Customers to whom the network company business was completely foreign reported that the terms and conditions of connection were difficult to interpret. These customers hoped that the professional jargon would be left at minimum, and the conditions and terms are perceived more suitable for the commoner to understand. To conclude, feedback from the customers were mainly positive and customers experienced good quality of service, but some had hoped more accurate and clear coverage of the process flow and division of responsibilities from the service person. Service received most positive feedback when the customer and the service person encountered on the phone, and the need for the physical meetings did not arise among the customers in general.

5.2.4 Information and time management

Touchpoints	Features
Information during the process	Customer receives an accurate information to support the delivery process and order
Division of responsibilities	Clarity of the division of responsibilities during the connection process
Meeting the agreed schedule	Company delivers the electricity connection on schedule to the agreed connection point

After the customer has ordered the electricity connection, the customer service representative forward the subscription to the electrical design. As the process map indicates, at this point the electricity connection goes through possible permits and terrain planning. Some customers wish to be present when the terrain designer arrives at the site. This step may take time, and it is important to explain that to the customer. Respondents who had to wait for the design, some were surprised that it can take that long. It was difficult to draw general conclusion concerning the customer experience at the touchpoint of information, since the situations of the connection points varied considerably. This led to very differentiative feelings and experiences about these touchpoints. Customer interviews revealed that the general knowledge towards the delivery process of electricity connection varies extensively among the customers. Respondents separated into two categories, those which knew the

process and understood the responsibilities of the various cooperative parties, namely Lappeenranta Energia Oy, the contractor and the subcontractor, and into those who had no preconception towards the process at all. Especially the knowledge of the first builders were usually lower. For example, interviews revealed that some customers assumed that the connection cable was part of the delivery, because the connection cable was marked in the contract. Some customers assumed that the connection price covers all the construction work, even the one done on the side of the property. All the details are explained in the terms of network connection, but not all the respondents were able to understand or even find them, because they were not part of the contract. Although, the customers who had talked with the customer service directly had clearer understanding of the process. Moreover, the division of responsibilities was clearly the area where customer experience was decreased, and knowledge varied extensively among the customers. Positively, the company has published the previously mentioned guidebook, which includes a table where customers can check the responsibilities for building the electricity connection and it is also presented in this presentation in Table 2. As a result, it is hoped that the division of responsibilities will be clearer for customers in the future, but also for the customer's constructors. Considering the contractors, some customers pointed out that there was unclear information from their contractors concerning the project. This led into an interpretation that even some of the local electricity contractors have shortcoming of understanding the electricity connection process.

The author finds out during the research that Lappeenranta Energia has once organized events where local electricity contractor were invited. In these events, cooperative parties jointly reviewed operating models and the division of responsibilities at different stages of the process. The need for the similar activity can be identified based on the customer interviews, since the uncertainty and misleading information from the constructor's part directly reflects as a poor customer experience towards the whole connection process. This is because the customer often perceives the network company and contractors as a one single entity. Few respondents stated that while they were in contact with the company's contractor, they first assumed that they were employees of the network company. The customer does not always have a clear picture of when he is dealing with a network company, and when, for example, an electrical contractor. This contributes the challenges of customer experience management process and shows how the creation of a customer experience is the sum of all encounters with the committed parties.

Regarding the touchpoint of the delivery schedule, in principle, the respondents were satisfied, and the customer experience was positive. Among the respondents there were two customers who initially considered to have had the electricity connected later than the delivery time specified in the contract. After the discussions, the author eventually revealed the cause, and it was not due to the delay on the delivery from Lappeenranta Energia. In these cases, the delay was due to either a missing electricity contract or a late metering request on the contractor's side. Once again, it all falls back to the general uncertainty towards the connection process and division of responsibilities. The customers expected to have the electricity connected by the time that was mentioned on the contract. That time indicates the timeframe on which the network company is responsible to have the networks ready for the customer's electricity connection. Before the connection, customer must have the electricity connection and the request for the metering from the contractor should be delivered and handled. That was left unclear in these cases, and even though the delay was due to either customer's or the contractor's side, it still led to decreased customer experience in this touchpoint.

