KEMI-TORNIO UAS

Identifying value of e-commerce in the purchase process

Perceptions of organizational buyers in facility services

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CONTENTS

ABSTRACT

FIGURES

TABLES

ABSTRACT

Lopez, Tanja. 2011. Value of e-commerce in the purchase process. Master's Thesis. Kemi-Tornio University of Applied Sciences. Business and Culture. Pages 77. Appendices 1.

The objective of this thesis is to identify how B2B facility service buyers experience value of electronically supported purchase process. The main research question of this thesis is as follows: How does an organizational buyer experience value of electronically supported purchase process? The first sub-question is the following: What are the benefits and sacrifices and the mechanisms behind them? and the second sub-question is: How do the benefits, sacrifices and the mechanism link to the different steps of the purchase process?

Qualitative approach was chosen as the research method. Past research on the purchase process, e-commerce and customer value formed the theoretical background. A customer value framework by Klanac (2008) was used together with the purchase process steps to build a conceptual framework. The findings of the empirical evidence were analyzed value by value relating to the purchase process, on the basis of which the conceptual framework was completed. Due to the confidential nature of the interview information, the transcripts are not published in the Kemi-Tornio University of Applied Sciences Library Version. However, the supervisors have an access to a selection of interview transcripts.

Conclusions were drawn from the completed conceptual framework. The results of the data analysis are in line with the current research. However, conclusions distinctive to B2B services are argumented for. The empirical findings suggest that in facility services buyers perceive value of e-commerce differently in respect of creating new purchase opportunities and increasing price transparency. To extend, it is suggested that value of electronic support is emphasized in efficiency, competence and confidence.

To conclude, this thesis proposes areas for further research. The practical continuation of this thesis is proposed to be research into how the sellers can improve their e-commerce processes to increase customer value as argumented in this thesis.

Keywords: customer value, e-commerce, purchase process, B2B services, facility services

FIGURES

TABLES

1 INTRODUCTION

"The majority of customer experiences today start electronically"
(Holland & Young 2010, 64).

Holland & Young (2010, 64) above crystallize one predominant phenomenon, i.e. web communication, in the context of e-commerce. This citation with a reference to electronic communication is also one of the main motivators for this thesis which is identifying customer value in the electronic purchase process. In the following chapters this thesis is introduced thoroughly.

1.1 Motivation and research problem

This thesis is triggered by an observation that due to growing use of e-commerce, sellers are pressured to renew their knowledge of a customer. In general, the tendency in the business processes is towards digitalization and portability. Ideally, information should be designed to be accessed anytime, independently with any portable device. Consumers can already purchase almost any product or service online. Providers need to have their selling processes in such a format that a buyer is able to purchase their products or services using for example a laptop or a mobile phone.

Customers in general are becoming increasingly sophisticated and informed with all available information in the Internet. A buying process has already advanced when a sales person is aware of it. A sales person does not hold the power of information anymore in a negotiation situation. In addition, due to increased web communication sales people have fewer opportunities to schedule face-to-face negotiation. Customers in general no longer feel necessity of meeting sales people face-to-face. However, there is a danger of giving too much information over the Internet and still losing a deal to a competitor. (Trailer & Dickie 2006, 48-49.) According to a survey done in North America among customers responsible

for business-to-business purchases, sales representatives' biggest mistakes were not following up customers' buying process, not listening to customers' needs and not following up with customer's issues (Cotteleer & Inderrieden & Lee 2006, 20). These results may not only be due to growing e-commerce. However, they do support the observation that a seller should know the customer better.

In 2010 B2B e-commerce is estimated to be ten times bigger in value than B2C e-commerce (Laudon & Traver 2010, 1-18). In 2009 the B2B transactional value of total online sales was estimated to reach from 85% to 90% (Turban & King & Lee & Liang & Turban 2010, 237). There is little research regarding the value of electronically supported B2B purchase process in services, which provides the motivation for this research.

E-commerce can have many negative influences in a business, such as allowing more transparent competition in prices, opening the competition to a wider geographic area and creating difficulties in keeping proprietary rights (Porter 2001, 66). However, I believe that if a company first understands customer value in electronically supported purchase process and then takes that knowledge when developing electronically supported sales processes, they have better chances to get benefits rather than harm. Thus, the focus of this research is getting to the core of customer value in electronically supported purchase process.

The motivation for this thesis is also supported further by two other observations which are described in this chapter. Sales organizations in general are under pressure of making processes more efficient and e-commerce positively contributes to efficiency (Porter 2001, 70). Companies create increasingly complicated solutions, which include both the product and the service (Steward 2006, 10). Companies today are putting focus on customer orientation, which means that the sales people need to shift increasingly from sales to relationship management. According to a survey with Chief sales officers in various industries (Trailer & Dickie 2006, 48), 85% of the respondent companies increased their product line in variety and complexity, and entered in new markets over the past several years. Challenges that these changes create to sales organization include an extended period of making a new sales person productive, increased sales quotas per sales person and decreased sales support personnel. It should be fair to deduct that sales efficiency is

important. Porter (2001, 70) argued already in 2001 that the Internet is the most powerful means of increasing operational effectiveness. Adelaar & Bouwman & Steinfield (2004, 179) develop Porter's (2001) findings further and suggest that having synergies with online and offline channels have several positive effects in a company, such as efficiency in operations and improved customer relations.

To highlight, understanding customer value is central for sellers when redesigning sales processes to gain efficiency with e-commerce. Automated sales processes are implemented to make the sales process increasingly efficient (Trailer & Dickie 2006, 48-49). Common benefits that companies are looking for are better customer management and collaboration with customers, saving resources or utilizing them better and having better delivery times (Turban et al. 2010, 77). According to Levenburg's (2004, 322) findings, the Internet is possibly a necessary tool for customer focused companies. In Levenburg's (2004, 326) study of retailers' Internet use for business purposes, the data suggests positive impacts on net profits when using the Internet for purchase and post-purchase activities, however, not necessarily for increased sales. A research done with e-commerce B2C retailers by Chircu & Mahajan (2006, 905) found evidence in their five cases that companies that have lowered high importance transaction costs to a customer with e-commerce, have done better than companies that have lowered low importance transaction costs. This suggests that it is important not only to find where customer value comes from, but how significant that value is for a customer. In addition, Chircu & Mahajan (2006, 906) conclude that it is important that a company identifies the factors that would create value to the specific customer, with the specific product in an online channel. Not all products and customers find value in online purchasing.

The reasons for focusing on customer value in electronically supported purchase process in this thesis are discussed above. Even though this research focuses only on the organizational buyer's purchase process, the practical outcome of this research is to apply the findings and conclusions to improve sellers' e-commerce strategy. Once the customer value is defined, a seller can find the synergies between a customer's purchase process and the seller's processes. Recognizing synergies between a customer's and a provider's process can bring greater value. The Merriam-Webster (2011) dictionary gives the

following definition for the word ‘synergy’: “a mutually advantageous conjunction or compatibility of distinct business participants or elements (as resources or efforts)”. A case study of click-and-mortar firms identifies many synergies when integrating offline and online channels, such as leveraging the brand, targeted offers and time and cost savings both for customer and seller (Adelaar et al. 2003).

Figure 1 below visualizes how purpose and motivation trigger the research problem which in turn generates the objectives for this thesis. The objectives, once analyzed, are targeted as input for service providers.

