

**Value creation and co-creation:
Organisational approach to online service innovation**

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Bachelor's thesis
November 2015
School of Business, Global Business Management
Degree Programme in International Business

Author(s) Vesterinen, Opri	Type of publication Bachelor's thesis	Date November 2016 Language of publication: English
	Number of pages 57	Permission for web publication: X
Title of publication Value creation and co-creation: Organisational approach to online service innovation		
Degree programme Degree Programme of International Business		
Supervisor(s) Kujala, Irene		
Assigned by		
Abstract <p>The objective of this thesis was to assist the case company to identify value propositions and co-creation possibilities in the context of the digital environment. Marketing research in value creation has traditionally focused on the goods perspective where the organization is seen as the value creator. Shift in marketing thinking has moved the focus to service logic which sees the customer as a value creator. Therefore, an organization can offer value propositions which the customer can later turn into value. Despite the interest in value creation, there are only a few studies on how value creation emerges and how it can be managed.</p> <p>The approach in the present study was qualitative. The primary data was collected by conducting two in-depth interviews. The interviewees were in an operational role in the case company and they had academic and practical experience in online service development so that they could provide insight into the company's value creation processes.</p> <p>The results showed that the case company relied on financial, strategic and functional value propositions. The co-creation process rose from the organization, which indicated that even though the customers were part of the co-creation processes, the main ideas for innovation emerged from inside of the case company. This suggests that the case company puts significance on resource-based innovation and less weight on co-creation and development of the service. Recommendations were given to the case company based on the conclusion on the co-creation and value proposition possibilities. Although the results were limited to the case company, the theoretical framework could be used in other settings.</p>		
Keywords/tags (subjects) Value creation, co-creation, value proposition		
Miscellaneous		

Tekijä(t) Vesterinen, Opri	Julkaisun laji Opinnäytetyö	Päivämäärä Marraskuu 2016 Julkaisun kieli: Englanti
	Sivumäärä 57	Verkon julkaisu lupa myönnetty: x
Työn nimi Arvon luominen ja yhteistuottaminen: Järjestöllinen lähestymistapa verkkopalvelu innovaatioon		
Koulutusohjelma Degree Programme of International Business		
Työn ohjaaja(t) Kujala, Irene		
Toimeksiantaja(t)		
Tiivistelmä <p>Tässä työssä pyrittiin selvittämään kohdeyrityksen arvon luomisen ja yhteistuottamisen mahdollisuuksia digitaalisessa ympäristössä. Markkinointitutkimus on perinteisesti keskittynyt arvontuottamisessa hyödykkeisiin, jolloin yritys on nähty ensisijaisena arvon luoja. Muutos markkinointiajattelussa on siirtänyt tutkimuksen painopistettä palvelujen luomiseen, jossa asiakas nähdään ensisijaisena arvon tuottajana. Näin ollen yrityksen on mahdollista tarjota asiakkaille arvolupauksia, jotka asiakas pystyy muuttamaan myöhemmin arvoksi. Huolimatta kiinnostuksesta arvon tuottamiseen vain muutamat tutkimukset ovat analysoineet, miten arvo muodostuu ja kuinka tätä prosessia voidaan johtaa.</p> <p>Tutkimusote oli kvalitatiivinen. Lähdeaineisto kerättiin kahdesta haastattelemalla kahta kohdeyrityksen henkilöä. Molemmat haastateltavat ovat operatiivisessa roolissa kohdeyrityksessä. Kummallakin oli akateemista ja käytännönkokemusta verkkopalveluiden kehittämisestä, jotta he pystyivät tarjoamaan syvemmän ymmärryksen kohdeyrityksen arvontuottamisprosessista.</p> <p>Tulokset osoittivat, että kohde yritys välittää taloudellisia, strategisia ja funktionaalisia arvolupauksia. Yhteiskehitysprosessit ovat yritysvetoisia, mikä viittaa siihen, että asiakkaat ovat mukana yhteistuottamisessa, mutta pääasiallisesti ideat ja innovaatio nousee kohde yrityksen sisäisestä toiminnasta. Tulokset osoittavat myös, että kohdeyritys painottaa innovaatiossaan resurssipohjaista lähestymistapaa, joten yhteiskehitys ja palvelun kehittäminen jäävät vähemmälle huomiolle. Tutkimuksen lopussa annetaan ehdotuksia kohdeyritykselle perustuen tutkimuksen johtopäätöksiin. Tämän tutkimuksen tulokset koskevat vain kohde yritystä, mutta tutkimuksen viitekehystä voidaan käyttää myös muihin tutkimuksiin</p>		
Avainsanat (asiasanat) Arvon luominen, arvon tuottaminen, arvolupaus		
Miscellaneous		

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1 Introduction

1.1 Value Creation

For organisations of all sizes that seek to be innovative and improve their overall customer experience and engagement, value creation offers a powerful tool to characterize, achieve and develop these targets. Value creation is recognised as one of the key marketing concepts by the American Marketing Association (AMA) (Definition of Marketing, 2013.) although a consistent understanding of value, value creation and value co-creation remains unspecified (Grönroos & Voima 2011, 3). The shift in marketing thinking from a company perspective to customer centred concepts has changed the way in which value creation is seen. A handful of scholars have conducted research on value creation, especially from the service perspective (Grönroos & Voima 2011, 1; Vargo & Lusch 2008, 9) and innovation (Skålen, Gummerus, Koskull & Magnusson 2015, 42) in marketing studies. Despite the interest in value creation there are only a few studies that have focused on marketing implications and that would further illustrate how value creation emerges and how it could be managed (Skålen et al 2015, 42; Grönroos & Voima 2011, 7). Furthermore, little is known about the specific dimensions and categories that are important in value creation design.

Traditionally value creation is treated as something that a firm creates and that is usually linked to tangible goods. Service logic challenges this traditional microeconomic model and reverses thinking towards an intangible, knowledge and resource based exchange. (Vargo & Lusch 2004a, 15.) Changes in the marketing environment, especially digitalisation, have given the opportunity for the consumers to participate in processes that used to be the prerogative of companies only (Lutz & Hoffman 2014, 23). Furthermore, the digital environment is transforming marketing practices within organisations in general. There have been two major approaches in marketing towards the digital environments. One way sees digital environment as an extension of the traditional marketing mix, whilst digitalisation is also viewed as a completely new approach towards marketing (Wymbbs 2011, 95). Digital environment has changed marketing practices regardless of the angle from, which it is approached.

Co-creation and direct interactions between a customer and a firm are becoming more crucial in value creation. Digital technologies are forming traditional business strategies and creating environment of easy and effortless usage and communication anytime, anywhere and with multiple devices (Pagani 2013, 617). This creates new kinds of skills and competences that employees need to have in order to be able to respond to the customers' expectations. Firms need to be able to create throughout employee experience to be innovative and allocate right resources to be successful in co-creation with customers (Ramaswamy 2009, 33).

1.2 Case Company Enegia

Enegia is a leading energy management and consultation company in the Baltic region. It offers a wide selection of services in the energy market and energy efficiency consultation. The company was founded in 1995 and the main owner of the company is Vaaka Partners Oy. The Enegia brand includes the following companies: Enegia Consulting Oy, Enegia Services Oy and Enegia Sweden Ab. Other companies, which are part of the group, are Enegia Portfolio Services Oy and intStream Oy. There are 170 employees working for Enegia and they are operating in Finland, Sweden and the Baltic region. The customer base consists of 20,000 corporate customers. Enegia does not produce energy but they offer solutions and expertise in the field of Energy. The main values of the company are built on customer orientation, openness and reliability (Enegia, 2016).

There were several principles that determined selection of the case company. The company had to be small or medium size and had to work in the IT-service field. The company needed to have a strong interest in value creation and development of their processes in value propositions and co-creation. Enegia is medium-sized company and their EnerKey –product is a reporting service, which is designed to manage energy related information and advance customers' efficiency of energy use online. Service is developed and designed to customer needs and offers possibilities for cost and energy reporting and alert services that notify if there are changes in consumption.

EnerKey –product has four core services. The first being energy reporting, which enables customers to follow their consumption of energy from hourly to annual levels.

Metering data is gathered from the Enegia database, and EnerKey gives the opportunity for customers to compare, manage, and analyse all property consumption in one place. Second is cost reporting, which gives the opportunity to examine the actual cost of the energy in selected periods. The alerting service, on the other hand, is designed to notify when there are changes in metering consumption. Besides reporting and management services, EnerKey provides Energy Window –service, which offers customers an opportunity to invite and co-operate with property users to reduce energy consumption. Energy Window –service presents consumption data in graphic and visual way. Customers can locate the service on the intranet or website and share development of the consumption with other property users (Enegia 2016.)

1.3 Research Problem and Objectives

This paper examined value creation from two perspectives. The first was the organisation's perspective as a value facilitator. Furthermore, the organisation operates in a provider's sphere, which includes processes that are closed from the customers and a co-creation sphere, which includes direct interaction with the customers. Service logic was adopted into value creation in this study. Moreover, value and value creation in service-logic were seen as controlled by the customer (Vargo & Lusch 2008, 9; Grönroos & Voima 2011, 1; Skålen et al. 2015, 1). Conversely, there are studies that still emphasize the organisation's dominant position in marketing terminology and therefore also in value creation (Strandvik & Holmlund 2012, 133).