All the respondents were asked that did they know what was required in order to have the electricity connected in addition to the connection contract. Especially, the author was interested to study how many customers had known that the electricity contract should be done before the metering. Third of the respondents had received this information via email from the customer service and were able to create the contract on time. The other third had to call to the customer service and find out why the process is not going forward and what it takes to get the meter installed. Usually, these customers belong into the group of cases where the metering request was not even received yet from the own contractor. The last group heard the requirements from their contractor who had called to the customer service to inquire about the process flow. The results indicate that the information and its delivery to the customer was incomplete in some cases, and such shortcoming in the information flow can cause a delay on the electricity metering process and reflect as a negative customer experience towards the network company.

Based on the study results, web ordered customers experienced the workflow monitoring service that operated in real-time to be useful and informative. Tracking is available at the MinunLittymä service for the registered customers whose order is connected to the user account. The reasons to direct customers to place an order online is due to its effectiveness and monitoring operations. Online service makes ordering and tracking easier for the customer and speeds up the information flow between the company, contractors and the customers. Figure 14 illustrates the tracking system in online service available for the registered and associated customers.

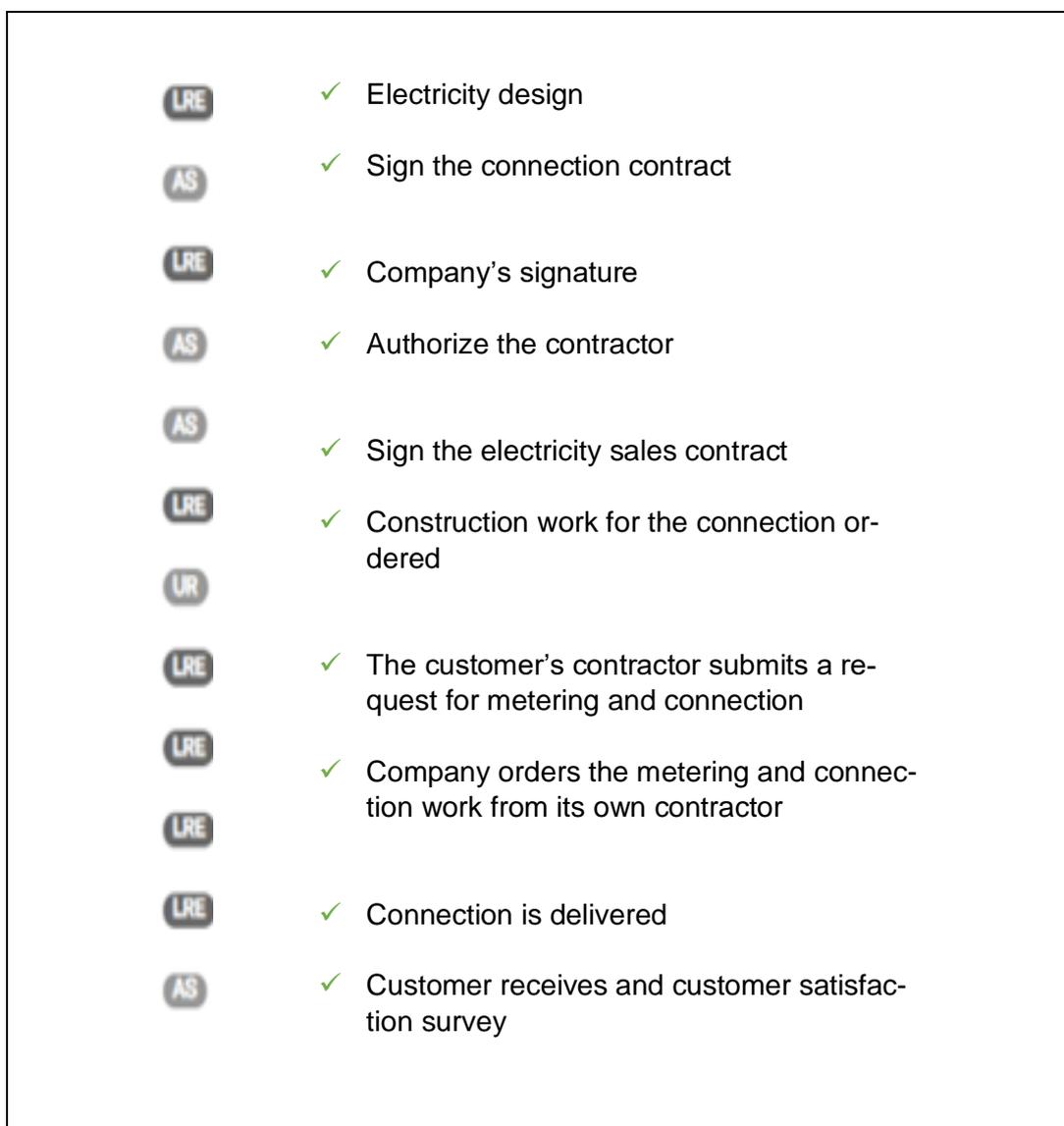


Figure 14. Tracking of the process flow (Lappeenrannan Energia Oy 2021c)

5.3 Crucial touchpoints between the customer and constructors

Touchpoints	Features
Communication during the work	Customer requires more information on the process regarding the responsibilities of the contractors and the process flow.
Customer's contractors order the connection and metering	Customer's contractor registers to Ura-koitsijaOnline service and submits the request for the metering and connection of electricity.
Network's contractors deliver the meter and connects the electricity connection	Customer Service process the request, make sure all the attachments are included and forwards the metering and connection to the network contractor.

As mentioned before, the encounters that, from Lappeenrannan Energia's point of view, take place between the customer and a third-party contractor, the customer easily perceives encounters between the customer and the network company. Therefore, it is important to include touchpoints where the customer experience is formed based on the actions of partner companies. For example, the electricity meter is installed by the company's cooperative contractor, and interviews revealed that many of the customers did not know that they were not dealing with the network company at this touchpoint.