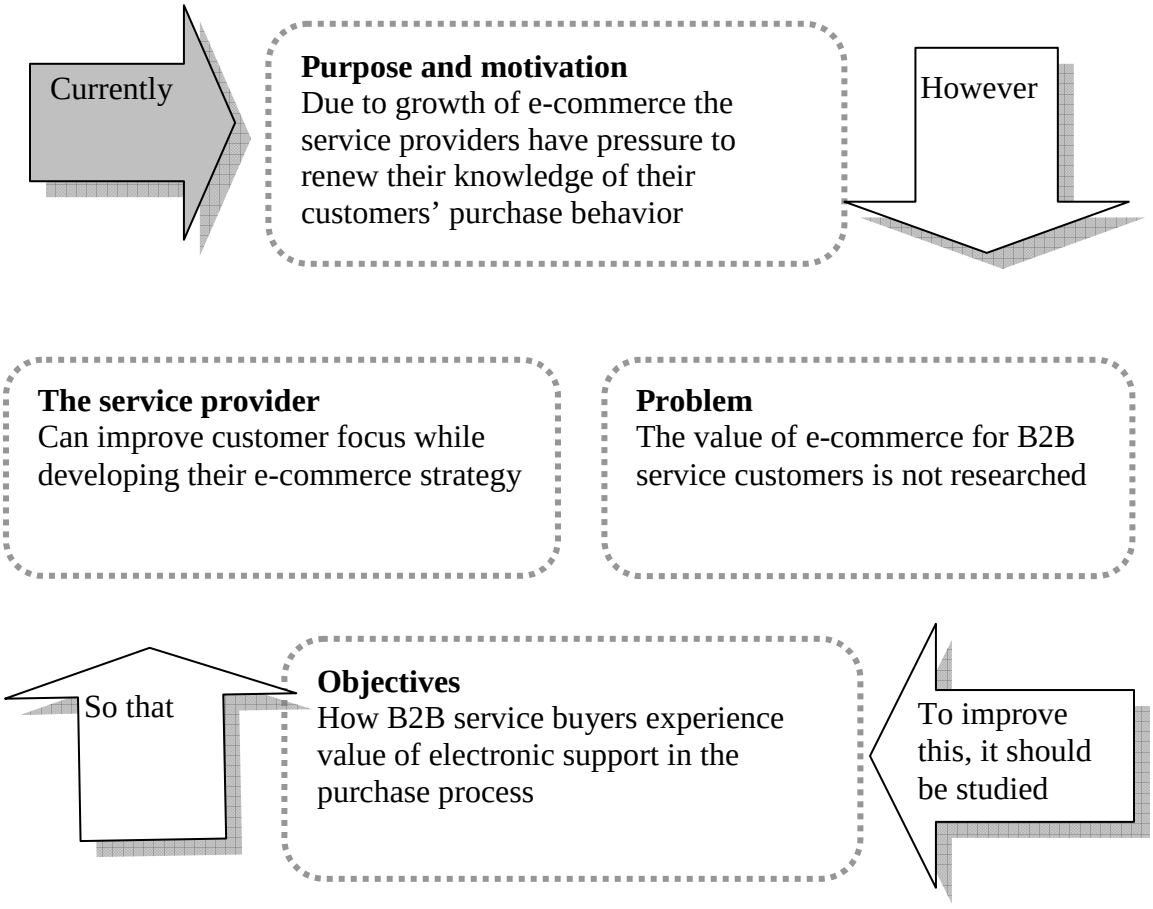

Figure 1. Positioning of the research problem

To conclude, e-commerce is central to business operations. Hence, it is important to understand customer value of e-commerce. However, in B2B services customer value research is neglected, which forms the research problem of this thesis. When approaching facility services industry which is the specific focus in this thesis, the research problem cascades and magnifies as follows:

- There is little research on customer value of e-commerce in B2B services.
- There is currently no research published on customer value of e-commerce in facility services. Facility services in relation to the scope of this thesis are discussed in more detail in Chapter 3.1.2.

1.2 Objectives, scope and research questions

The objective of this research is to identify the value to an organizational buyer of electronically supported purchase process in facility services. In this study customer value refers to value experienced by an organizational buyer. It is important to understand customer value to build competitive advantage (Lichtenthal 1997, 224). The outcome of this research should have clear and practical elements that demonstrate the value and what it means. The major elements of customer value are expected to be in the areas of time saving and convenience. The bigger elements are expected to be broken down to smaller components that can make practical sense. Turban et al. (2010, 241) describe service related e-commerce being used to cut service costs by self servicing and offering enhanced customer service with innovative solutions.

The aim of this study is to express how organizational purchasers experience value of electronically supported purchase process in the service sector. This thesis searches for the practical aspect by modeling values against benefits and sacrifices, tools and the purchase process.

The main research question of the study is:

- How does an organizational buyer experience value of electronically supported purchase process?

Contributing to the practical relevance and applicability of the main question, the complementing sub-questions are:

- What are the benefits and sacrifices and the mechanisms behind the value?
- How do the benefits, sacrifices and the mechanism link to the different steps of the purchase process?

Qualitative methods are used to arrive at conclusions concerning the above presented research questions. The conclusions are supported by previous research and 5 case studies conducted through five interviews.

This research focuses on customer value, electronic commerce and the purchase process. The literature review includes research both on products and services including business buyers and end customers due to the scarcity of research directly on e-commerce in B2B services. Electronic commerce does not include discussion on technical aspects as they are not in a central role of this thesis. Sales and marketing processes are not discussed as the objective of this thesis is to find value experienced by the buyers in the purchase process.

Business to business services and facility services form the detailed focus in this thesis. Companies in general focus increasingly on the core activities and outsource non-core functions. Companies buy a variety of services from cleaning to IT. Even though product sales and purchases electronically have become everyday life, services have lacked behind. (Kiinteistöpalvelut 2010.) The empirical research is concentrated in the capital area of Finland due to reasons of manageability of the research.

1.3 Key terms and definitions

Several terms and their definitions have developed around electronic commerce. Table 1 illustrates the summaries of the key terms and their definitions used consistently throughout the research.

Table 1. Key terms and definitions

Term	Definition
Customer value	In this thesis, customer value refers to the value experienced by a customer within the customer's processes. Value that a customer creates for a seller is not part of this research.
Electronic	Any information that is transformed in a digital format is considered electronic in this thesis.
E-commerce	"The use of the Internet and the Web to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals" (Laudon & Traver 2010, 1-8).
The Internet	The Internet is a worldwide network of computer networks built on common standards. In addition to computers, other wireless devices such as phones are connected to the network. The Internet links different parties and makes possible services like file transfer, e-mail, shopping and instant messaging. (Laudon & Traver 2010, 1-20.)
The Web	The World Wide Web (the Web) provides access to the Web pages, which made the Internet commercially interesting. The Web made possible a communication infrastructure and information storage system with colors, voice and video. (Laudon & Traver 2010, 1-20.)
Business/Organizational buyer	A person purchasing for a company is referred to as 'a buyer' or 'a purchaser' in this thesis.
Individual buyer	A person purchasing for individual use is referred to as "an individual buyer".
Customer	In this thesis a company that purchases services is referred to as "a customer".
Company	In this thesis a company that provides services is referred to as "a company", 'a seller', 'a provider' or 'a vendor'.
Click-and-mortar firms	Companies that have added e-commerce as an additional marketing channel in addition to a physical organization are usually referred to as brick-and-mortar firms (Turban et al. 2010, 48).
RFP	Request for proposal

In this thesis through chapters 1, 2 and 3 'a customer' and 'a company' refer to companies in general. In chapters 4 and 5 where case studies are described and analyzed the case

companies are referred to as ‘the company’ or ‘the buyer’ and their providers ‘the seller’ or ‘the provider’. A term ‘electronically supported purchase process’ is used when referring to digitally enabled transactions in the purchase process. The term ‘e-commerce’ is used when discussing the phenomenon of digitally enabled transactions between organizations in general.

1.4 Research strategy

According to the process of abductive approach (Thietart 2001, 54) this research is initiated based on observations and then deepened with theoretical background. The empirical research in this thesis focuses on facility services. Thus, existing research on customer value of e-commerce is extended. Extending research to a new area suggests that the findings may bring something new to the field. Dubois & Gadde (2002, 559) argue that an abductive approach can be productive when trying to discover new ideas and make new models. Theoretical background is searched in the previous research including customer value, e-commerce and the purchase process. The previous research provides a framework on which the empirical findings are constructed. A customer value framework of website communication by Klanac (2008) is chosen as the principle framework. Klanac’s (2008) framework is combined with the purchase process steps, based on which the empirical research results are modeled. Using case studies constructed by five interviews with facility managers, this thesis finally completes the model demonstrating the value of electronic communication in the purchase process in facility services.

Due to inadequate research of customer value in B2B services, the theoretical background of this thesis consists of customer value research in both products and services in customer and business markets. Customer value aspect is supported by research on e-commerce and the organizational buying process.

Qualitative research methods are chosen for this thesis. Quantitative research by nature is focused on searching the common laws through numbers, and suggests that it is objective and disregards the factor of an individual. Qualitative research, on the contrary, recognizes

the subjective nature of individuals and events (Gummesson 2006, 173) and seeks for depth of information over breadth (Blaxter & Hughes & Tight 2006, 60). This research uses qualitative methods as experiencing customer value is highly sensitive and influenced by individual traits and events. The chosen methods are discussed in more detail in Chapter 3.

1.5 Structure

Chapter 2 reviews and summarizes findings of previous research and forms the theoretical background. This theoretical background focuses on three essential areas which are e-commerce, the business buying process and customer value. Chapter 3 presents the research approach which includes the methods used and the rationale of the field research. Data analysis in chapter 4 presents the case studies included with data analysis. In Chapter 5 the analyzed data is concluded and discussed for implications. Appendix 1 includes the complete questionnaire of the field research.

2 LITERATURE REVIEW

This literature review visits and discusses previous research made in the main focus area of this thesis. The main focus includes customer value, the business buying process and e-commerce. As customer value is central to this research, all topics are discussed in the context of customer value.

Below in Table 2, the key literature essential to this thesis is summarized. As can be observed, benefits of B2B e-commerce have sufficient attention in literature from various angles. However, there is little literature regarding benefits of e-commerce in purchasing B2B services. The literature regarding services is only concentrated on finance, brokerage and insurance services. Supported by the literature below, this thesis forms a framework which provides the basis for analyzing the case studies in Chapter 4.

Table 2. Key literature supporting this thesis

Author	Approach	Description
Klanac (2008)	Customer value of B2B website communication	Forms a customer value framework in B2B website communication
Foster (2005)	Value creation in B2B digital relationship	Forms a framework for understanding value creation in a buyer-seller web communication
Turban et al. (2010, 77)	Benefits of B2B e-commerce	Lists benefits of e-commerce to organizations and their mechanism
Turban et al. (2010, 254-255)	Benefits of e-procurement	Lists benefits of e-procurement to sellers and their mechanism
Turban et al. (2010, 241)	Service industries online B2B	Describes B2B services with the most online presence, travel and hospitality, real estate, financial services and financing
Laudon & Traver (2010, 12-10)	Internet-supported B2B procurement transactions	Describes B2B procurement process with internet supported transactions and systems
Laudon & Traver (2010, 9-33)	Service industries online	Describes services with the most online presence, financial, mortgage, insurance, real-estate, travel, recruitment and their benefits of internet presence
Roberts (2003, 103)	B2B purchase transaction process	Describes transactions costs of making B2B purchases
Ojasalo (2010, 35)	B2B services purchase process	Describes how organizations purchase services

2.1 E-commerce

Customer value, the purchase process and B2B aspects are mirrored throughout this chapter. This chapter is important in two ways. First, relevant directly for this research is to understand what e-commerce means. Second is the applicable aspect, which means the development of e-commerce, its current size and trends worldwide. For companies it is important to have continuity for their investment. Thus, it is important to have evidence on sustainable ways to apply the findings in this thesis into developing the sales process and tools.