Grönroos and Voima (2011, 6) suggest that '*value co-creation should be analysed on the basis of the roles of the customer and the firm and in recognition of the value spheres that encompass the provider and the customer*'. More in detail, this means that the roles of a firm and customer are different, but that direct and indirect interaction are necessary. The organization's role is to provide value propositions, which the customer can later turn into value-in-use. Furthermore, according to Grönroos and Voima (2011, 12), there cannot be value co-creation without direct interactions between the customer and firm because without direct interactions the organisation can only offer value propositions.

The author finds it especially interesting to discover how value creation, co-creation and value propositions can be managed in a digital environment. Energy industry as

such is at a turning point, according to Payne and colleagues (2008), nonetheless industry, organisations should consider at least three different types of approaches towards co-creation. These would be opportunities arising from technical breakthroughs, opportunities linked to changes in industry logics, and opportunities in changes of customer preference and lifestyle. (ibid. 88-89.9) Changes in the energy industry create new challenges for companies to manage value creation. The case company was interested to find out EnerKey-service value creation processes and possible new value proposition and co-creation opportunities.

The aim of this study was to apply a value proposition framework in the case company's processes and further create a picture of the value propositions processes at the moment in the case company. The objective of this study was to assist Enegias' EnerKey- service in identifying new opportunities for value propositions and co-creation in the context of the digital service environment. A field-based research process was used to identify the key dimensions and categories within the framework to achieve the objective of the research. Building on these assumptions, the research questions were:

1. What are EnerKey key dimensions and categories of value propositions?
2. How can EnerKey manage and identify new value proposition and co-creation opportunities?

The rest of the paper is structured as follows. First, there is a review of relevant literature on value creation, the characteristics of the digital environment and studies on innovation. Secondly, the thesis describes the methodology of the research. An exploratory research was conducted and a qualitative approach was implemented to achieve the objectives of the study. This includes sections of two the case companies and two expert interviews. Thirdly, the findings from the interviews were analysed and the organisational dimensions of the value propositions for Enegia were identified. This is followed by the academic and managerial contribution of this research. The last part evaluates the limitations of the study and gives suggestions for further research opportunities.

2 Theoretical Framework

2.1 Value creation

Value, value creation and a company's performance are widely used and vital terms in marketing. As a result of their popularity in marketing literature there are many viewpoints and approved definitions for 'value'. Furthermore, the ramification of the value concept becomes evident when it is defined by asking what value is, by whom and how it is created and where and when (Grönroos & Voima 2013, 134). In the academic literature 'value' is analysed from numerous perspectives including the service customer, provider (Helkkula, Kelleher & Philström 2012, 60) and the economic (Mathwick, Malhotra & Rigdon 2001, 41) or strategic value (Porter 2008, 78). This paper treats value as a customer driven process, which cannot exist before it is created or before it has emerged (Grönroos & Voima 2012, 136; Helkkula et al. 2012, 60).

Ideally, in a traditional, good-based perspective, the customer and producer are separate entities so as to ensure the maximal efficiency of the manufacturing process (Vargo & Lusch 2004a, 11). The location of value creation is in the provider's service offerings or it descends from the organization's service activities, neglecting customer's activities or efforts (Helkkula et al, 60). However, from the service dominant logic (SDL) perspective, the customer is always a part of the production of value (Helkkula et al. 2012, 61, Varo & Lusch 2008, 8).

According to Helkkula and colleagues (2012, 65), value is always experienced by the customer (consciously or unconsciously) through his/her individual experience. Furthermore, even tangible goods are instruments that potentially could offer services to a customer. However, without knowledge of how to use, maintain and repair and further adapt these skills in the consumer's individual context, the customer is not able to release and initiate these services into his/her life (Vargo & Lusch 2004a, 11). For example, a consumer could buy a computer but without understanding and knowledge of how to use it, the services that are connected to the use of the computer cannot be delivered.

SDL emphasizes the customer's role in value creation, underlining that a service needs to be experienced by a customer (Helkkula et al. 2012, 60; Payne, Storbacka &

Frow 2008, 83; Vargo & Lusch 2008, 8). From the phenomenological perspective, value is subjective and defined by the recipient (Vargo & Lusch 2008, 8). However, according to Grönroos and Voima (2013, 135), in SDL value creation is seen as an all-encompassing process, where there is no distinction between the roles of a customer, service provider or other actors. Therefore, the roles in value creation are imprecise and equal thus making all actors the co-creators of value.

Customers have a chance to work as co-creators in an operator's business processes, which emphasize the provider's role and influence in value creation but decrease the customer's power over it (Grönroos & Gummerus 2014, 212). The distinction between SDL and Service logic (SL) is in the locus of value creation. In SL the customer is the value creator and the provider's role is to make value propositions that the customer can later turn into real value.

The value creation process as in value-in-use is not linear and it might not follow the provider's activities. It is a closed sphere from the provider who cannot have access to it. (Grönroos & Gummerus 2014, 207.) Similarly, Helkkula and others (2012, 62) argue that the customers' perceptions of their past and future experiences potentially have an influence on value in the experience. The value creation process could start already before the actual transaction or without any former connection with the provider (*ibid.*, 65). For example, this could happen when a person is dreaming of a new smartphone and how it could have an effect on the person's life and on the ways in which others sees him/her. Therefore, value the created in customer's sphere is not confined to certain place or time and it can happen in temporal settings (Grönroos & Voima 2012, 10; Helkkula et al. 2012, 64). Consequently, the core focus of the recent value creation research has been on the customer's life where value-in-use is linked to past experiences together with the current and anticipated future visions (Helkkula et al. 2012, 65).

The customer combines resources and processes from one organisation with the resources and processes from other providers and/or actors. This process of integration is personal as it mirrors the customer's individual, relational and collective goals (Epp & Price 2011, 37). Therefore, the customer needs to combine different resources from different providers when using, for example, a smartphone and further excerpt value from using that smartphone. Furthermore, the use of social media on a

smartphone is a combination of at least three different providers (the phone manufacturer, the operating system and application). The use of these three creates experience(s) in value-in-use highlighting the process of the use whether it is social, physical, temporal and/or spatial and therefore ascertaining the experience of value-in-use. (Grönroos & Voima 2012, 139.)

Value-in-use as a part of value creation is a continuing, changing and empirical process, which contains phases that could create positive or negative value in different settings (e.g. social, physical or temporal). Furthermore, it emphasizes the customer's role as a user, experiencing process from his/her social or individual context. (Epp & Price 2011, 51; Helkkula et al. 2012, 61.) The value that emerges from these experience(s) is tied to the customer's personal world which could contain aspects from the individual's previous experiences and internal feelings and/or aspects of social interactions, such as stories through the grape vine (Epp & Price 2011, 47; Helkkula et al. 2012, 60; Meyer & Schwager 2007, 5). When value creation is seen as a customer-driven process rather than a provider-driven process...*the locus of value creation is the customer's physical, mental, or possessive activities, practices and experiences in multiple individual and social contexts* (Grönroos & Voima 2012, 138).

2.2 Value Proposition

According to Chandler and Lusch (2015, 6 - 8), value propositions are invitations from actors to one another to engage in service. This definition ties the value proposition development into the value creation and service design processes. All actors are facing multiple value propositions daily, these could be economic, financial, social (ibid. 8), symbolic, functional, emotional (Rintamäki, Kuusela & Mitronen 2007, 630), ethical (Ballantyne & Varey 2006, 339) or environmental (Anderson, Narus & Van Rossum 2006, 91) values or combination of these. Actors have to decide, whether they want to engage with the service or not. Although, it is not necessary that actor recognise all value propositions to the service alluring to engage with. (Chandler and Lusch 2015, 6 - 8.)

Skålen and colleagues (2015, 2), suggest that the value propositions are built on different practices and resources within the organisation. New service innovations are associated with development of the practices and resources in the organisation.

(ibid. 2). Chandler and Lusch (2015, 8), highlight that the intensity of a value proposition plays a role in engagement to the service. Higher intensity makes value proposition more attractive for an actor. Furthermore, creating value propositions that are more competitive (Vargo & Lusch 2004a, 11), successful (Rintamäki, Kuusela & Mitronen, 2007 622), superior (Payne & Frown 2005, 172) and/or compelling (Lusch, Vargo & Tanniru 2010, 20) for the user.

According to Payne and Frown (2005, 172), organisations ability to understand attributes that are important for a customer helps to create superior value propositions. This knowledge could be combined with the analysis of other customers that has similar preferences and could led to a realisation of new market segments that are not covered with existing offers (ibid., 172). Epp and Price (2011, 37), suggest that organisations tends to develop their service based on their own product offerings, rather than understanding customer's mission and values. Organisations ability to understand their customers' key dimensions and motivation behind value creation processes supports organisation success in creating successful value propositions (Rintamäki, Kuusela and Mitronen 2007, 630).