The meter installation is a phase where the customer expects to have connection available to use and is often the first and only physical appearance that the customer has from the company. The final user expects to have the electricity available and ready to be used as fast as possible. If there are problems or delays at this point, or the customer is unaware of the schedule, it will have a negative impact on the customer experience. During the conversations with customers, some respondents admitted they had felt that the network company is the fault for the delay. These customers knew that their contractor had delivered the metering request, but what they did not know was that the metering request had been sent back to the contractor to be refilled. Lappeenrannan Energia has specific requirements for the metering request, and often the contractor had delivered inadequate request that were sent back to be filled. That is not only a fault of the contractors, since the Ura-koitsijaOnline

is insufficient in terms of required information and guidance for the contractors. The company is aware of that flaw and is currently improving this service. Moreover, it all comes back to the unawareness of the division of responsibilities and misleading communication between each committed party that causes the customers to get an expression that the delivery is delayed. In reality, customer's contractor is either delivered inadequate metering request that require further complement or have not supplied the request at all. These customers express the dissatisfaction towards the network company, whom they assume to be the reason for delay. Customers who participated on the interviews had experienced these situations and had called to the Technical Customer Service to inquire about the delivery. It had only become clear to them that the delay of the delivery was due to the inadequate actions of their own contractor, or at some case, the missing electricity contract. It is unfortunate that these situations often cause negative customer experience towards the network company, although are caused by the action of other committed parties.

When the metering request is admitted by the network company, company's contractors deliver the meter and connects the electricity connection. This is the last touchpoint between the customer and the company, and often the only time when the customer physically meets a representative of the connection process. Therefore, it is important to generate positive customer experience so that the customer is left with a good feeling towards the company and its contractors. Respondents in general addressed positive experience towards the metering situation. Only one of the respondents was clearly not pleased, and it was because he had hoped to be present when the person comes to install the meter to his house. Respondent did not receive information concerning the agreed metering date and felt he should be informed by the network company.