2.1.1 Why B2B e-commerce

B2B e-commerce means transactions made electronically between businesses. The main reason that electronically made transactions are increasing over offline transactions is that online transactions create benefits both to buyer and supplier. The benefits are often related to savings in time and money, reduced delays and improved collaboration, which in turn allow the businesses to gain competitive advantage (Turban et al. 2010, 242.) Sacrifices occur due to user problems, security concerns and costs from implementing technology (Turban et al. 2010, 76). The sacrifices are summarized in Table 3.

Table 3. Sacrifices of B2B e-commerce (Turban et al. 2010, 76)

Sacrifices
Resistance to new technology
Implementation difficulties
Security concerns
Lack of technology skills
Cost of implementation

The business buying process is more complex and lengthy than the consumer buying process with a lot of paper work, many persons involved and purchase items that need to be

described in detail. Due to these complexities, supporting the process with electronic technologies has many opportunities of eliminating paper, reducing errors and accelerating the whole process (Roberts 2003, 103.) Collaboration internally and externally also is more efficient when facilitated electronically (Laudon & Traver 2010, 12-8). Holland & Young (2010, 30-31) argue that the revolutionary aspect in communication is that a buyer can take many steps without the effort of having to make an appointment with a seller organization and having to spend time with sales person. A buyer may find prices in the Internet and enough product or service information and the credentials of sellers. A buyer can even short list sellers before talking to any of them. Roberts (2003, 103) discusses also in detail different opportunities for cost reduction in areas such as search, communication and monitoring. Businesses have extensive needs to monitoring their purchases for example in terms of fulfilling the promised quality and correctness of invoicing. In some instances, businesses also need to provide reports to government or other organizations for complying different criteria set for safety and environment. Automated reporting reduces not only the costs of monitoring, but also saves time and reduces errors. (Roberts 2003, 103.) The benefits of B2B e-commerce are summarized in Table 4.

Table 4. Benefits of B2B e-commerce

Laudon & Traver (2010, 12-8)	
	Lowers administrative costs
	Lowers search costs
	Lowers transactions costs by eliminating paper work and process automation
	Increases opportunities for collaboration with suppliers
	Creates greater price transparency
Roberts (2003, 103)	
	Eliminates paper
	Reduces errors
	Accelerates the whole process
	Lowers search costs
	Lowers communication costs
	Lowers monitoring costs
	Supports easier price and product comparison
Turban et al. (2010, 242)	
	Creates new purchase opportunities
	Eliminates paper and reduces administrative costs
	Expedites processing and reduces cycle time
	Lowers search costs and time for buyers to find products and vendors
	Increases productivity of employees dealing with buying
	Reduces errors and improves quality of services

Makes product configuration easier
Reduces inventory levels and costs
Reduces procurement costs
Facilitates customization via configuration
Provides for efficient customer service
Increases opportunities for collaboration

In addition to gaining competitive advantage, it should be considered that another driver to engage in electronically supported transactions is the fact that the environment is increasingly electronic. It is increasingly a must for businesses to engage in e-commerce in all different business areas as the world around does so. Below the size and growth of e-commerce are described in monetary value and as a percentage of total sales in the U.S, in the European Union and in Finland between 2002 and 2010. The practice to describe the size of e-commerce varies from country to country and therefore the figures are not directly comparable. However, the size and growth can be deduced from these figures.

- The U.S. manufacturers' sales branches and office sales e-commerce in 2008 accounted for 31.8 percent of total sales. In monetary value it counted for 542,758$ million. The durable goods held slightly more (33.8%) than nondurable goods (30.2%). (U.S. Census Bureau 2010b.)
- According to the U.S. 2008 Service Annual Survey, e-commerce comprised 2.1 percent in 2008 in selected services revenue, in monetary terms it counted for 146,486$ million (U.S. Census Bureau 2010a, 1).
- E-commerce of total retail trade in 2008 counted for 3.6 percent of total retail sales, or 141,890$ million (U.S. Census Bureau 2010a, 3).
- Value of e-commerce between 2002 (U.S. Census Bureau 2005) and 2008 (U.S. Census Bureau 2010b) has increased as demonstrated below:
    - From 21.2% to 39.3% in manufacturing shipments
    - From 13.8% to 16.3% in wholesale trade
    - From 1.4 % to 3.6% in retail trade
    - From 1.2% to 2.1% in revenue of selected services.
- In the European Union enterprises, the turnover from e-commerce in 2010 counted for 14% of the total turnover. In Finland this figure was 18 percent. (Eurostat 2011.)

- In Finland e-commerce as a percentage of the companies' turnover increased between 2006 and 2008 from 14.1% to 16.5% (Tilastokeskus 2011a).
- In 2009 in Finland 81 percent of the companies' electronic commerce was made between businesses, and 19 percent to individuals (Tilastokeskus 2011b).

Despite of rapid growth of e-commerce, most products traded online are materials for maintenance, repair and operations. Purchasing B2B services is still rarer and has little attention in the literature. The most electronically traded B2B services are travel and hospitality services, real estate services, financial and online financing services (Turban et al. 2010, 241). E-commerce has developed rapidly since 1995. The first types of e-commerce were publishing and promoting. From there the activities developed to online ordering in 1997, e-marketplaces and customization in 2000, customer relationship management (CRM), supply chain improvements and e-learning in 2001. In 2002 and onwards e-commerce developed with social computing, supplier-buyer collaboration. The most recent development in e-commerce is B2B social networking. (Turban et al. 2010, 238.)

Figure 2 below summarized the essential business reasons for B2B e-commerce. In this research these reasons support the argument that B2B e-commerce is important in services as well. Thus, e-commerce in services should be studied further as done in this thesis.

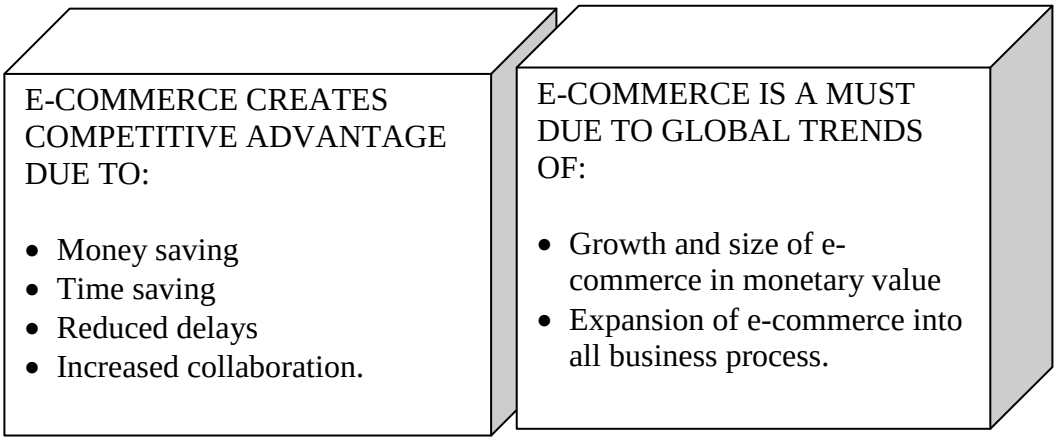

Figure 2. Summary of reasons to engage in e-commerce

Relevant in terms of customer value, it is important to look at the characteristics of e-commerce and what is its value delivering mechanism. E-commerce is not bound to geography and it makes real time information flow possible. The global reach removes national boundaries and gives access to information anywhere. Real time information flow makes possible instant searching and connecting value networks and social networks. The Web has evolved to a complex environment that enables sharing not only data in variety of formats, but the Web also facilitates social interaction. Instant information exchange and social networks are significant for companies due to a change in the balance of power. With the social networks facilitated by the web, customers gain easily access not only to competitor information, but more importantly to evaluations and recommendations from other customers. Gaining access to information is just one of the benefits to customers, and one of the opportunities to companies. In addition, e-commerce reduces information costs and increases its quality. (Turban et al. 2010.) Social computing is the following level in e-commerce. It is generally called the Web 2.0. This adds the social networking aspect to the Web interaction. The emphasis of traditional e-commerce is on making processes increasingly efficient and cutting costs. The Web 2.0 enables connecting people and facilitating exchange of information and opinions through blogs, wikis and other platforms. (Turban et al. 2010, 55-56.)

2.1.2 E-commerce in the purchase process

Directory services and search engines are ingeneral the most visible e-commerce applications. Invoicing is becoming increasingly electronic every day. Smaller companies are already pressured to provide an electronic invoice for a bigger buyer. Electronically facilitated comparison and voting give transparent possibilities for a buyer to evaluate suppliers. Partner relationship management (PRM) technology helps sellers to service their customers better. With new e-commerce technologies a buyer can have access to the supplier’s inventory report, the buyer’s own purchasing history, chat rooms and bulletin boards. The PRM communities do not only connect one buyer and supplier, but may connect a whole community including the end customers. (Turban et al. 2010, 271.)

Porter (2001, 75) uses the value chain as a frame to describe the most substantial on-line applications. Interpreting these from a buyer's side, electronic support provides various benefits in marketing and sales and after-sales service. Table 5 below summarizes the benefits.