Service is rarely experienced in one particular time or by only one actor (Chandler and Lusch 2015, 17). More precisely, after service is experienced, it can cast a shadow that could have influence for a long time into the future. Furthermore, that similar service experiences could centre upon to nonlinear and highly dynamic agencies, institutions, organisations, communities and individuals. (Maull, Gerald & Johnston 2012, 72.) Therefore, value propositions might invite, shape and potentially transform engagement towards the service (Chandler & Lusch 2015, 17).

2.3 The role of a company in value creation

In the product oriented view organisation's output or services are seen as the main source of the value creation (Vargo & Lush 2004a, 12). Value creation as a customer-driven process changes the organisation's role from value creator to a value facilitator. The firm's processes and outputs (physical or virtual) generate potential value, which the customers can later transform into value. (Grönroos & Gummerus 2014, 207.) In the SD –logic value propositions are seen as value creation promises. These promises could be created by the organisation itself, with customers or other actors

by integrating resources and knowledge with existing abilities and competencies (Skålen et al 2015, 9).

A co-creation sphere gives an opportunity for an organisation to engage with the customers and further, to be an actor in value creation as a co-creator. Interaction between the consumer and company is direct. (Grönroos & Gummerus 2014, 208.) Furthermore, the organisation's ability to interact with the customers and therefore its capability to influence the customers' processes and understanding what knowledge and/or resources are relevant for the customers' missions and value are essential for the organisation's success as a co-creator (Payne et al. 2008, 86). Epp and Price (2011, 37) found in their research that organisations tend to create, develop and integrate services and products from their perspective and from the point of view of their own offerings. Understanding the customers' mission and values and their further solution design gives organisations a possibility to create value propositions that are more in line with the customer goals. Moreover, this creates more opportunities for partnership and co-creation. (ibid. 37.)

Value creation by the customer is phenomenological and therefore subjective and changing. It varies and evolves between individuals and reflects on the customers' social and internal contexts (Helkkula et al. 2012, 66). Every experience is disparate from each other even when multiple consumers experience the same value proposition by an organisation. Therefore, value proposed by an organisation may not relate to the value experienced by the customer (Grönroos & Helle 2010, 585; Ramaswamy 2009, 35). According to Payne and colleagues (2008, 85), companies should create superior value propositions. Furthermore, they should create a competitive advantage and create more value for the customers and separate themselves from the competitors (ibid., 85).

A company plays the role of a provider and the deliverer of value propositions that the customers can potentially use in their value creation process (Grönroos & Gummerus 2014, 207). Knowledge and therefore decisions about the customers' value creation process should be based on a holistic view of the customers' experiences, processes and emotions. It should also take into consideration the customers' social contexts and combine this knowledge in order to create a deep understanding

of the customers' experiences and processes in addition to the hard data (e.g. customer surveys) in the organisation. (Payne et al. 2008, 89.) Moreover, Epp and Price (2011) emphasize the importance of understanding collective goals besides individual ones when creating value propositions for customers. They further highlight it especially in the context of services that are experienced as a family or another group (also virtual). The ability to distinguish and separate individual and collective goals in online and social contexts creates more understanding of the customers' value creation process. (ibid., 48) This also helps to create interactive, longitudinal, individual and contextual co-creation (Payne et al 2008, 93).

2.4 Co-creation in value creation

Co-creation is defined in SD –logic as function of interaction between customer and organisation. These interactions are direct and essential to succeed in managing value creation (Grönroos & Voima 2012, 1-2). Ballantyne and Varey (2006, 344), define co-creation as a dialogical interaction, which creates something new or unique. Where else, co-production is communicational interaction and is based on exchange of knowledge or resources (ibid., 344).

Chen, Tsou and Ching (2011, 1332) highlight that customers' role has changed in service innovation. Customer role has shifted towards co-producer. These views see importance in direct interaction between customer and organisation and further, customer participation in service production process. There have been three main research approaches towards co-production 1) Constructive participation 2) Resource based participation 3) External innovation. (ibid., 1332.)

In constructive participation co-production is viewed as a process, where customers give suggestions to organisation to improve and create service. This would include clear communication from customer's side from possible problems to producer (Gruen, Summers & Acito, 47). Customer business interaction is structured and it involves customer participation in work of organisation. Customers who are deeply involved with co-production are more likely to address service failures but at the same time co-production could led to higher customer satisfaction and add value to the production. (Chen et al. 2011, 1333.)

Resource based view (RBW) sees co-producing as exchange of resources between organisation and other actors (Kor & Mahoney 2004, 184). Further, RBW knowledge that the organisation itself does not possess all the necessary resources and therefore it emphasises joint creation and sharing of resources that the organisation and customer hold (Chen et al. 2011, 1333). RBW emphasize customer role in value creation, it involves customer participation in core processes of production. Because RBW lifts so heavily to knowledge and resource sharing, quality of partnerships is fundamental part of success in RBW (Chen et al. 2011, 1333).

Innovation could also arrange separate from organisation. This kind of co-production represents external innovation and heart of it is in customers. Primary source for new products and service innovation comes from customers. (Chen et al. 2011, 1333). Organisations are able to implement these innovations rapidly to their product lines or service offerings because innovations are not tied to geographical nor time constraints (Desouza, Awazu, Jha, Dombrowski, Papagari, Baloh and Kim 2008, 42).

Payne and colleagues (2008) defines co-creation as *...strategic options for creating value* (ibid., 88). Co-creation could arise from joint inventiveness, co-design or shared production (Lusch, Vargo and O'Brien 2007, 13). Moreover, successful co-creation is linked to superior (Payne et al. 2008, 84) and intensive value propositions, which engages actor into the service (Chandler & Lusch 2015, 8). Co-creation opportunities are related to nature of the industry firm is operating in. Although, nonetheless industry, organisations should consider at least three different types of approaches to co-creation. These would be opportunities arising from technical breakthroughs, opportunities linked to changes in industry logics and last opportunities in changes of customer preference and lifestyle. (ibid. 88-89.)

2.5 Participation in value creation process by members of organisation

From organisational perspective it is important to notice, how value co-creation activities are implemented in to practice, and how members of an organisation sees their role in it (Grönroos & Helle 2010, 584). Chan, Yim and Lam (2010, 58), argues that it is not customer participation that drives customers but rather co-creation of

value that matters. Organisations ability to engage and create an 'inside out' employee experience is crucial to align right resources and to succeed in the co-creation with the customers (Ramaswamy 2009, 33).

Communication and internet research have been focusing on online and offline participation (Lutz & Hoffman 2014, 24). Participation from organisational point of view could be seen as influencing. This would include influencing formal (such as public activities) and non-formal (such as organisational and online activities) participation (Ngo & O'Cass 2012, 1140). Participation and empowerment are related to each other. Empowerment is a feeling person gets when she/he feels that their role is competent and important. Moreover, empowerment is internal driven rather than external driven and therefore it cannot be guided from the outside. It requires activate participation in situation and successful use of one resources (Speer, Peterson, Armstead & Allen 2013, 103).

According to Wirtz, Horvath, Canli and Kandampully (2014, 4) through online branding communities' organisations could influence consumer's social identity. Online branding communities are...*network of relations between providers and brand consumers who attach a certain value to engaging in a relationship with both the provider and with the brand's other consumers* (Wirtz et al. 2013, 5)

The social identity is strongly related with brands and therefore by well-managed community firm could find a new value propositions and co-creation platforms to create more value in use. Further, online communities could create an environment to stretch out from the existing brand identity and value propositions, and create new innovative and different ways for co-creation and value propositions. (Schau, Muniz and Arnould 2009, 41.) Fournier and Lee (2009, 106-107) found in their research that consumers were more interested to create new social links in online communities rather than to engage with the brand. Moreover, customer is using products or services in his/her social context, this shapes customer behaviour and engagement in online and offline platforms. Therefore, when developing online communities, target group social context should relate to the created content to engage and attract visitors for the site. (Wirtz et al. 2013, 8.)

According to Lutz and Hoffman (2014, 24,) online participation rarely correlates with the offline participation. Conversely, Wirtz and others (2013, 8), argues that online

participation could lead to an offline participation especially in activities that are not deliverable in online. Psychological factors have an impact on engagement and participation. Business participation research is missing view that takes into consideration social-economical background (Lutz & Hoffman 2014, 24). Therefore, these factors cannot be set aside in online engagement research. (Speer et al 2012, 110 – 111.) Similarly, Venkatesh, Morris, Davis and Davis (2003, 469,) found in their research that intention to use and acceptance on information technology is connect to psychological factors.

Compeau, Higgins and Huff (1999, 153) argues that self-efficacy plays an important role in an online engagement. Internet provides a platform for customers to be more self-directed in the value creation. Online environment has given opportunity for users to create and share content and therefore, service which used to be privilege for organisations to offer, has widen to consider other actors as well. This creates an option for organisations to engage customers into value chain and co-creation processes which are related to higher identification, loyalty and satisfaction in online engagement research. (Lutz and Hoffman 2014, 23.)