The general approach is that the customer's contractor and the network company's contractor agree on the time of the meter installation. Customer is depending on the own contractor to inform them about the agreed metering schedule, and generally this did not arise as a problem during the interviews. Most of the respondents had clear idea on the agreed metering and connection date, and to those who had not known that did not express dissatisfaction towards the process. Therefore, it can be expected that the communication between customer's contractor and the customer is working regarding on this matter.

6 Identified problem areas and development needs

The customer interviews resulted in the current state analysis of the customer experience in the electricity connection process. Based on the interview results, author identified areas that require development in terms of the customer experience. The current problems in the electricity connection process are listed below.

- The customer is unaware of the procurement process of the electricity connection.
- The customer does not know or is unaware of that not all the committed parties involved in the process are personnel of the Lappeenranta Energia.
- The customer does not understand who is responsible for the different aspects of the process.
- The customer meets difficulties while using the electrical service channels.
- Based on the communication between the customer and the network company, some steps in the process are left unclear for the consumer.
- Customer feels they have not found enough information regarding the process.

6.1 Unawareness

Based on the interviews it is fair to state that the procurement process of an electricity connection is not familiar to most of the connection clients. As mentioned before, most of the people goes through the process only once in a lifetime, and therefore it could not be expected that the customers are familiar with the process. Company is constantly developing its web pages to be more informative, since nowadays most of the customer encounters takes place online. Study revealed that in many cases, the website is the first touchpoint between the customer and the company. Therefore, clarity and user friendliness of the web page should be considered based on the study results. Results confirm that in case the information was on the web page, it was difficult to find without the help of the service person. Since the company's web page is often the first place where customer experience starts to form, further attention should be paid towards the web pages in terms of the electricity connection process. It is also important to emphasise the meaning of communication, and the customer service plays a major role in the formation of customer understanding towards the procurement process. In case of customers who places an order online and never reach out for the company it is very difficult to direct information that will reach the customer. The online service is there to help to reach these customers, and customers can

track the process while signed in the MinunLiittymä. The customers who do not use online service should be reached out in other ways. To conclude, the problem is that the customer is unaware of the procurement process of the electricity connection. To solve this problem, the company could consider including general information regarding the process flow and future steps in the confirmation of order via email to all the connection customers. This way they could reach out to all the ordered customer no matter are they online users or not. Also, company's web pages regarding the electricity connection process must be critically reviews and improved in terms of the user friendliness and information search.

6.2 Committed parties

It is important to make sure the customer has a clear vision of the committed parties involved in the process. Negative encounters with other committed parties tend to reflect towards the networks company. Because the client's own contractor is essential part of the process, it would be extremely important to provide access to all the information required. This was also the case for several customers, who told that their contractor was confused about the current operating model and had met difficulties during the submission of metering request in UrakoitsijaOnline service. This service is currently under the development process to support the contractor during the submission of the metering request. Inadequate information and support in UrakoitsijaOnline directly reflected towards decreased customer experience and caused delays in the process. The service must be improved to serve the contractors and results in effective operating manners that supports customer experience formation. Especially, contractors expect to find information of what the metering request should include, and the expected processing time of the request.

As mentioned before, Lappeenrannan Energia has once organized events to which local electricity contractors were invited. In the events, company and the local contractors jointly reviewed operating models and the division of responsibilities at different stages of the process. Similar activities could increase the understanding between the committed parties, and this will reflect as good customer service towards the customer. When all the operative parties are aware of the process flow, they can support customer's during the process, and this will reflect positive experience towards the connection process. During the interviews, the guidebook of electricity connection was not published and Table 2 that illustrates the division of responsibilities between the committed parties was not available for customers. This table is extremely informative and easy to understand, and based on the study results, necessary improvement for the customers to be able to understand the process.