Table 5. Substantial on-line applications in Marketing and Sales and After-Sales service

Marketing and Sales	After-Sales Service
• On-line channels and marketplaces • On-line quotes • On-line product configurator • Tailored marketing • Real-time feedback.	• On-line support of customer service representative through e-mail response management, billing integration, co-browse, chat, "call me now", voice-over-IP and other uses of video streaming • Customer self-service via the Web sites and intelligent service request processing including updates to billing and shipping profiles • Real-time field service access to customer account review, schematic review, parts availability and ordering, work-order update, and service parts management.

Communities can help to find new business partners, improve communication with the business partners and be used as a feedback channel (Turban et al. 2010, 271). Holland & Young (2010, 34-36) describe an occasion of successfully hiring a learning specialist through the hiring company's Linked In connections. A buyer can also use communities to alert sellers for upcoming needs and creating awareness of customer value. B2B portals are platforms for exchanging information and transactions between businesses. In the facility services in Finland for example Tampuuri, at www.tampuuri.fi, offers a platform that connects the facility managers' providers to the same platform. In this platform the facility manager can manage and follow up the services. A portal can consist of communication tools, auctions, community services and may support buying (Turban et al. 2010, 265).

For smaller companies there are online solutions to aggregate demand in order to negotiate better prices and services. Aggregating demand is supported by a third party who gathers the demand online, and further negotiates for aggregated needs offline or online (Turban et al. 2010, 258). There are electronically supported possibilities to make requests for

proposals (RFP). The simplest solution which can be observed in many companies' online presence is a form that is requested to be filled out with the basic information of the service need. The form is then submitted and the customer is left with an automated message to wait until a seller contacts them.

Automated pricing tool on a website is another electronically supported application. Automating pricing requires careful planning and strategizing from a service provider. A customer can calculate a price, or an estimated price, for a service in an instant. According to my observations, industrial service sellers and buyers tend to undervalue this automated pricing due to complexity of service contents and tendency for customers to have unique individual needs.

Online supported reverse auctions provide a sophisticated RFP process. In a reverse auction, a buyer specifies service or product parameters and releases the specifications to an auction portal for bidding. Chosen providers are then invited to participate the bidding. Reverse auction requires careful planning from a buyer in order to get satisfying results. There are various benefits of reverse auctions, but also downsides. Schoenherr & Mabert (2007) have studied the benefits and downsides to demonstrate their validity. Possible price reduction is one of the benefits due to reverse auction allowing open competition. However, case studies (Roberts 2003, 110-113; Schoenherr & Mabert 2007, 374) argue that there are many other attributes to the process than seeking just the lowest price. Preparing an auction takes careful planning from a buyer whose goal is to find a longer-term partner. A long-term partner is expected to have attributes that correspond to a buyer's needs. In addition to approximating the true market price, a buyer can expect finding new providers and getting other process efficiencies in the bidding process.

E-procurement refers to technologies developed for procuring purposes. A buyer can buy an electronic solution for particular purchase needs or for the whole purchase process. Alternatively, a buyer company may develop their own system. (Quesada & González & Mueller & Mueller 2010.) Firms such as Ariba provide e-procurement solutions tailored for service purchasing needs.

Customer support can be made easier and faster with electronic support. Not only are there web-forms that a customer can fill out and send to the provider, but instant chats providing real time customer support are also emerging. For an example, please see at Akamai's Web pages at www.akamai.com.

2.2 The business buying process

The purpose of this chapter is to describe the purchase process as it is understood in this research. The objective is to break the process into understandable and analyzable pieces, and discuss the nature of each step. Differences between an individual buyer and an organizational buyer are discussed. Additionally, the process steps are discussed in relation to customer value and in consideration with prevailing trends in the e-commerce technology. An end consumer is referred to as an individual buyer and a person making purchases for a company is referred to as an organizational buyer or a business buyer.

2.2.1 Organizational buying behavior

Organizational purchase is a complex process during which there are often multiple people with different roles involved with decision making at different stages (Webster & Wind 1996, 52). Characteristic to the business buying process is that it often involves frame contracts. The frame contracts are used especially when service needs are of bigger value and repetitive in nature. The frame contracts are negotiated using more time and effort and going into deeper details in each process step. Once having a frame contract, repetitive purchases can be made with less process steps with a selected provider. Complexity and price of a product or service influence the purchase steps. (Kotler & Keller 2009, 225-226.)

There are a few differences between an individual buyer and an organizational buyer. While an individual satisfies only their own needs while making purchase decisions, an organizational buyer satisfies those of the organization and their individual needs

Organizational buyers are predominantly risk averse, which shows in a buyer's personal buying behavior. Assessing a service may take time due to assessing risks involved. (Webster & Wind 1996, 54.) In regards with the purchase process, in an organization many people are typically involved with a purchase in different stages of the process (Palmer 2005, 120-123). The group of people involved with a purchase is often different in each purchase decision (Ojasalo & Ojasalo 2010, 35). The involvement of many people makes the organizational purchase process longer. Organizations tend to have formalized purchasing routines, going through official offer evaluations and making frame contracts that outline the terms for further smaller purchases. Organizational and individual buyers are likely to emphasize different factors in the service. While an individual buyer emphasizes the price, an organizational buyer focuses on reliability and performance. (Palmer 2005, 129-131.)

As mentioned, there are various people involved with the purchase process during an organizational purchase. Webster & Wind (1996, 56) categorize the roles of purchasing in their research into user, influencer, decider, buyer and gatekeeper. The user is the end user of the purchase. The influencer holds expertise for needed specifications of purchases and can influence by evaluating different options. The decider holds the power to make the final purchase decision. The gatekeeper, for example a secretary, filters information before passing it on. (Webster & Wind 1996, 56.) In addition to the roles within the purchasing company, different types of communities that may influence the purchase process have emerged with the technology. The communities may consist of buyers, sellers, partners, sub-contractors and associations (Turban et al. 2010, 274-275).

Webster & Wind (1996, 54) add to the decision making roles three more variables that influence the purchase decision making; social, organizational and environmental. Environmental factors manifest in constraints and opportunities, as in availability of goods or services. Environmental factors influence the organization's behavior by rules and policies. The organization in turn affects the individual's behavior, which already mentioned, makes the difference between an individual and organizational buyer. An organization sets up policies, processes and creates the prevailing working climate. Turban et al. (2010) observe that buying organizations today often have advanced expectations

from technology and requirements on vendors' sales processes. The social variables influence the interaction between the different roles within a company and between a purchasing and providing company's roles (Webster & Wind 1996, 54).

Sheth (1973) examines industrial purchasing behavior on three levels. He starts his model with the expectations of individuals participating in the purchase process, such as purchasing agents, engineers and users. The expectations of these individuals are influenced by the information that the individuals have received regarding the product or service, the individuals' own background, previous experience with the purchase and their own perception of the received information. On the second level the industrial buying process affects the buying behavior. The industrial buying process is defined by the factors related to a product or service, and those related to a company. The third layer in Sheth's (1973, 51) model is conflict resolution, where he examines the forces of interpersonal decision making.

This thesis is focused to identify the value only from a buyer's perspective. A buyer operates in an environment where all the above identified variables of Webster & Wind (1996) and Sheth (1973) influence a buyer's purchasing behavior. In addition, Webster & Wind (1996, 57) demonstrate five individual-bound traits influencing a buyer's behavior; personality, role set, motivation, cognition and learning. However, Webster & Wind (1996, 57) state that the social, environmental and organizational variables have often more influence to the purchase decision than the personal traits. Therefore, it may be reasonable to deduct that a buyer's value perceptions are better explained by social, environmental and organizational variables rather than the personal traits. For example, if a buyer values automated paying process, he would not necessarily give credit to a provider for it unless the organization also had a policy for preferring vendors that do offer automated payment. Webster & Wind (1996, 57) suggest that risk-averse behavior of buyers is explained to occur due to a mixture of organizational, social and personal variables avoiding uncertainty. Furthermore, the uncertainty is best tackled with information-gathering.

While this research focuses only on value perceptions of a buyer role, it is interesting to keep in mind that this role's perceptions are not the only ones affecting the buying process.

All other roles involved with the buying process perceive value and excluding those is one limitation of this study.

2.2.2 The stages in the buying process

The business buying process starts from the problem or need recognition and continues with describing the need, specifying the product or service and searching the supplier. Once desired suppliers are found, they are approached by a proposal solicitation. The received proposals are evaluated, the supplier is chosen and contract terms are specified. The purchase process is not complete until the purchase is reviewed and its delivery evaluated against the original needs and contract terms. (Kotler & Keller 2009, 233-238.) Table 6 describes the purchase process steps. The presence of e-commerce affects this process. The literature regarding organizational purchases does not suggest that the purchase process steps would have changed due to e-commerce. However, the environment and the tools have changed. E-commerce has impacted the techniques that buyers utilize and the balance of power due to easier access to information, enabling new providers and substitutes, price competition, easier purchasing and easier provider finding (Porter 2001, 70). The information availability online increasingly gives a buyer power (Holland & Young 2010, 28-31). Online B2B reverse auctions have increased in product and service procurement since first introduction in 1990's (Schoenherr & Mabert 2007, 373).

Turban et al. (2010, 253) describe the major activities of a purchase that range from searching items to budgetary control. These activities are detailed in Table 6. Non-value-adding tasks such as data entering, correcting errors in paper work, expediting delivery and solving quality problems take much of a buyer's time. In addition to these, traditional purchasing has other inefficiencies such as delays and paying too much for non-planned purchases. (Turban et al. 2010, 252-253.)