Typically, with tangible goods, product is the end of a value chain. Co-creation shifts this idea from a product to an experience. Value of a product or service is measured more in terms of functions of experiences rather than as the product itself (Ramaswamy 2009, 35). These experiences influence customer engagement and allure to customer participation in different platforms (online/offline) and in disparate social settings. (Payne et al 2008, 93). Information system studies highlight the usability and ease of use which correlates with consumers' intentions to participate in online and further to engage in co-creation activities (Venkatesh et al. 2003, 469). Although, acceptance for a new innovation determines participation. Complex innovations that involves changes in on going processes, business models or behaviour creates more resistance which might led to unsuccessful implementation of a new idea. (Brown & Martin 2015, 59.)

2.6 The impact of digital environment

The term 'digital environment' does not have a clear clarification yet. In this study, term 'digital environment' contains use of computers, computer networks (e.g. the

internet and organisation's Intranet) and digital communication (e.g. email, mobile applications and voice mail (adapted from Husson University 2015). Some of the marketing approaches treats digital marketing just as an extension of traditional marketing tools. According to Wymbbs (2011, 95), even when digitalization is changing how we think, marketing is still in between old and new. Nonetheless, the approach towards digitalization, digitalization is changing practices and organisations needs to think about process and implementation of marketing in digital environment from different perspective than with traditional marketing tools. (ibid. 95)

In digital environment, it is more likely that a person with a positive attitude towards technology would be more willing to participate, communicate and use digital applications (Chappuis, Gaffey and Parvizi 2011, 1) than a customer with more negative attitude. Therefore, psychological drivers shapes customer's willingness to participate in co-creation activities. Customer's negative attitude towards technology is associated with feelings of concern towards using online platforms and further to engagement to online activities. Customer segment's attitude towards digital environment should have an impact on organisation's strategy and decisions whether to use online or offline activities to increase participation and engagement for service offerings. (Lutz & Hoffman 2014, 24).

Information systems research is emphasizing fulfilment for whole process of buying from online. This would include online and offline activities, which are seen equally important in customer experience (Chiu, Wang, Fang & Huang 2014, 107). This is in line with SD –logic and studies on customer engagement. Value creation is not only tied to one place or time it evolves and develops through experiences, which could create more value-in-use for a customer or conversely particular experiences could have a negative impact on customer value creation process. These experiences are significant for a customer when creating value-in-use. Furthermore, organisation might create valuable insight on customers' behaviour by understanding the customers' value-in-use processes. Online environment creates also a new challenges for organisations. Usability and especially problems with systems or apps online are related to frustration and bounce from the site (Minjeong, Jung-Hwan and Lennon 2006, 56). Therefore, It is crucial in online environment that webpages and apps are working.

Parasuraman, Zeithaml and Malhotra (2005, 18), highlights that difficulties with usability could be linked to customer's device and therefore be reason of non-functionality of the site. Customer's knowledge and resources plays an important role in the value-in-use creation, actor's willingness and knowledge are helping him/her to release all the potential of a value proposition. Moreover, person's psychological qualities effects acceptance towards the use information technology (Venkatesh et al. 2003, 469). Therefore, organisations innovation processes regarding to online environment should take into consideration, what is the attitude towards digitalization and foremost what kind of resources end users have to hold to enable these innovations.

Use of mobile devices have been skyrocketing in past years and it has been estimated that by 2017 there will be 4.77 billion mobile devices (Statista 2016). Further, shifting focus from desktops to mobile and tablet devices. It is essential that apps and webpages works also with hand held devices. (Chen et al. 2015, 26.) Due to the complexity of e-commerce, where customer could face multiple technology – technology, and human – technology user interfaces while making purchase, management should be able to measure and understand online innovation also from system quality side (Field, Heim and Sinha 2004, 303).

2.7 Online Innovation

The innovation research similarly to the value creation research has focused on goods dominant –logic (GD) perspective, which is based on Schumpeter's theory of economic growth, where there are clear distinctions between product, process and organisational innovation (Skålen et al. 2015, 10). In the service dominant –logic (SD) development and creation of the value propositions are tied into the service innovation. Moreover, creating more comprehended view of innovation, which roots are in innovation types that arise from the resources. (ibid., 10.)

Michel, Brown and Gallan (2008, 62) argues that innovation in the value proposition creation should move from the products towards an integration of the resources. Value propositions should add resources to customer's value creation process and therefore making them better off (Grönroos & Voima 2013, 7). SD –logic treats service innovation as a direct or an indirect communication, where value propositions

are delivered direct through services and indirect through tangible goods. Tangible goods serve as a tool for the service provision (Vargo & Lusch 2004b, 326). Therefore, SD –logic provides a view, which is applicable for both service and manufacturing sectors (Grönroos & Gummerus 2014, 223).

In the service innovation research two major approaches have dominated the research. The first is tied to a GD –logic and is structured, and the other one is less formalized and emergent (Skålen et al. 2015, 11). The structured view can be traced back to a new product development (NPD) and sequential stage gate model (Michel et al. 2008, 55). The model is constructed on rational and consecutive innovation, which separates processes to phases like generation, idea assessment, design, testing and validation, and market launch (Skålen et al. 2015, 11). NPD considers service innovation process as a kind of a good where service is a complimentary for a product rather than it would have a key role in value creation or service innovation (Vargo & Lusch 2006, 47).

The practice based innovation emphasises front line workers and customers' importance in the service innovation processes (Chen et al 2011, 1332). The Innovation process is seen less formal and practiced based, where heterogeneous situations emerged from day-to-day practices (Skålen et al 2015, 11) which then are linked to a certain customer and problem given. Problem solving in these situations are strongly tied to a resources at hand, and solution varies from customer to customer (Fuglsang and Sørensen 2010, 583). According to Skålen et al (2015, 38), practised based service innovation process lacks a clear generic models for managerial implications, while structured approach has succeeded to create these models.

SD- logic creates opportunity to integrate the structured and practise based views together rather than to separate them. Skålen and others (2015, 38), argues that service innovation process can be separated to three sections in the service innovation typology 1) Resource-based service innovation process 2) Practice-based service innovation process 3) Combinative service innovation process.

Resource-based service innovation emerges from the resources that are being innovated and their focus is to achieve...*what value a value propositions promises* (Skålen et al. 2015, 39). Resource allocation becomes crucial and to succeed in resource-based service innovation, organisation has to develop and cohere resource to meet

customer requirements. Practise-based service innovation, on the other hand, focuses on how promised value propositions are evolving internally and through co-creation with the customers. Lastly, combinative service innovation process puts equal weight on resources and practices and naturally in these innovation process managing practices and resources becomes evident. (ibid., 39)

While many of the organisations tend to describe themselves as customer-centric, most of them would not include customers into their innovation process (Ramaswamy 2009, 35). Recent innovation literature has highlighted 'design thinking' and '360 degree experiences' when engaging customers' into innovation processes (ibid.). According to Ramaswamy (2009, 35), design thinking is 'mind-set and process' at the same time. It evolves from a view that every transactions is heterogeneous and experienced independently by an actor. This gives significant opportunity for businesses to integrate 'design thinking' into their management and therefore create innovation which supports all human activities (Brown 2008, 1)

Brown (2008, 1) define design thinking as a process that..."*imbues the full spectrum of innovation activities with a human-centred design ethos*". Prior research in design thinking has focused more into industrial manufacturing or physical products (Brown & Martin 2015, 64). It should be noted that the design thinking can be viewed also as a management concept because it includes all human centred activities within the methodology (Brown 2008, 8). Brown and Martin (2015, 58), argues that design has moved notable away from products but tools of design are implemented and extended to new practices creating design thinking. Design thinking is a powerful tool when engaging and adopting people into new ideas and experiences (Brown & Martin 2015, 64). Further, design thinking relies heavily in 'learning by making' –concept (Leavy 2012, 27) which in practice means that there are many small steps rather than few big ones. Furthermore, emphasizing journey of the whole process where interaction with users is a main key to remove bad designs and create confidence towards designs that are working. (Brown & Martin 2015, 64.)

3 Methodology

According to Creswell (2003, 4-5), Crotty (1994) suggests that in the process of designing a research proposal the researcher should evaluate four questions considering epistemology, theoretical perspective, methodology and methods. It is further highlighted that these four questions are interrelated to the process of designing research. Furthermore, by using Crotty's framework, Creswell (2003) conceptualized research design to the elements of inquiry which consist of knowledge claims, strategies and methods. With these elements the researcher can use either quantitative, qualitative or mixed methods approached to the inquiry. (Creswell 2003, 3-6.)

Similarly, Saunders, Lewis and Thornhill (2009, 137) emphasize that research design and strategy decisions should support the objectives and purpose of the research. Purpose of the research is often but not limited to threefold of one exploratory, descriptive or explanatory study (ibid. 137-139). Exploratory study aims to find out valuable insights and ask questions that could potentially show phenomena in a new light (Robson 2002, 59). Furthermore, exploratory research is usually conducted using some of the following approaches: a search for literature, interviewing 'experts' in the subject or conducting focus group interviews (Saunders et al. 2009, 140).