6.3 Division of responsibilities

As it came clear during the interviews, the division of responsibilities was not clear to many of the customers in the beginning of the process. Part of the respondents had general idea of the process and the division of responsibilities, but some customers mentioned that before the first encounter, they had no idea on the process flow, or the committed parties involved. For example, before contacting the customer service, there were customers who assumed the connection cable and electrical work on the property are part of the connection price, which is not the case. This adds the challenges for the connection sales and the customer service to be able to generate a clear vision on the process flow and customer's responsibilities. Recently published guidebook includes a table that explains the division of responsibilities, and can help customers, contractors as well as the network company during the process. External communication from the company's side should be raised to a significant role in formation of customer understanding, and company should continue to invest in more informative external communication regarding the connection process. Cooperation with the local contractors would also increase general understanding of the division of responsibilities, since it came up from the customer's side that their contractors were not completely aware of their responsibilities or the process flow. Moreover, the guidebook is not only a great improvement in customer's point of view, but also serves the local contractors during the connection process.

6.4 Service channels

As mentioned before, some of the respondents had faced difficulties while using the company's online services. Even though the online services collected mainly positive customer feedback, some users had picked up inefficient features concerning the online order. Respondents that had place an order through MinunLiittymä as unregistered customers and forgot to subsequently associate their user with their subscription were many among the respondents. That played a major role in the perceived customer experience at this touchpoint. The biggest problem here was that the customer is unable to sign the contract through the service or track the process flow. Attachment of the order to the customer's user is possible via the link provided with the order confirmation, and many respondents were unable to find this link afterward. Customer service can later connect the order under the customer's user, if the customer is registered user and have placed the order online. In case of customers who had called to the customer service and the service representative did the order for the customer directly to the system, it is not possible to link the user and the order afterwards. Even though this only came up from one respondent, it can be assumed that

there are many similar customers among the orders. Online service should be improved to allow to attach any order under the customer's user at any time of the process. It should be possible to attach the customer order under the user even if the order is not done in web by the customer. To conclude, if the company has a desire to target customers to online services to place an order, they must secure the proper functionality of the services. At best, online services increase customer satisfaction, but malfunctioning systems cause confusion for customers and result in poor customer experience.

6.5 Process flow

Although the maturity of customers addressed positive experience towards the quality of customer service, some respondents would have required more information regarding on the process flow. This can be difficult for the service person to observe, since often the customers express to have understood everything and only later in the process, they detect that something was misunderstood or left uncovered. Registered customers who use MinunLiittymä service can track the process flow, and those customers were clearly more pleased with the information regarding on the process flow. Company should invest in reaching all the customers and include information regarding the future steps in the process. For example, all the customers could receive additional information about the process flow as they receive the confirmation of order by email. With the help of the process map created for this research, company could create a guideline to be published that would help customers to understand the process flow. Automated notifications are already used in the process, and these should be considered to utilize for example to remind the customers to make the electricity contract before the metering. Currently, if the customer service person mentions this during the first contact, most often the customer has forgot this when the time of the connection is close. The customer service must check separately whether the customer has been reminded of the electricity contract when the metering request arrives, and the possibility to automate this directly from the service should be seriously considered. This would speed up the connection and metering of the final connection in many cases and increase positive customer experience towards the connection process. To conclude, customers express general uncertainty towards the process, and a process map could help customers to understand the process flow. The process map could be a part of the web pages as it is presented in the MinunLiittymä, since that way also the non-online users could benefit from that information.

6.6 Information and communication

Research brought up that the customers experienced a lack of information in the online channels and sometimes felt that they had not received enough information to be able to place an order without contacting the customer service first. Sometimes the lack of information can be a cause of a deeper problem, the problem that the information is there but it is too difficult for the customer to understand or find. For example, there is information on the company's website, but customers may not find the information easily, or they do not understand it. To be able to place an order in the online service, the customer is required to include information like size of the electricity connection, location and planned connection point. This caused uncertainty in the case of some customers since they assumed the network company would provide the information regarding the size of the connection. The network company does not define the size of the connection for the customer, instead the customer's own electricity contractor calculates the need and determines the size. Part of the interviewed customers said they would had placed an order online but had to call customer service in order to find out the size to be ordered. Some of them were surprised to find out that this was not under responsibility of the network company and hoped that it would be explained in the ordering process. This is an example on how the lack of information and communication increase the unnecessary contacts from the customer's side, and if more information would be available for the customers, it could decrease the number of contacts leaving more time for other activities.