Need or problem recognition is described as the initiator of the business purchasing process. At this stage a company recognizes a need for purchase (Kotler & Keller 2009, 233). E-commerce can support recognizing the need in terms of alerting a buyer of their

becoming need. Being able to alert the customer, the provider is required to proactively design and plan how to communicate the emerging need to their customer. Services that can be remotely monitored, can send a becoming service alert to a customer. Other services that cannot be monitored remotely can be communicated to a customer based on seasonal peaks and other external stimuli that can be expected. The distinctive feature in this stage is that the need in B2B value chain tends to fluctuate strongly based on the end consumer needs (Ojasalo & Ojasalo 2010, 39).

During product or service specification a buyer specifies the service or product needed. A provider can support this electronically by having information available regarding the value that the service or product brings to a buyer. (Kotler & Keller 2009, 233.) The objective of a buyer is to define specifications that best fit their need at the lowest price. E-commerce can support the buyer's objective by providing clear information of the service in a format that is understandable and relevant to several different roles in a buyer organization. At this stage more than one person may already be involved with assessing the need. Ojasalo & Ojasalo (2010, 39) add that the specifications are usually very detailed and quantities carefully planned in order to avoid excess stock. Also, at this stage there are usually several other roles involved such as users of the product or service and technical experts.

The objective of supplier search is to find the best supplier with the best conditions. Information is retrieved from references, personal contacts, recommendations and brochures. A buyer may skip supplier search step if satisfied with an existing supplier, or if the buyer has formed a strategic partnership with a specific supplier. (Ojasalo & Ojasalo 2010, 39.) Porter (2001, 66) identifies use of marketplaces, auctions and buyer-seller matching as significant applications of e-commerce for supplier search. After the actual search, possible suppliers are evaluated and a few are selected for proposal solicitation. Schoenherr & Mabert (2007, 381) observe the importance of the background work of qualifying vendors carefully before selecting for bidding. In reverse auctions, the need for qualifying vendors increases substantially, which is an advantage since in traditional supplier search and proposal solicitation vendor qualification is often neglected. Case studies suggest (Schoenherr & Mabert 2007, 376) that the significance of supplier qualifications increases before selecting them for bidding.

In the proposal solicitation step a buyer asks for proposals from the selected suppliers. The more costly and the more complicated the purchase is the more information is needed (Kotler & Keller 2009, 234) and longer written specifications made (Ojasalo & Ojasalo 2010, 40). The significance of online reverse auctions for the traditional purchase process model can be seen in the supplier search and proposal solicitation. In reverse online auction a buyer submits the RFP after specifying the product or service, and providers are requested to bid in an online environment against the specifications. The online environment makes the bidding process transparent, which affects the bidders directly. In addition, the nature of the negotiations may change due to setting the price in the bidding. Having set the price in the bidding phase, the negotiation can concentrate on the service or product itself. (Turban et al. 2010, 255.)

A supplier is selected against certain criteria that a buyer has defined. Price and quality may be only part of the criteria (Kotler & Keller 2009, 235). Other criteria are experience and size of the supplier, reputation, location and references (Ojasalo & Ojasalo 2010, 49). A vendor can support the selection process electronically for example by providing tailored information to a buyer and emphasizing the values and criteria that a buyer is looking for. In addition, if a buyer values environmental friendliness, the supplier can automatically emphasize the environment in tailored electronic communication with the customer. Ojasalo & Ojasalo (2010, 40) bring forth that also in supplier selection there can be several roles involved, who make decisions based on their motivations, rational selection criteria as well as emotions.

Order-routine specification describes how and when the products or services are delivered. The delivered products or services are examined, paid and fed into the system (Ojasalo & Ojasalo 2010, 40). A blanket order can also be made. The blanket order describes conditions for continuous smaller purchases during longer-term (Kotler & Keller 2009, 238) and eliminates supplier search and proposal solicitation steps during negotiated duration of the blanket order. The distinctive feature of this process step is having various hidden costs which buyers try to reduce or eliminate with electronic systems and strategic partnerships (Ojasalo & Ojasalo 2010, 40).

Performance review may provide critical information for a buyer to decide for further purchases (Kotler & Keller 2009, 238). E-commerce could support the performance review process for example by providing the same platform for a buyer and a seller to monitor the performance. Purchase, inventory and forecasting systems that are linked with the suppliers' systems, are amongst the most notable purchase applications of the Internet identified by Porter (2001, 75). These interlinked systems facilitate for example reporting provider's performance. Performance reporting may consist of evaluations of communication, flexibility, timeliness and reliability, how the product or service fits the expectations, and the quality of a provider in general. The reporting output may be further used for evaluating future purchases. During performance review it is also important to involve different evaluators, such as end-users (Ojasalo & Ojasalo 2010, 40).

Table 6 below summarizes the purchase process (Kotler & Keller 2009, 233-238) and the major activities (Turban et al. 2010, 253), together with distinctive features of each process step (Ojasalo & Ojasalo 2010, 39-41).

Table 6. The purchase process steps, features of the step and the major activities during the process step

Features	The purchase process	Major activities
Needs fluctuate easily	Problem or need recognition	
Very detailed specifications Planned quantities Participation of other roles	Product or service specification	Search for items Learn details of items and terms
Best vendor for best conditions Supplier evaluation/qualifications	Supplier search	
Need for detailed specifications	Proposal solicitation	
Several selection criteria Several roles Several decision making motives	Supplier selection	Negotiate or join group purchasing Sign agreement or contract
Hidden costs	Order-routine specification	Create specific purchasing orders Arrange invoicing and payments
Reporting needs	Performance review	Expense, management, and purchasing budgetary control

2.3 Customer value

This chapter focuses on the overall understanding of customer value creation. Previous research is visited to describe what customer value means in e-commerce and in the purchase process.

Customer value is a relationship between the perceived value of the product or service combined with the satisfaction of the price paid for it (Evans 2002, 134), where the value should be perceived higher than the one that competitor creates (Evans 2002, 135; Kotler & Keller 2009, 161). Rust (1995, 59) connects customer satisfaction with improved financial performance.

Klanac's (2008, 141) extensive study on customer value on B2B website communication sets a framework on the benefits and sacrifices summarized in Table 7. In this table the linkages of benefits and sacrifices in relation to the experienced value is depicted. In the middle the value is stated and in the laterals the benefit and sacrifice that explain the value in a practical manner are described.

Table 7. Customer value of B2B website communication (Klanac 2008, 141)

Benefit	Value	Sacrifice
Being flexible	Convenience	
Saving space	Convenience	
Saving effort	Convenience	Investing effort
Saving time	Efficiency	Spending time
Gaining understanding	Competence	
Supported workflow	Competence	Interrupted workflow
Being inspired	Competence	
Being objective	Competence	
Being confident	Confidence	Being uncertain
Being relaxed	Comfort	Being frustrated, being concerned
Treated specially	Appreciation	Treated ordinary
Having fun	Enjoyment	Being bored

2.3.1 The mechanism of customer value in e-commerce

The value that electronic communication brings to a buyer originates from the Internet's features of being accessible anytime, being a few clicks away, being up-to-date, paperless and downloadable (Foster 2005). Klanac (2008, 27-28) supports these, adding characteristics of being historical, being customizable, having multiple information forms, enabling multiple participants, being interactive, being self-administrative, problem occurring due to technical reasons, issues of security and having clarity.

As discussed in Chapter 2.2, electronically supported purchase process can give buyers access to new suppliers, lower purchasing costs and make faster the order processing and

delivery. E-procurement lowers transactions costs and saves in paperwork. E-commerce can reduce customer's time and cost spent on choosing and purchasing a products. A trusted brand reduces the search cost even more since the customer has already formed their opinion on the brand (Jelassi & Leenen 2003, 40). Agarwal & Venkatesh (2002) suggest that when evaluating customer value of online channels, the product characteristics, user characteristics and shopping occasion characteristics could be included into the evaluation as factors. With these factors included, the drivers for the outcome could be better understood, analyzed and categorized as variables.

Porter (2001, 73) finds that online and offline channels complement each other and with a proper online strategy a company can achieve better value of both. Porter's (2001, 73) view is supported by Foster's (2005) study of digital value. In fact, Foster (2005, 250) continues further arguing that true value emerges when adding to the online-offline combination the supplier-buyer relationship continuum of value input and output.

The challenges of e-commerce are various. For a customer's disadvantage the online channel lacks the traditional personal interaction (Kolesar & Galbraith 2000, 424), which a seller company should take into account and manage. Porter (2001, 76) suggests that disadvantages and costs of e-commerce originate from several sources. Due to the nature of the Internet there is a lack of touch-and-feel. Non-verbal signs of human to human contact, such as tone of voice and body gestures are also not supported. However, Porter (2001, 76) continues that these disadvantages can be easily compensated with using traditional methods and vice versa.

The Web can provide different marketing information, such as promotions, product, pricing and market conditions. Marketing information is used frequently for gathering product information. E-mail and interactive features can make communication in the Web personal. (Deeter-Schmelz & Kennedy 2002, 148.) Interactivity may be for example online customer support, customer feedback, solution specification tools, reporting tools and communication storage (Klanac 2008, 28). Compared to customer-seller direct communication, the Internet is not time-bound or location-bound. Additionally the speed of information flow in electronic communication is higher than in the off-line communication.

(Rao & Perry & Frazer 2003, 15.) Website communication has self-service characteristics and its usage depends on the user's activeness (Porter 2001, 75). There is evidence that Internet communication does not substitute traditional face-to-face communication, but rather complements it. In addition to the communication aspect, e-commerce has positive effects also in other areas of business-to-business relationship, such as lowering conflicts, enhancing coordination and bonding, building trust and improving business performance. (Klanac 2008, 30-31.)