The purpose of this thesis was to develop a strategic framework for value propositions design. Therefore, the appropriate angle for this study was in exploratory research. In this study the data was collected by using qualitative research methods. The primary data was collected with in-depth interviews from two employees from the case company. Secondary data was collected from prior research literature. In the following sub-chapters, the research methodology, design and methods are discussed in more detail.

3.1 Data collection

The methods of the data collection are drawn from the case study strategy. The case study strategy is defined as a research strategy that involves empirical investigation of precise phenomenon, in a real-life context and from multiple sources (Saunders et al. 2009, 588). This approach is well suited for international business research due to the nature of it. Most of the case studies begins with reviewing existing material and

records, and new data is often collected through interviews. This gives opportunity for direct observation and interaction. Second strength is contextuality of the case study. In other words, phenomena that is researched is hard to study outside of its natural setting, which is common in international business research, where certain phenomena and its impact is researched in different national contexts. (Ghauri 2004, 113.) Case study provides opportunity for a researcher to have holistic and deep understanding of the phenomena investigated. Case study is often used but not limited to qualitative research methods. Although, often concepts and variables investigated are hard to quantify, which makes experiment or survey methods inappropriate. (ibid., 114.)

The case study approach was selected to test the value proposition framework, and to provide more insight on the value propositions and co-creation management for Enegia. Value creation is heterogeneous process that is developing and changing and it is not linked into one place or time. Therefore, whole value creation process is highly contextual and linked to a customer's life. The case study approach gives an opportunity for a researcher, to investigate this phenomenon from the case company's point of view and give an insight on their value proposition and co-creation activities.

According to Ghauri (2004, 116), selection of the case is crucial part of the data collection in case studies. Selection for a project starts with deciding target population for the research. After defining the target population next phrase is to gain access and select cases, objects or firms that researcher wish to study. Selecting these cases should be coherent with research problem and theoretical framework in hand. (ibid., 116.) In this study several principles were considered when deciding case company. The aim of the research is to study and develop an understanding of customer value creation process in online environment and to assist organisations in their value proposition and co-creation processes.

First, organisation had to be small or medium size company and working in the sector of IT-services. It was crucial that the organisation had strong interest in value creation and development of their processes in value propositions and co-creation. Finally, the experts who were interviewed had to be part of the operational processes within the organisation and also have an academic and practical experience in online

service development, to provide deep insight of the case company's value creation processes. Enegia is a medium sized organisation and EnerKey is an online service, which helps customers to manage and optimize their energy consumption. Company representatives had an academic and practical experience to ensure that in-depth interviews provides a holistic view of the value proposition processes in the company.

Data can be separated to two different entities, primary and secondary data (Saunders et al. 2009, 600). Primary data is determined as a data that is collected specifically for ongoing research project (ibid., 598). Furthermore, primary data is collected using either combination or one of the following research programme observation, qualitative or quantitative research (Wilson 2012, 37). Quantitative data generates numeric data and it is linked to data collection methods like surveys and data analysing techniques like graphs or statistics. Qualitative data collection, on the other hand, relates to data collection techniques like interviews and data analysing methods like categorising and it creates non-numerical data. (Saunders et al. 2009, 151.) Moreover, the qualitative research is characterised as a flexible and unstructured approach, which tries to find a deeper insights and understanding of the certain phenomenon (ibid., 103). In depth unstructured interviews are associated with the qualitative approach (ibid., 320). Interviews as it best can offer deep insights on the researched topic but success in interview is dependent on interviewer's ability to build trust and comfortable atmosphere (Wilson 2012, 105 – 106).

Primary data in this thesis was collected from the two in depth interviews from the two experts of the case company to generate deeper understanding of the value creation processes inside of the case company. The data was collected from Enegia by interviewing two proponents of the organisation. Interviews were held on 25. February 2016 and paper version of the existing framework were presented to the interviewees to cover all key dimensions and categories.

Secondary data is prescribed as research that was conducted for another research project (Saunders et al., 2009, 600). Secondary data can be divided into internal and external sources. External source refers to published works, which could include multiple resources like electronic sources, which origin is outside of organisations, government reports, internet or published research reports. Internal data refers to sources that are originating from the organisation, like sales reports, information

gathered from customer loyalty program or any other information organisation has internally, which is not available for public. (Wilson 2012, 36-37.) In this study secondary data is collected from external sources e.g. case company's website.

3.2 Data Analysis

The analysing method for the data collection should be considered from the perspective of, whether qualitative and quantitative methods were used to gather the data. Quantitative data collection methods create a numeric data, therefore analysis generates standardised data, which is presented as diagrams and statistics forms. (Saunders et al. 2009, 482.) Qualitative data collection methods and analysis are associated with a non-standardised data. The goal of an analysis is to create 'thick' description of the phenomena. There are several factors that researcher should consider when analysing qualitative data. Due to the complex nature of the non-standardised data, researcher should summarise, group or restructure as a narrative to support meaningful analysis. (ibid., 482.) Miles and Huberman (1994) framework for the qualitative data analysis was chosen to analyse data gathered from the interviews.

Miles and Huberman (1994, 10 – 11) framework on data display and analysis for qualitative data includes three stages 1) Data reduction 2) data display 3) drawing and verifying conclusion. Data reduction includes process that reduce amount of information and it construct it in a more formalised way. This could include observation summaries, document summaries, coding and categorising data. (Saunders et al. 2009, 503.) According to Saunders and colleagues (2009, 491), summarising data is a process where large amount of text is reduced into fewer words. Data from interviews were reduced by summarising principal themes that aroused from the interviews.

Data display is associated with the organising and assembling data into summary diagrammatic or visual displays. There are two main clusters for the data display 1) matrices and 2) networks. Matrices are form of tabular, where data is displayed in designated columns and rows in appropriate cells of such, like matrix. Network display data is a collection of nodes or boxes, which are connected with lines, in some cases with for example arrows to demonstrate relationships in between nodes. (Saunders et al. 2009, 503.) Saunders and colleagues (2009, 505) argues that according to Miles

and Huberman (1994), there are assets that are linked with using these forms of data display. Qualitative data collection produces a large amount of data, which is unorganised. Use of data display forms will help researcher to analyse data and draw conclusion from extended text. (Saunders et al. 2009, 505.)

Data is displayed in matrices for this investigation. Based on the findings from literature the key dimensions and categories of the value proposition framework were identified. The aim of the second phase was to collect and analyse empirical data. The data from interviews were reduced by summarising key findings and insights arising from the interviews. Further key dimensions and categories based on the literature were reviewed and developed according to the findings from the field-based results. Last phase objective was to finalise the framework and provide suggestions for the organisation value proposition processes. Value proposition framework is displayed in the Table 1., chapter 4 page 26.

3.3 Research ethics in data collection

When conducting research, ethical principles should be taken into consideration in all of the stages of the research. Saunders and colleagues (2009, 184) define research ethics as questions that are related to how we formulate and clarify our research topic, design and gain access, collect data, process and store our data, analyze data and write up our research findings in a moral and responsible way. Furthermore, the research design should not create any embarrassment, harm or any other material disadvantages for those who are participating in the research (ibid., 160).

Awareness of research ethics has grown dramatically in the past decade. When conducting research, the most important ethical issues are related to those who are part of the research. Therefore, the research design should be methodologically sound and morally defensible towards the participants (Saunders et al. 2009, 184). Furthermore, when conducting interviews, the respondents should have the possibility not to answer questions that they feel uncomfortable with, and the purpose of the research should be clear in order to avoid any or possible harm or discomfort.

4 Research results

The data analysis was based on Miles and Huberman (1994) framework of data display and analysis revealed that case company is actively offering value propositions but a clear process for the value creation are missing. In order to answer the research questions, first, case company's practices for the value propositions were analysed from interviews. The results from the interviews are displayed in the tables 2-8 according to the value proposition framework. Based on the literature review and according to the analysis of the value proposition framework, conclusion and managerial implications were drawn from the analysis.

The value proposition design framework is presented in Table 1. The framework consists of seven value creation dimensions which were identified according to criteria outlined in the methodology part and applied from Neuvonen (2015). The dimensions and the categories derived from the literature and empirical part of the research are explained in more detail in the next chapter. They are further combined with the empirical research results of the interviews.

The value proposition forms are 1) Financial 2) Strategic 3) Functional 4) Symbolic 5) Social 6) Ethical and 7) Environmental. They refer to value proposition forms that an organization offers to the customer. The *Financial* form includes activities and processes that are related to the benefits that a customer can receive from the usage of the product. According to Neuvonen (2015, 4), this category provides major benefit for the customer and is further linked to the avoidance of manual work. The *Strategic* form, on the other hand, deals with value propositions that are linked to understanding and benchmarking competition and competitors. Moreover, it is highlighted that this category also offers a possibility for co-creation and partnership with the competitors (ibid., 4).