Based on the study, uncertainty towards the connection price exists, and currently it is almost impossible for the customer to know the price without contacting the customer service. One improvement idea was to include a connection pricing map on the webpage, where consumers can type the address of the connection and get the price based on the location. Illustrative model is presented in Figure 15 below. Idea would require further investigation on how it could be implemented and what it would require in order to be functional and useful tool for the customers. Some network companies already use this type of maps that help customers to find out the price without calling to the customer service.



Type the address here

Figure 15. Model of the pricing map

6.7 Strategic profile

To conclude this chapter, a strategy profile presented in Table 5 is created according to the Blue Ocean's strategy by Kim & Mauborgnen (2016) and their Four Actions Framework. Framework for the value creation was also introduced in the theory part of the thesis. The strategic profile illustrates the current situation of the organization in terms of functionality and ineffectiveness of the operating policies. Based on the study results, essential actions are divided into four different categories whether they are areas to be improved, something to be created, decreased or completely deleted from the process.

<p style="text-align: center;">Improve</p> <p>Information and communication</p> <p>Information flow between the committed parties</p> <p>Online service channels</p> <p>Webpages regarding the connection process</p> <p>Customer Experience Management</p>	<p style="text-align: center;">Create</p> <p>Clear materials for the customers, contractors as well as the employees</p> <p>More effective measurement tools to measure customer experience</p> <p>Cooperation with the local contractors</p> <p>Common guidelines for contractors</p>
<p style="text-align: center;">Decrease</p> <p>Uncertainty of the customers</p> <p>Variations in the operating models</p>	<p style="text-align: center;">Delete</p> <p>Inefficient operating manners</p> <p>Technical malfunctions in the service channels</p> <p>Bottlenecks</p>

Table 5. Strategic profile of the organization (Adapted by Kim & Mauborgen 2016; Linden 2014)

In order to gain strategic advantages like the ones listed in the chapter 3.8, company must have a clear vision of the current state of the customer experience and create a long-term customer experience management program. Study identified the critical touchpoints where the most positive and negative customer experience is formed and based on that, listed the areas for development and improvement. This study leaves room for further investigation and as a continuum, company should create a strategic customer experience management plan which would support the company to achieve all the benefits from the great customer experience in the future.

7 Summary and evaluation of the study

The purpose of the study was to produce a current state analysis of the customer experience using qualitative research methods. The qualitative customer interview research helps to understand customer expectations and reasons behind the customers particular activities. In order to result in valuable data, qualitative research was the only method that can provide information on customers individual emotions and feelings. The study resulted in valuable information on customer's experience in Lappeenranta Energia's electricity connection process. Based on the collected data, author was able to identify the existing problem areas and produce development ideas to improve the process. The objectives of the study were successful, and the research questions identified at the beginning of the study were answered as the work progressed. The success of the research can be also assessed in terms of a scientific point of view, the target organization point of view and from the researcher's own experience. When evaluating the results of the study from a scientific point of view, the validity and reliability of the study must be considered. (Olkkonen 1994, 38-39.)

Reliability describes the reliability and reproducibility of a study. The reliability of a study is high if, when repeated, the exact same study would obtain the same results. In assessing the validity of the research, consideration must be paid whether the research measures that which it was intended to measure or how truthful the study results are. In other words, does the research instrument allow to reach the desired study objective. Credible material, a reliable analysis process and reliable presentation of results, as well as the researcher's own competence in the topic, have a significant impact on the reliability and validity of the research. (Olkkonen 1994, 38-39.) For this study, the level of reliability and validity is considered to be on a good level. The research instrument, a qualitative method allowed the study to result useful data in terms of the customer experience. The study was able to find answer on the given research questions and they were presented credibly and easily interpretable by its target audience. Although the results of the study have been collected from a relatively small audience, reproducibility is on a high level based on the unique business environment the company is operating. Although the author interviewed a small group of customers, direct observations collected by working in the company allow to state that the similar experiences are repeated among the customers, and the results are in many ways predictable on author's behalf. It is entirely possible that by interviewing completely different clients, the study would have produced different results, because as stated in the theoretical part, the customer experience is the sum of an individual's own feelings and expectations and we are all different. However, this does not eliminate the fact that the data collected based on

the experiences of these target customers succeeded in creating valuable information for the company about the experiences of its customers.