Burke's (2002, 422) study on consumers found that shoppers between ages 25 and 54 rated almost equally high the importance of service, followed by product information and speed of shopping. The same study suggests that men are increasingly interested in technology enhanced shopping in the Internet and interested in possibilities to custom design their product online. Women were found to be increasingly interested in talking to someone in person when purchasing. Higher education was found to have a positive effect on valuing shopping online. Business purchasing differs somewhat from individual purchasing which is discussed in Chapter 2.2. However, personal characteristics and motivations do influence the value perceptions, as is discussed in Chapter 2.2.1.

2.3.2 How does customer value show in the purchase process

Foster's (2005) study of use of extranets identifies more proactive and faster response to customer problems and needs, and better service to customers needs in general. In addition, a buyer benefits of having the correct information, for example documents, available at any current time, including alerts of updated information.

Customers have more sources to gather information for evaluation when online. The social network enabled by the Web has changed the information flow from top-down, companies to customers, to side-to-side, where customers exchange business relevant information. The changed information flow changes the nature of information from subjective to objective (Turban et al. 2010, 35), which creates value to customers.

Consumers collect information on the product or service and the provider, and they compare it against their own criteria. In addition, consumers compare collected information to other relevant options available in the market. The collected information is influenced by the experiences with the brand and the product. (Kolesar & Galbraith 2000, 430.) In addition to comparing the information to other competitors, consumers should be able to compare the different offers of the same provider, with different features, payment terms and delivery times (Jelassi & Leenen 2003, 41). The information in the Web should be relevant enough to help a consumer to make a purchase decision. A consumer can attain value from company information, frequently asked questions, offers, news, delivery status and payment conditions, for example (Jelassi & Leenen 2003, 40).

Electronic purchase process can provide a customer with an option to customize a service. However, Thirumalai & Sinha (2010) review different studies in retailing that show opposite views from a consumers' side whether they find customizing useful or not. Customization can include an online store that recognizes a consumer and the corresponding account. The online store offers interaction with a seller according to the consumer's preferences, informs about interesting offers according to the profile and the exact service information that a consumer needs. Consumers can be offered to customize a product online. Mass-customization offers value that the consumers are willing to pay extra for (Jelassi & Leenen 2003, 41). Guaranteed delivery time and tracking of the order give a consumer a feeling of assurance (Kolesar & Galbraith 2000, 436).

An online channel opens new possibilities for customer service. Customer service as such has been identified to have quality dimensions that are reliability, tangibility, responsiveness, assurance and empathy (Parasuraman & Zeithaml 1991, 41). A customer can see their account details including past purchases and tracking the order, which creates traceability. A customer should also have an easy access to talk to someone real-time (Jelassi & Leenen 2003, 44).

Table 8 summarizes the different mechanisms, benefits and sacrifices of e-commerce discussed in the previous research. The mechanisms, benefits and sacrifices are categorized in the corresponding parts of the purchase process.

Table 8. The purchase process, Mechanism and Benefits

The purchase process	Mechanism (=tool, process, opportunity)	Benefit/Sacrifice (=action of increase or decrease)
Problem or need recognition	Tailored marketing information of products, services & prices Social networks exchanging business relevant information Objective information	Creates new purchase opportunities Better value of information
Product or service specification	Solution specification tools Tailored marketing information of products, services & prices Communication storage Speed of information flow Configuration and customization tools Multiple sources for information on offering	Saves paper work Reduces administrative costs Cost and time saving
Supplier search	Access to new suppliers Lack of personal interaction Interactive communication Communication storage Not time nor location bound	Lowers search costs and time for buyers to find products and vendors
Proposal solicitation	Lack of personal interaction Interactive communication possibilities Not time nor location bound	Increases interactive communication
Supplier selection	Offer comparison tools Interactive communication possibilities Not time nor location bound	Lowers price Lack of personal interaction Lowers time and cost to choose the provider
Order-routine specification	Atomized payment Tracking of order Seamless sales process experience Speed of information flow Self service Correct information at correct time Real-time information update	Saves paper work Reduces administrative costs Expedites processing and reduces cycle time Increases productivity of employees dealing with buying Enhances coordination Enhances business performance Reduces errors and improves quality of services Reduces inventory levels and costs Fater response to problems
Performance review	Reporting tools Online customer support Customer feedback Communication storage Speed of information flow Self service Historical	Reduces administrative costs Eliminates paper Increases productivity of employees dealing with buying Increases opportunities for collaboration Lack of personal interaction Lowers conflicts

3 RESEARCH DESIGN

3.1 Research approach

In this chapter the empirical research plan of this study is formed and thoroughly discussed. The previous literature review gives an understanding of the topic and guidance to which kind of field study meaningfully supports this study. The following chapters describe the rationale of the field study starting from the measurement and techniques chosen, explaining the categories used, and finalizing with examining the quality of the methods chosen.

This research derives from customer value framework of website communication of Klanac (2008). Supported by previous research on customer value, electronic commerce and the purchase process, and field research of buyers, this thesis applies Klanac's (2008, 141) framework in practice in the service industry. The description of how value is experienced builds on Klanac's (2008) framework by describing the mechanism of value and by demonstrating practical content for the values.

3.1.1 Research method

The research strategy for this thesis is formed to support the views described in the previous chapter regarding the aspects of 'interesting' and 'justified'. The research strategy aims to reasonably appeal to both practical and academic communities. The following chapters describe the methods used and how they intent to accomplish interesting and justified research

Even though quantitative methods are often overpowered in published articles and generally considered the more appropriate scientific research method, Cassell & Symon & Buehring & Johnson (2006, 290) argue that qualitative methods have contributed a lot to

business and management research, and that qualitative techniques, such as interviews and case studies, can give interesting views in this area both to academicians and practitioners.

There are two main reasons for using qualitative research methods in this thesis. The first reason is the complexity of the research topic, i.e. the purchase process and perceived value. The purchase process commonly involves various people in various roles. Different factors such as the personality, age and lifestyle among others, influence the purchase decision and opinions related to it. Moreover, Evans (2002, 135) discusses that when measuring customer value it is not enough just to take a snapshot of customer satisfaction at a certain point in time. He continues, that customer value, being a sophisticated measurement, needs to recognize the relationship of value and price, and also the perspective of the value of the competitor (Evans 2002, 135). Given that the purchase process and customer value perception are both topics influenced by individual perceptions and are often unique events (Webster & Wind 1996, 52), the qualitative research method is expected to give this research better value than a quantitative research method. This standpoint is supported by the previous description in this chapter of the nature of qualitative research by Gummesson (2006, 173) and Blaxter et al. (2006, 60-61). In this research the view of Blaxter et al. (2006, 60) of depth in qualitative research is sough through interviews. According to my experience during five interviews, it is possible to observe secondary signs such as the interviewee's interest to stress some topics more than others, the enthusiasm towards the topic and the style of how the interviewee discusses the topic. In addition, there is an opportunity to encourage open answers that are emphasized as important by the interviewee. The second reason for using qualitative methods is the ambiguous nature of perceived value. Due to the main objective of this research being identifying perceived value, the research methods must support its ambiguous nature. It is important to allow explanation and discussion around what an individual understands as value.

The lack of quantifiable data often leads to lack of credibility (Cassell et al. 2006, 295) and deteriorated perceptions of quality. However, the quality perception of this research leans on satisfying the parameters of 'interesting' and 'justified' in order to appear credible to the reader. Baldridge & Floyd & Markoczy (2004, 1067) argue that research which is

supported by evidence adds interest for academicians and relevance for practitioners. Daft & Griffin & Yates (1987) revisit Davis's (1971) theory of what constitutes as interesting in research contributions. Davis (1971, 327) argues that interest is aroused when research challenges enough current beliefs to be interesting, but not too much to be too unbelievable. If research does not challenge current beliefs, it is viewed as obvious, thus boring. Baldridge et al. (2004, 1065) continue that research is interesting to academicians when it either challenges an existing theory, or takes it further. Furthermore, the practitioners find research interesting when it argues for a new type of behavior. Cassell et al. (2006, 298) find evidence that these same factors also add into perception of quality in the qualitative research methods.

Justified research according to Baldridge et al. (2004, 1067) refers to being supported by evidence. Both academic and practical communities give more value to justified research. Baldridge et al. (2004, 1072) argue that practitioners and academicians do differ in ways that they consider what epitomizes qualified evidence. The academicians value more formal theory and quality of the research methods, while the practitioners tend to appreciate sources that are established with credible reasoning.

Moreover, as Cassel's (2004) findings show, there is a lack of commonly understood criteria for quality in qualitative research. For this reason this research leans on the above mentioned criteria of interesting and justified to achieve sufficient level of quality of research through qualitative methods.

3.1.2 Design of the field research

The objective of this research is to identify the value that e-commerce brings to the purchase process in the area of facility services. In order to achieve as comparable and applicable results as possible, what is meant with the purchase process is defined first. Then value, which is ambiguous by nature, is defined in the context of this study. To continue, e-commerce is similarly defined.

The following gives insight into the background of the interview questions and to its design. It is important to understand that customer value of electronically supported purchase process is a complex area. It comprises not only of the purchase process, customer value and e-commerce, but is also influenced by topics such as the nature of facility services and characteristics of services.

As discussed in Chapter 2, the purchase process has generally understood steps. The purchase process steps used in this research are specified in Table 9 below. These process steps are detailed enough in order to discus electronic commerce in each step, yet simple enough for using in the conceptual framework.