The *Functional* form is related to understanding how the customers use the product and what kind of training they would need in order to be able to gain the most in their value creation process. Functionality is also linked to information quality and accessibility to that information. The *Symbolic* value propositions, on the other hand, refer to values that are associated with the lifestyle and image that the value propositions could possibly create.

What? Value proposition forms	Where? Value proposition activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Financial	Design:	Producer of resources:	Formal:	Ongoing processes over time (value-in-use):	Online:	Can Actively influence on customer's perceptions
Strategic	Development:	Value facilitator:	Non-formal:	Proactively, a role of an initiator:	Offline:	And repurchase intentions:
Functional	Manufacturing:	Co-producer:	Active influencer:			
Symbolic	Delivery:	Co-creator:	Individual:			
Social			Organisation:			
Ethical						
Environmental						

Table 1. Value proposition framework

The Social value propositions are connected to activities that are seen valuable in a social context. They are also connected to how well the value propositions serve in social groups. The *Ethical* form refers to issues that deal with ethical decision making and how well a service takes into consideration ethical issues related to the field. The *Environmental form* is linked to corporate responsibility and awareness of environmental issues.

Value proposition activities 1) Design 2) Development 3) Manufacturing 4) Delivery are linked to processes in the organizations that are associated with a value creation activities. The *Design* activities include processes that *could* integrate with the customers or create co-creation opportunities with the customers. The *Development* process indicates to an internal communication and further to possible limitations that relates to it. This also includes the general process development and further integration of the customer into these processes. The *Manufacturing* activities include quality checks, technology in general and its implementation in maintenance and measuring. The *Delivery activities* include all operative actions and internal distribution work.

The value proposition means are linked to an organization's willingness to use the resources that an organization has access to, including human and knowledge-based resources. The means could be divided into four different sectors: 1) Producer of resources 2) Value facilitator 3) Co-producer 4) Co-creator. The *Producer of resources* is associated with processes dealing with how well the organization utilizes its data analysis. It is also associated to the competence to implement and give up and recreate new practices or ways to work. The *Value facilitator*, on the other hand, refers to employees as a source of innovative ideas. The *Co-producer* includes, for example, consultants and suppliers that are associated with the development or contribution of a service. The *co-creator* can be, for example, a customer or other actor with whom a service is developed.

Participating actors in value creation could be divided as follows: 1) Formal 2) Non-formal 3) Active influencer 4) Individual 5) Organisation. The *Formal* actors indicate regular and virtual teams, and they do not include people outside of the organization. The *Non-formal* refers to mixed teams with members outside of the organization. The *Active influencers* are customers who are willing to participate in processes

and competent for a dialogue. The *Individual* actors are, for example, employees who have influence on a service. The *Organization* collides with new and old organizational behavior and moves towards agile methods where decision making is seen more as many small decisions that can be adjusted frequently according to the task at hand. Two dimensions are related to when value propositions are delivered. The propositions can be 1) ongoing process over time (value-in-use) or 2) they can work proactively in the role of an initiator.

Participation platforms is divided into 1) online and 2) offline platforms. The *Online* platforms refers to intranet and overall online platforms, which are characterized by a 24/7 access and with multiple devices. The *Offline* platforms, on the other hand, are preferred for social interaction. The Seventh and last dimension includes value creation motives that 1) can actively influence on the customer's perceptions and 2) that can actively influence on the customer's repurchase intentions

4.1 Financial value propositions

The case company is communicating financial value proposition designs through reports, which offers information about the core consumption and the related changes in prices and expenditure. In Table 2 case company's financial value propositions are presented within the framework. Different marketing channels are used to communicate financial propositions including emails, newsletters and through website content. Main platform for the offline communication of the financial value propositions are through sales and help-desk teams. Sales team is responsible of a straight communication of these propositions accompanied with the material that is produced to support the communication. Consultants are responsible of non-formal co-operation of the financial propositions, whom organisation has hired in order to develop the software.

Active influencers were organisations that are working in a same industry and could provide additional data for the case company's software. These organisations did not have any direct influence on case company's processes or development but their work in related fields were seen as influence. One of the Interviewees brought up that one of the case company's employee is an individual influencer due to her work with customers. She has been doing most of the training with the customers and

therefore, had knowledge within the company that other ones did not have. Problems within the organisation were linked to some difficulties to deliver fast and efficient ways to work, which was related to tools available. In other words, lack of tools had an effect on employees work to deliver value propositions effectively.

The reporting service was seen as a financial value proposition which affected the value-in-use. These reports indicate changes in numbers and based on these changes, customer is able to optimize their processes and therefore, have financial benefit of using the service. Help-desk team participates also actively in delivering value-in-use, as they provide help for customers in daily use and problems with the service. Case company is proactively connecting customers in a case of problems and deadlines. The service itself gives also notifications of the possible problems and these are reviewed on a daily basis for the customers.

The main core of the financial benefits is related to the use of the software and linked to the knowledge and resources. Understanding the electricity consumption in a customer premises gives tools for a customer to make decision, which have reducing effect on consumption and gives tools to optimize the buying price, which correlates to the expenses related to consumption. One of the interviewees mentioned that the service development is alleged to create more opportunities for a financial benefit for the customer but process is still ongoing. Conversely, other interviewee communicated that there were no plans to develop the software to response better for providing solutions to create more financial benefits.

Similarly, to the value propositions on financial development, basics of the delivery of information are in the production. The customer is able to the sort the data to response better to specific customer issues and problems. The customers were included in co-creation of the new version of the software by listening to their opinions and considering alterations to make the service better. The customer has a co-producer role in the beginning of the contract where the organisation has the responsibility to provide all the relevant information for the case company. After this, case company is able to work with the data, and prepare reports. Communication of the financial propositions is focusing more in delivering the reports and training to use the software.

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Financial	Design: Reports communicates core consumption, costs and price changes Newsletter, email and website	Producer of resources: Software, includes processes that customer is not aware of	Formal: Helpdesk team Sales team is responsible of communication to customers Marketing material	Ongoing processes over time (value-in-use): Reports for customers	Online: Software as a core of service provided Electronic newsletters	Can Actively influence on customer's perceptions Service itself for organisations that haven't followed their energy consumption before
Knowledge gives tools to reduce consumption	Development: Service development to increase financial benefits is still in process	Value facilitator: Data from energy suppliers are stored into software, which gathers information into one place where data is easy to access and utilize	Non-formal: Consultants	Proactively, a role of an initiator: Notifications from possible problems are checked for the customer Reminding customers for important deadlines	Offline: Training Customer magazine	And repurchase intentions: Training, customer is able to emphasize problems/needs Leads are delivered to sales team Consultant services
Helps to buy energy with optimum price	Manufacturing: Possibility to influence through investments	Co-producer: Customer is responsible to deliver adequate start data	Active influencer: Co-operation with other organizations			
Deallocation of resources	Delivery: Consumption data	Co-creator: Customers are involved into development of the service by listening their needs and feedback	Individual: Employees with special skills and knowledge			
Prevention of accidents	Possibility to sort and filter reports and data for customer specific problems		Organisation:			

Table 2. Financial value propositions

Main platform for the case company to deliver the service is in the software and therefore online environment plays an important role in the value proposition creation. The software provided by the case company is the main source for the value-in-use. It provides reports, which are crucial in order to succeed in the delivery of the financial value propositions. Offline platforms, on the other hand, provides training to use the program or other related information is shared in a magazine, which is specifically created for the customers. One of the interviewees highlighted that training and customer meetings provided platforms for the offline communication. It was also mentioned that video material played a source of information for a customer to use the software, besides Skype and F2F meetings.

Both of the interviewees agreed that the customer perceptions could be influenced by service provided. Software itself would give tools for a customer who has not been concentrating on measuring electricity consumption before. Other interviewee emphasized that the training provided a place to understand customer's needs which then the case company could answer for. Similarly, consultation services had an important role to develop service and possible re-purchase. Sales leads are forwarded to the sales team either with phone call or via email. Emails are linked to the CRM and processed further. Email and phone calls were seen as faster and more efficient way to communicate leads than only through the CRM-system.

4.2 Strategic value propositions

The strategic value propositions are displayed in Table 3. These value proposition forms were linked to the possibility for a customer to answer legalization in the energy markets. This would free resources for the customer because service provides knowledge and resources to meet the regulations and further gives a customer the possibility to re-allocate resources within the organisation. Furthermore, ability to answer to the legalization creates opportunity for a customer to communicate corporate liability. Legalization in the energy markets is also an active influencer on the strategic value propositions. Politicians, which are responsible of these legislations, could be seen as an individual influencer for the strategic participating actors.

The case company is actively developing the software and its interface. Help-desk creates strategic benefit for the customer. Through provided service customer has

tools to make the right or better decisions on investments. Service is delivered through the software constantly and additional consultation services are provided for the customers.