8 Conclusions

The purpose of the study was to examine the current state of the customer experience in Lappeenranta Energia's electricity connection process. Research had main focus on the interface between Lappeenranta Energia's Technical Customer Service and the customer, but touchpoints between the contractors and the customer in the value creation process were not excluded. The structure of the study consisted the theoretical and the empirical part, on the basis of which aimed to find answer to the research questions. The theoretical part of the work consisted of a literature review which introduced the significant concepts in terms of the study. The empirical part was a qualitative research implemented by customer interviews. Once the theoretical part was found a base for the concept of customer experience and its importance in terms of the company's operations, natural continuum was to find out the current state of customer experience in case company's processes. Based on the results, areas for development were identified and illustrated in the form of a four-field strategic framework.

The objectives of the study were successfully met, and the research questions identified at the beginning of the study were answered as the work progressed. The main findings of the theoretical chapters are related to the concept of customer experience, value creation and the importance of customer experience management. It came to be known that there are no single established concept of customer experience in the literature. Theory covered the business environment of the regulated electricity network business and justified the importance of customer experience management in the monopoly business. Theory was able to determine concrete strategic advantages that are the result of invested customer experience management practises. It was interesting to find out that there was very little research about the topic, and the topic definitely has a room for the further research.

Empirical part and the customer Interviews aimed to conclude a clear vision of the current state of customer experience in order to recognize the areas for development in future. The most important findings based on the interviews was to be able to recognize touchpoints were the most positive and negative customer experience occurs during customer's journey, and why it happens. The most positive touchpoints were the easy interaction with the company at different stages of the process, the benefits of electronic channels as well as the quality of customer service. Touchpoints where the most negative customer experience had occurred were related to the unawareness of the division of responsibilities, lack of information in the online channels to support the ordering process and the irregularities of the electronic services. It came clear that the company cannot pay attention only to what is

being done internally, since the actions of cooperative parties' effect on customer experience. It is possible that the only party that the customer meets in person during the connection process is from a partner company and not from Lappeenrannan Energia. Therefore, the cooperation and communication flow stand in a crucial role in terms of customer experience formation.

Company should develop processes at the strategic level through the strategic four-actions framework defined in the work so that future operational changes support the management towards the great customer experience. Based on the theory part of the thesis, it is crucial to focus on customer experience in the monopoly business, and Lappeenrannan Energia can gain many positive advantages by applying the value creation for customers. Improved employee's experience, efficient operation models, increased brand value and customer value are desirable achievements that the company can reach by applying customer experience management in the strategic level. In the future, the company must take a closer look at the development needs identified in this work in order to eliminate problem areas from the processes and create an even better customer experience.

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Appendix A: Framework for customer interviews

Theme 1- First Encounter and Information Search

- Was it easy to find Lappeenranta Energia, contact details, contacting channels, etc?
- Was the information regarding the delivery of new electricity connection available and easy to be found?
- Did you receive enough information and support in order to place an order?
- Did you find information regarding the price?
- Did you feel that more information and support were needed in order to place an order?

Theme 2- Communication, Reachability and Contact Management

- Where the communication and reaching the customer service easy and effortless?
- Did you receive an answer in the reasonable time for questions?
- Was it effortless to sign the connection contract?

Theme 3- Quality of the Customer Service and Customer Understanding

- Where the customer service friendly and professional?
- Did the service specialist offer supportive and accurate information?
- What type of customer experience you perceived during the service encounters?

Theme 4- Information and Time Management

- Was the communication from the company clear and informative?
- Did you feel that you got accurate information to support the delivery process and order?
- Was it clear how the division of responsibilities between each committed party was settled?
- Where the company able to meet the agreed delivery schedule?

Theme 5- Free words from the customer

- What would you wish to be developed in the future?