Table 9. The purchase process

Problem or need recognition	General need description / Information search	Supplier search	Proposal solicitation	Proposal evaluation and Supplier selection	Payment	Customer support	Service evaluation and feedback

Facility services include a variety of services for maintaining and servicing constructed facilities. These services commonly include for example waste collection, security, elevator maintenance, cleaning and business premises services. The facility services industry is growing, developing and becoming increasingly diverse (Kiinteistöpalvelut 2011). The growth is due to the global trend of businesses focusing on their core know-how and out-sourcing non-core business areas, such as facility services (Lehtonen & Salonen & Puhto 2007, 6).

The value of facility services in 2009 was 15.7 billion Euros, which is more than the value of new construction. Real estate in Finland account for 50% of the wealth of the nation, 40% of the end consumption of energy, 30% of carbon dioxide emissions and 20% of the waste. Facility services count for 8% of the GDP, 7% of the employed people and 5% of the value of the real estate (Kiinteistöpalvelut 2010).

In order to keep the interviews coherent, the structure is focused on the biggest services such as waste, cleaning, facility services, security and elevator maintenance. There are many other services as well including catering, technical services, user services and support, and plant design. The assumption is made that the information received during the interviews is more accurate and relevant when it focuses around the services that form most of the purchase actions during the day.

Services have distinctive characteristics such as intangibility, inseparability, heterogeneity and perishability (Mortimer 2002, 461). Intangibility makes it difficult to judge the quality of the service before purchasing it. A buyer relies heavily on recommendations and reliably can form an opinion only after having own experience of the service when it has been consumed. Delivering a service is inseparable of a provider. Delivering services highly relies on individuals. Thus, personalities are a considerable factor of the service experience. All services are unique, heterogeneous. It is difficult to compare different providers due to services being understood in a different way by different persons. The same service can vary even with the same provider due to different people executing it. A service is perishable in a sense that once it is consumed it cannot be recreated anymore. For a buyer, for example judging the quality of a service depends heavily on the end user experience and their feedback. (Mortimer 2002, 461.)

The objective of the interviews is to cover facility purchases in a range of scenarios. Commonly, facility services are purchased for private building communities, commercial communities, infrastructure facilities or for facilities of a private company. The role of the interviewee should be significant in purchases and the interviewee should have a solid experience to base the opinions on. The data gathered during the interviews is then analyzed and discussed. A considerable thought is given on the opportunities to utilize the findings

3.1.3 Data collection

This research uses interviews as primary information source. The purpose of this research is to provide reliable information for companies to develop their electronically supported sales and service support by using customer value as guidance. In planning the interviews, the following issues should be taken into account.

First, the interview should provide sufficient insight to different purchase scenarios. It is assumed that this approach gives enough confidence to a decision maker that the final conclusions are valid and adoptable in the markets researched in this thesis. Purchasing for the company's own use, purchasing for another company, managing services for another company and purchasing and managing services for another company are the included as different purchase scenarios.

Second, the research includes variety of services. Even though the research conclusions can be useful to a company selling just one service, they can benefit taking into account a variety of services. This gives not only ideas from other sectors, but represents more correctly a buyer's daily routines and takes into account the whole workflow. Moreover, it could even be that having one service supported electronically would not provide as much benefit to a customer as having most of the purchased services supported similarly. The more service purchasing is supported electronically the more opportunities it creates for increasingly harmonized purchasing experience.

Third, earlier in this chapter it was discussed that qualitative research gains value in practitioners' community when the sources are respected. The interviews for this thesis are all conducted with companies that make a significant amount of service purchases per year.

Each of the five interviews is an hour long. The interviews follow the designed structure. However, they are not dependent on the structure. An important feature of the interviews is to allow the interviewees to spend more time on issues that are considered more relevant to them. This way it is possible to observe the emphasis that the interviewees give to each part of the purchase process and the value that electronic support brings.

3.2 The conceptual framework for data analysis

The conceptual framework is constructed here expanding Klanac's (2008) customer value framework discussed in Chapter 2.3. The customer value framework is expanded with a linkage to the purchase process discussed in Chapter 2.2. The case studies in this work are focused on finding the mechanisms that create benefits and sacrifices in B2B services in facility services. This conceptual framework, presented in Table 10, is completed with the mechanisms, benefits and sacrifices in Chapter 4.3.

Table 10. The conceptual framework

Process step	Mechanism	Benefits & sacrifices	Value
Problem or need recognition			Convenience
General need description / Information search			Efficiency
Supplier search			Competence
Proposal solicitation			Confidence
Proposal evaluation and Supplier selection			Comfort
Payment			Appreciation
Customer support			Enjoyment
Service evaluation and feedback			
General			

The main and the complementing research questions' rationale are explained below. The explanations include the aim of the question and its practical applicability.

1. How does an organizational buyer experience value of electronically supported purchase process?

This question summarizes the aim of this thesis to analyze what value electronic support brings to the purchase process compared with an off-line process. The question takes into account only the organizational buyer and not the other roles involved in the purchase process. Value is searched from the simplest solutions such as e-mail, more advanced ones including electronic market places, to the ones that might not exist yet as anything else but as an idea.

2. What are the benefits and sacrifices and the mechanisms behind them?

Value is described as a sum of benefits and sacrifices (Klanac 2008, 144). The benefits and sacrifices should be understood to understand and verify the value that is formed. This research extends the benefits and sacrifices to the level of the mechanism that creates them, which is expressed in this thesis through tools, processes and opportunities.

3. How do the benefits, sacrifices and the mechanism link to the different steps of the purchase process?

According to my experience, companies in general analyze and express their functions through processes. To complete the practical aspect of this thesis the values are modeled against the purchase process. Expressing the values through the purchase process not only makes understanding a buyer's experience clearer, but also visualizes how the values behave and develop throughout the process.

4 DATA ANALYSIS

This chapter describes the case studies and summarizes findings of the case studies. The value of electronically supported purchase process is searched through benefits and sacrifices. The value of electronically supported process is formed by comparison with an off-line process. The findings are discussed and analyzed for further implications in Chapter 5.

4.1 Case studies

In this chapter the 5 case studies used in this thesis are described. The case study companies were selected to cover different scenarios of purchasing facility services. These scenarios are briefly discussed in Chapter 3.1.3. The case studies were constructed based on 1 hour interviews. The interview details have been listed under References. The names of the interviewees and the companies are changed.

4.1.1 Shopping centre

The company purchases and manages services for their clients. The interviewed person, later referred to as ‘the buyer’, buys and manages services only for one company with a turnover of 7.5 million Euros. The daily work of the buyer is almost completely purchasing services. The invoices are paid by the buyer’s client, which makes the service purchasing very price focused. Also, there is an element of competing with price, which makes the buyer’s client increasingly price sensitive. The buyer is responsible for assuring that the hired services are suitable for the purpose and work as they are supposed to. The services purchased cover a wide array, such as waste collection, security, elevator maintenance, cleaning, surveillance, electricity etcetera. The buyer gathers all their providers every two weeks to the same meeting to discuss how everything works.

The electronic support for purchasing services in question is almost only relying on the use of e-mail. One provider, however, is providing notably more electronic support for purchasing services. In addition to this there is available a common platform developed by the stakeholders in real estate maintenance, that would support the purchase process of many services that are included into this platform. This is not widely used and the buyer speculated that it might be due to the providers preferring their own solutions.

Describing the needed service is not very supported. In general, it is sometimes difficult to understand what is needed, and the terminology of the provider is often too technical as well. The same issues occur when comparing the service offers. Here electronic simplicity could be of use. Of the purchase process, searching for providers is the most supported electronically. Using Google almost all possible providers are found easily. This is also the most important part of the process for the buyer. However, after finding the provider, it is very hard many times to find the right contact in the provider's Web pages to request for proposals. The buyer states that most irritating is to bump into the contact information in a format 'firstname.lastname@company.com', when the person searching does not know the contact yet. Also, an idea could be to have a Google type of search function right on the first page where the buyer would right away find what he needs. Selection of the provider is not very supported electronically. Usually, the not wanted providers are already left out before asking offers. The buyer does this decision either based on experience, or by asking colleagues for recommendations of past experiences of certain providers. This step could be possibly electronically supported. However, there could be a confidence issue if the recommendations and feedback of suppliers were found online. At least there should be a reasonable amount of past feedback to be able to have a trustworthy opinion. Customer support should always be the first thing to be found in the providers' websites. When there is a problem (already) occurring, the provider usually notifies the buyer of it.

Saving money is very important, and many benefits finally add up to saving money. Especially in situations when there is a sudden increase in inevitable expenses, as in this case a notable increase in electricity tax, money saving is very important.

Important benefits in electronic support in the buyer's opinion are confidence, flexibility and space saving. For the buyer it is fundamental to feel confident that the service request has been received, the provider informs the estimated time for service completion, and when the service has been completed. Knowing that the issue is being taken care of is a fundamental part of this purchaser's role. In this area electronic support is very important since it provides a fast and real-time communication between the provider and the buyer.

Another side that electronic support brings to confidence is that it leaves a trace. When discussed on the phone for example, the provider can leave out things or color the truth. Also, it is difficult to remember things agreed on the phone. Electronic communication always leaves a trace and provides a way to check what has been discussed or agreed.

Time saving is also important and electronic support is an enabler to save time. One of the reasons for this is that the response times in electronically supported process are shorter. This is as important as the confidence that the buyer wants to feel. Short response times mean that the services have a shorter down-time and less discomfort for end users.

Space saving would be important as well since there is a lot of paper for each contract and work order. Electronic support could easily enhance this benefit. For example the common platform Tampuuri could be a good solution for this. A mobile device could bring a sense of easiness to the purchasing in different steps of it, but the buyer could not say for sure since he did not use one. Flexibility is one of the benefits that electronic support brings to the purchase process.