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Strategic	Design:	Producer of resources:	Formal:	Ongoing processes over time (value-in-use):	Online:	Can Actively influence on customer's perceptions
There are certain electricity laws that organizations need to fulfil and provided service gives a tool for firm to develop their processes to answer for those laws	Development: IT delivers the functioning of service and UI	Value facilitator:	Non-formal:	Proactively, a role of an initiator: Participating in meetings considering changes in legislations like energy certificate	Offline:	And repurchase intentions: Communication only in customer magazine
Image, corporate responsibility	Manufacturing: With a help of Helpdesk team customer is able to make wiser investment decisions	Co-producer:	Active influencer: General legislations Legislation on the energy efficiency of buildings			
Service release resources which can be allocated into more important functions and processes	Delivery: Software as a core service, additional consultant services	Co-creator:	Individual: Politics Organisation:			

Table 3. Strategic value propositions

4.3 Functional value propositions

Functional value propositions are supported by the service provided by creating opportunities for the customer, to filter the data and sort information in a way that it creates data that is relevant for the customer. Therefore, it is easier to follow and notice changes in consumptions, spot possible problems and make decisions based on the data. One of the interviewees pointed out that when problems are discovered at the earliest stage it saves the customer's resources. The data itself is stored into one place and customer has easy and time saving way to access to it from one software.

The customer provides the beginning data for the case company. Other data is collected from, for example, electricity suppliers. All of the data is integrated into the software. In cases where customer has commit to reach the targets for the Energy Certificate, the case company's service enables the possibility for the customer to show development and compare data on different time periods.

Development of the software is concentrating into user interface, usability of the software is priority while core functions of the service stay unchanged. Developers of the software has the main responsibility in the development. In one interview, it was brought up that the other employees don't have possibility to influence the end result of the functionality of the software. In other interview it was highlighted that the different teams' needs and problems with the functionality are listened but the lead programmers are linchpin in the development of the functionality of the software. Employee in charge of the specific customer makes sure that when challenging metering in customer premises is taking place it is delivered in a sensible way.

The value proposition means of the functionality were described as; where case company has main responsibility as producer of the resources. While the organisation is in charge of the functionality of the service, consultation services are used as a developers of the functionality. Their services are used mainly for the coding of the software. The data gathered for the system comes from the different sources like the energy suppliers and subcontractors. Therefore, these third parties act as a co-producer of the functional value propositions. Problems with, for example, GSM –network effects delivery of consumption data, even when customer's metering systems are working, which creates problems that organisation has no control of.

Customers are included as co-creators of functionality by listening to their opinions and needs from the software, through workshops, customer meetings and by possibility to participate in pilot projects. It was also brought up that the customer has the opportunity to contact the case company via email to provide solutions and ideas for the development of the software. One of the interviewees highlighted that inside the organisation regular brainstorming sessions are held to improve functionality.

The case company is providing an additional service for other reports that cannot be created with the software in Excel form. These offline reports are prepared by using the data from the service but are made manually. There is also a possibility to create investment calculations for the customers to help making decisions on investments.

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Functional	Design: Core of the service unchanging but functionality is developed	Producer of resources: Main responsibility comes from the case company	Formal: Lifecycle team is able to do calculations for investments	Ongoing processes over time (value-in-use);	Online:	Can Actively influence on customer's perceptions Customer magazine includes success stories of using the service
Possibility to sort and filter information individually in terms of relevancy for customer. All data stored into one place. Time efficiency	Development: Core of the service unchanging but functionality is developed	Value facilitator: Developers from consultant services	Non-formal:	Proactively, a role of an initiator:	Offline: Customer is able to buy separate reports as a consultancy service from case company	And repurchase intentions:
Data consist of information send by customers, energy suppliers considering prices	Manufacturing: Developers are in charge, end result is in their hands	Co-producer: Suppliers, subcontractors, problems in metering could be caused by external service provider for example issues with GPS - networks	Active influencer:			
If customer has adhered for energy certificate long term data is needed to compare start to development	Delivery: Challenging calculations and calibrating are supported by team member in consumption places	Co-creator: Customers have been part of development by participating in pilots, survey for feedback, meetings, emails. weekly meetings with whole team within case company	Individual:			
Foresee problems and fix them early as possible			Organisation:			

Table 4. Functional value propositions

4.4 Symbolic, social and ethical value propositions

The corporate responsibility was brought up as symbolic value proposition. It was emphasized that energy is a widely talked issue and the case company's service provides tools to, for example reduce consumption of the electricity that could support the customer's image. Further, if customer wishes to profile themselves as an organisation that is concerned and willing to make an effort to create sustainable practices, communicating use of case company's service could create benefit. Moreover, it was highlighted in interviews that sustainability could create value for a customer but main responsibility of communication of this was within the sales team. The symbolic value propositions are also communicated in some of the marketing materials. Symbolic value propositions are presented in table 5.

Social value propositions are presented in table 6. The case company would only highlight their presence in LinkedIn for social interaction. One of the interviewees pointed out that there is no practice to collect all the service users together. Social interactions within company were seen important but not in the context of one product.

The case company don't communicate the ethical value propositions through service itself. Ethical practices are delivered more in an organisational level, for example, development of the service is in Finland, meters are not bought from China, where have been cases of child labour. The results of ethical value propositions are presented in table 7.

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Symbolic	Design:	Producer of resources:	Formal: Sales team	Ongoing processes over time (value-in-use):	Online:	Can Actively influence on customer's perceptions Customer magazine
Corporate responsibility	Development:	Value facilitator:	Non-formal:	Proactively, a role of an initiator:	Offline:	And repurchase intentions:
	Manufacturing:	Co-producer:	Active influencer:			
	Delivery:	Co-creator:	Individual:			
			Organisation:			

Table 5. Symbolic value propositions

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Social	Design:	Producer of resources:	Formal: Sales team	Ongoing processes over time (value-in-use):	Online:	Can Actively influence on customer's perceptions Customer magazine
LinkedIn, but no communication between customers	Development:	Value facilitator:	Non-formal:	Proactively, a role of an initiator:	Offline:	And repurchase intentions:
Social interaction doesn't feel comfortable in this sense with only one product. Important part of case company culture as a whole	Manufacturing:	Co-producer:	Active influencer:			
	Delivery:	Co-creator:	Individual:			
			Organisation:			

Table 6. Social value propositions

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Ethical	Design:	Producer of resources:	Formal:	Ongoing processes over time (value-in-use):	Online:	Can Actively influence on customer's perceptions
More in corporate level	Development:	Value facilitator:	Non-formal:	Proactively, a role of an initiator:	Offline:	And repurchase intentions:
	Manufacturing:	Co-producer:	Active influencer:			
	Delivery:	Co-creator:	Individual:			
			Organisation:			

Table 7. Ethical value propositions

4.5 Environmental value propositions

The results from the environmental value propositions are displayed in table 8. Environmental value propositions were seen more important than the ethical value propositions. These were linked straight to the energy efficiency which leads to possibility to track and follow consumption with provided service and further, to reduce and make processes more efficient. Besides lowering costs for a customer it also has reducing effect on emissions for the nature. One of the interviewee added the corporate responsibility and further, green energy as possible environmental value proposition. This was linked to the ability to compare development from, for example last year in carbon footprint. Additionally, cities that make commit to follow the energy legislation to reach the Energy Certificate as their own initiative could apply for a fund from Finnish Government.

The team asks for the required documents that are needed for the calculations for customer's consumption. The responsibilities are divided within the individuals by accounts but at the same time the whole team is participating in all processes. The key accounts have more consumption places, but higher volume of accounts are within the smaller organisations. One of the interviewer pointed out that she is actively working customer centric ways.

What? Value proposition forms	Where? Value proposition providers activities	How? Value proposition means	By Whom? Participating actors	When? Value proposition timing	Where? Participation platforms	Why? Value proposition motives
Environmental	Design:	Producer of resources:	Formal: Lifecycle team, newsletter	Ongoing processes over time (value-in-use):	Online:	Can Actively influence on customer's perceptions
Linked straight to energy efficiency, customer is able to follow and track consumption. Therefore it is easier optimize consumption and processes which relates positive to environment	Development:	Value facilitator:	Non-formal:	Proactively, a role of an initiator: Customer centred thinking	Offline:	And repurchase intentions:
Case company could profile themselves more as a supporter of environment issues	Manufacturing:	Co-producer:	Active influencer:			
Possibility to track and compare development from different time periods	Delivery: Key accounts have more consumption places but higher volume of accounts are from smaller organisations Key accounts have more consumption places but higher volume of accounts are from smaller organisations	Co-creator:	Individual:			
Government provides funding for cities if they are participating voluntarily getting Energy certificate			Organisation: Impulse from marketing communication			

Table 8. Environmental value propositions

5 Discussion

The main purpose of this thesis was to apply value proposition framework into case company's existing processes and further identify value proposition dimensions of EnerKey- service and find new opportunities for value propositions and co-creation. Results were derived throughout from literature reviews and from two in-depth interviews from the case company's representatives. Prior research on value creation is divided with two major research approaches: goods-based perspective (Vargo & Lusch 2004a, 11) and service dominant logic, which treats value creation as a customer driven process (Helkkula et al. 2012, 61, Vargo & Lusch 2008, 8). In this research value creation was investigated from a service dominant perspective using value proposition framework.

Value proposition framework is built on assumption that value creation process is not linear and value is always created by customer. The service provider can only offer value propositions that customers can later turn into value or by influencing the customer's value creation process through co-creation activities. (Grönroos & Voima 2012, 142.) Organisation's value propositions should represent the whole customer experience and reduce the risk associated with not meeting service promises (Rintamäki, Kuusela & Mitronen 2007, 630).

The analysis on the case company's processes revealed that service is developed around financial, strategic and functional value propositions. These value propositions could be viewed as intensive value propositions that engage actors into service (Chandler & Lusch 2015, 8). The core of the service is to provide data for a customer to reduce, improve and track electricity consumption. Based on the data provided to a customer, the customer is then able to make decisions on investments, redeem resources and optimise the buying price for electricity. These services are functional and financial because they propose value propositions that meet a customer's needs in terms of lowering costs and increasing convenience (Rintamäki, Kuusela & Mitronen 2007, 627), further enabling resources for other processes.

The main platforms to communicate the value propositions are through sales force, training and a newsletter/magazine. This supports the customer's ability to adapt and release value propositions linked with service into their processes (Vargo & Lusch 2004a, 11). Development of the service concentrates mainly on functionality of the service, meaning innovation is resource-based; it relies on resources that are being innovated and it focuses on achieving what a value proposition promises (Skålen et al. 2015, 39). Responsibility of the development of the online service is with the IT department and outsourced service for coding. Resources that are needed to develop the online service are bought from an external actor, therefore resource-based view (RBW) of co-production is taking place. A foundation on resource base view of co-producing is in exchange of knowledge between two different actors. (Chen et al. 2011, 1333.)

Customers were asked for suggestions and feedback about the service. Channels that were used for receiving feedback from the customers were e-mail, through customer meetings and workshops. Therefore, co-production relies heavily on constructive participation, where customer gives feedback on service and the organisation develops their service based on these suggestions (Gruen et al 2000, 37). This is in line with Ballantyne and Varey (2006, 344): distinction of co-production and co-creation. Co-production is an exchange of resources while co-creation is associated with creating something new and unique (ibid., 344). Customers had opportunities to be more involved with development and innovation processes by taking part, for example, in pilot testing. This could be linked with resource based view (RBW) of co-production which is determined by exchange of resources from organisations and other actors (Kor & Mahoney 2004, 184). Further RBW could be connected with organisation's processes that included other actors for resource exchange like energy suppliers, governmental regulations and outsourced IT-services.

5.1 Managerial Implications

The key managerial implications originating from this thesis serve as a basis for the case company to manage and identify new value propositions and co-creation activities. The research results may be interesting for other companies who seek to manage their value propositions and co-creation processes.

The customer's value creation process is not linear and value propositions that held a value for another might be insignificant for others (Grönroos & Voima 2013, 144 – 145), therefore value propositions addressed by the service provider should be based on understanding the customer's value creation process as a whole (Anderson et al. 2006, 2; Skålen et al. 2015, 2). Value propositions should be created from the perspective of experience of the service (Epp & Price 2011, 37) and it should represent the whole customer experience (Rintamäki et al., 2007, 630). Therefore, the case company should consider nature of their service and their customer segments. Crystallising these segments and further by investigating and analyzing these segments' value creation process could led to a realisation of possible new market segments and value propositions (Payne & Frown 2005, 172).

One of the case company's core value propositions is related with optimising and reducing costs related to energy consumption. The case company should substantiate these promises by backing up these claims: showing in numbers how EnerKey- service reduces and optimises energy related costs and distinct service from rivals; demonstrating how these differences compared to rivals are beneficial for the customer. (Anderson et al. 2006, 1; Rintamäki et al. 2007, 631.)

All operations should be created from the perspective of creating a real value for the customer (Rintamäki et al. 2007, 631). By understanding resources and lack of resources within company, management could distinguish knowledge gaps that could be crucial for development of the service and new value propositions (Payne et al. 2008, 93). Awareness of these gaps could led to a recognition of co-creation and co-production possibilities with other actors or guide human resources for training or hiring needs. Co-creation with other businesses could open new possibilities for EnerKey, including new service opportunities and adding resources and knowledge that the organisation itself is not holding at the moment. Finding these potential businesses would depend on EnerKey customers and understanding their core of business. Developing service based on those key areas of industries or customer needs would allow more opportunities for value proposition creation and co-creation.

Co-creation of value requires from the organisation skill to engage the extended enterprise by managing across and within customer and supplier value creation processes (Paynet et al. 2008, 93). In other words, co-creation transmits into business to

business and business to customer relationships. Managing co-creation process and engaging customers or business partners into meaningful co-creation requires understanding heterogeneity of each actor. Therefore, communication style and co-creation processes which generate good results with one customer, might lead to a disaster with another one (Paynet et al. 2008, 93).

Studies in co-creation emphasise engagement as an internal, rather than external sourced process (Grönroos & Voima 2013, 135). This also includes front line workers, as they are executing processes of value propositions therefore they could be seen as a part-time marketing persons (ibid. 2013, 146). Management's ability to communicate value propositions to their employees and employees' ability to communicate them to customers is crucial to developing successful value proposition and co-creation processes.

5.2 Credibility of the research

When conducting a qualitative research main concern of the validity comes to...*a question of whether the research sees what he or she thinks or thinks what he or she sees* (Kirk & Miller 1986, 18). In other words, researcher needs to be able to describe clearly how the data were interpreted, and these procedures and methods should be public and transparent. Further, to qualify the results and allow applied methods to replicate the research to reach for similar results. (Sinkovics, Penz & Ghauri 2008, 699.) See chapters 3.1 and 3.2 for more detailed explanation of the data collection and analyzing process of this research project.

The case study method approaches investigated topic from real life phenomena perspective. It focuses on theory construction and building of a new holistic and in depth understanding, explanation and interpretation of phenomena (Riege 2003, 80). There are four design tests: 1) Construct validity 2) Internal validity 3) External validity 4) Reliability to improve quality of case study design. Construct validity is associated with operational measures for the concepts that are under investigation. In case study researcher often has a close and direct personal contact with case company. Therefore, case study is viewed more subjective than other qualitative research methodologies. Therefore, researcher needs to make conscious effort during data collection and analysis periods to refrain from subjectivity to ensure validity of the

data (ibid., 80.) Author did not have any former relationship with the case company or respondents therefore, issues associated with construct validity could be avoided.

Internal validity is related with establishing phenomena investigated in a credible way. Researcher tries to find generative mechanisms, by not only emphasizing major patterns, similarities and differences between the respondents but also with identifying components that are significant against theory, and what mechanisms produced them. (Riege 2003, 81.) To enhance internal validity of case study according to Riege (2003, 82), using Miles and Huberman (1994) display of illustration and diagrams in the data analysis phase reinforce validity of the research project. Miles and Huberman (1994) framework of data display and analysis was applied for data analysis in this study. Tabular were used illustrate the patterns arising from primary data and components that were significant against the value proposition framework.

Case studies relays on analytical analysis and paatterns and findings are generalised to some broader theory. External validity should consider generalisation of the investigation and how finding mirrors to existent theory. (Riege 2003, 81.) According to Riege (2003, 83), Yin (1994) suggest that ensuring external validity, researcher can compare evidence from investigation to existing literature in the data analysis phase. Evidence from empirical research was compared with existing literature on value creation and value proposition framework was developed according to these findings.

Reliability is connected with demonstration of how research project and processes were carried out. Further enabling other researchers repeat the research and achieve similar results (Sinkovics, Penz & Ghauri 2008, 699; Riege 2003, 81). There are several techniques to ensure the reliability of the research project. To ensure the reliability of this study data collection and analysis were considered throughout the project. Miles and Huberman (1994) framework for data display and analysis was used to first reduce the data, second illustrate key findings and patterns and last by drawing a conclusion of the findings. Detailed documentation of the investigation and progress was implemented. Data was gathered from multiple sources; besides empirical evidence data was collected using external secondary sources.

5.3 Implications of Future Research

In the course of this research project possible new ideas for future research were discovered in the field of value creation. It was highlighted in literature that that there is only couple studies that has put emphasize on analytical analysis of co-creation (Grönroos & Voima 2013, 129). More research is called in ways for organisations to engage and co-create with customers. Especially in online environment, where elements from virtual reality is blended in user experience in real world.

Each value creation process by an individual is different and it contains parts that are unconscious and parts that individual has imagined. Therefore, research is called to understand value creation process across the different fields of studies. Most of the present work in service logic is qualitative therefore more quantitative research on topic to validate and conceptualise the framework should be carried.

5.4 Limitations of Research

Research is based on systematic way to collect and analyse data. It is not based on beliefs, research emphasizes logical relationships and is able to explain limitations of the research (Saunders et al, 5).

The first limitation of this research project is that it is restricted to one organisation and same time only into one geographical location. Therefore, it cannot be applied as it is to other locations or organisations without future research in different settings.

The second limitation is that both of the interviewees are in managerial position within the company. Research on topic has indicated that frontline workers and other personnel within the organisation has input in value proposition processes (Cadwallader 2008, 232).

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7 Appendices