A small local copy machine company RICOH Mikava offers to change the color cartridges before the old one gets finished. They have a system that alerts them when the customer's color is about to finish, and they deliver color to the customer's stock. This provides the customer with feeling of continuation of work flow, a sense of easiness and relaxation, even before the buyer notices the problem or the need for service.

The buyer does not see any sacrifices owing to electronic support.

4.1.2 Office cluster

The company buys services for their own company to sell on to their client a real estate company and to the real estate company's tenants. The company also manages those services for both customers. These two types of customers have following requirements: those who own real estate contract full keys-in-hand services, and individual tenant customers who buy individual services. The keys-in-hand clients are all different in nature and requirement. One is interested in a simple report only, focused on financial numbers, another one is interested also in partly co-managing the services, and one is in between. The interviewed person, later referred to as 'the buyer' is buying and managing services as full-time role. The service variety includes everything necessary in real estate maintenance and services for rented office space, such as waste, security, elevator maintenance, cleaning, catering and such. Once a month everyone gathers into a face-to-face meeting to go through everything, which brings its own value.

Tampuuri is the main system that they are using. The service providers have their own systems as well, but this company does not want to use them for the sake of not using many different systems.

Recognizing the need for service is not electronically supported and they do not see the need there either since recognizing the need for service is the core purpose of this purchaser.

RFP's and comparing offers are supported in Tampuuri for many of the services. The service providers can enter Tampuuri to make their offer there. Many times offers are being sent in e-mails back and forth between the parties and lawyers until the final contract is reached. Rather than electronic support, more valuable in this process would be face-to-face meeting, where the decision making on the final contract would be much faster.

All services are supported partly electronically. Waste care is using service descriptions, electronic waste reports, billing, customer support and orders and electronic customer

support. Elevator maintenance uses service descriptions, billing, error notifications and customer feedback electronically. Cleaning is using service descriptions, billing and error notifications in intranet. Guarding is using service descriptions, billing and anomaly reporting. Catering is using billing, service descriptions (menus), reservations and order intakes electronically.

Of all the services, cleaning and estate maintenance uses services requests only in the intranet.

Sacrifices are experienced when information technology is difficult to use or the users do not know well enough how to use it. This brings a sense of frustration, loss of time, discontinue of workflow and takes away inspiration. Other directly or indirectly influencing factors such as electricity shortages, network crusher or others bring a sense of distrust. Also, many older people have prejudice towards new things, for example they prefer using the phone since they have always done so. A big discomfort is using many different systems with different passwords.

Using intranet for service notifications liberates time since the service calls do not require service people on the phone all the time. Electronically supported service call goes automatically to a system, which sends text messages to the service people’s phone in the order of emergency. This way it is easier to follow the current situation and to react to it better, in other words the work is better organized. The benefits that electronic support brings are the continuation of workflow and time saving, and maybe some sense of easiness.

In general, electronically supported purchase process makes the service faster and information flow easier. Many times in the beginning when moving into electronically supported process, it first makes the workflow slower due to the initial learning, but at the end it gets faster and efficiency grows. Also documentation gets easier and information is found easier. The buyer thinks that thanks to new innovations also the usability and reliability is increasing. Always, whether something works well or not is not in the set up of the information flow, but rather it culminates into the persons doing the service.

4.1.3 Factory

The company's industry is not in the facility services. The role of the interviewed person, later referred to as 'the buyer', is to purchase facility services to take care and maintain various estates of this company which consist of factory buildings. Purchasing industrial services takes up to 20% of the buyer's time, while the buyer also purchases other type of services, products and raw materials.

The purchases of services are very little electronically supported according to the buyer's experience. However, he has seen some signs that this area is developing. Mostly the purchase process is supported by the telephone and e-mail. There is a long way to fuller support and until different systems would interact. Of the purchase process, searching for providers is the best supported electronically, which is mostly due to Google. However, in this business there are fairly little providers and they are already known. Payment is also another area which is well supported. Evaluating offers and choosing the provider could be challenging electronically due to the qualitative side of it. It is very important to evaluate the quality of the service offered and the background and capabilities of the provider. Giving feedback of the service happens also a lot by phone and e-mail. Of all services, one particular company has developed the electronic support the furthest. They provide reporting and feedback directly online.

Difficulty of purchasing the service entirely electronically could be the difficulty of describing and also interpreting the service. Since service is given by persons, the quality culminates a lot to the personalities giving it.

Important to be supported electronically would be reporting so that all information could be in one gathered place and accessible. The buyer does not believe that evaluations of other users to support decision making would bring a lot of benefits owing to doubts of accuracy of the information. The best evaluation of the provided service is through own experience. Here as an influencing factor is a distinctive environment where the services are executed.

The whole purchase process should be more seamless, and here electronic support could work well. This would bring benefits as continuation of workflow. Other benefits brought to the buyer are sense of easiness when process is streamlined, time saving when communication is faster and everything is in one place such as reports, easiness of understanding and saving of money.

As a negative side, electronic support could bring about mistrust when there is less personal contact. When persons meet face-to-face there is a benefit in seeing that the person has understood the topic or issue in hand and there could be less misunderstanding.

4.1.4 Retail

The interviewed person later referred to as ‘the buyer’ purchases services full time. The company purchases cleaning, estate maintenance and elevator maintenance mainly among other smaller ones. The buyer is responsible for managing all services for a bigger client. The services are produced by his employer. Thus, there is a peculiarity of loyalty towards two parties, the payer and the seller. There are between 700 and 800 service requests managed monthly.

Recognizing the problem or need in services cases that belong to frame contracts, are partly supported electronically. The service request is initiated by the end user by phone in 70% of the cases and input in the system in 30% of the cases. From there the requests go through different systems purely in electronic format until it reaches the service provider. The services are described with the part of the agreed services in Tampuuri’s electronic maintenance book. In the case of elevator maintenance, in urgent cases the service is not described to the customer, but the professional company takes care of the situations according to their internal processes. In urgent cases the information of service need usually comes by phone. Information search of providers and services is sometimes done using Google. This is mostly to gather information regarding what is available. Apart from that, there is usually background knowledge already of the important players in the field. Electronically supported is for example a list of preferred providers. Requests for bigger

proposals are typically sent via e-mail with an attachment. Evaluating offers is usually done face-to-face with the stakeholders. However, there is also an electronic history of providers' work which could be used to the evaluating process, but is not much used.

The biggest influence on the chosen provider is the buyer's experience of their work. In addition to that quality and price have an effect on the selection. Accepting an offer is done electronically, where there is an electronic acceptance in the system. Paying is completely electronic. Customer service is given via phone or online. Evaluation and feedback of the service can be done electronically. Reclamations are always done electronically. Evaluation and feedback in such could be used more, expanded from the serious reclamations only. In bigger contracts the providers send reports to the buyer of their past activities. Feedback and evaluation is also done in meetings. About 30% of these are done electronically. For the sake of evaluating the service, the provider could always communicate more, and here there is an opportunity with electronic support. There is never too much information about what the provider has done. Especially communication the relevant personnel change is critical.

Evaluation and feedback could be misunderstood when it is not done face-to-face, or on the phone. On the other hand there is a sense of easiness when a person can hide in the impersonal electronic communication. Another sense of easiness comes with the possibility to maintain documents in archive, where they are easily found and comparable. This also creates some sense of confidence, which is sometimes even usable in court to prove a case. Flexibility and continuation of workflow are important, which come from the ability to check the situation without having to contact other people, where it could also lead to conversations that branch to other non-related topics and take time. Sense of understanding and confidence are also brought when there are changes in personnel, and this is important. In these cases the electronic trace and history are important. On the other hand the danger of misunderstanding for example in offers is important to avoid.

When the services are described vaguely different offers are not directly comparable and there could be misleading differences worth of hundreds of thousands of Euros. Electronic support brings easiness since it makes it possible to not always gather in person in same

time and space, and that directly saves time, which is the most important of all. With the time saving the downside is also that it is always expected to save even more time, as it would never be enough. Time is mostly saved due to being able to manage with fewer resources. Being able to work remotely brings a sense of relaxation and appreciation, and this is possible only due to electronic support. There is a difference between the older and younger generation. The older one has mistrust on the electronic support for example in cases where something used to demand a local presence and now since electronic support can be remotely monitored. These are exactly the cases where savings can be brought, both in time and money. In a busy environment the meaning of time saving is especially meaningful.

4.1.5 Negotiating services

The company negotiates supplier contracts for their customers. Facility services are a part the negotiated contracts. Their core business is asking for bids from suppliers, and evaluating the offers according to relevant categories such as quality, ability to deliver, price and safety. The role of the interviewed person, later referred to as ‘the buyer’, is to estimate needs for their customer, select suppliers for bidding and choose winning suppliers. The contracts are signed between the supplier and the buyer’s customer. The buyer’s customer pays for the contracted services. The buyer purchases services for their customers most of the time during the daily work. Facility services form only one part among others.

The service is usually described by using information from the previous invoice details. The buyer does not usually start looking for new needs. The suitable suppliers are searched using their own databases and those of the customer’s and the Internet. They also have their own international networks to search for suppliers. The request for proposal is sent by e-mail in Excel format where all parts of the service are described. The company also has their own portal that can be used for requesting proposals. However, this was not used in Finland yet. In the portal it is possible to compare offers within the same parameters,

assigning weighting for each value, and making a graphical output for visual comparison of the offers.

In services such as waste collection it is difficult to compare providers since the markets are small and the service content complex and varies from provider to provider. In these cases the need for electronic support is the greatest since purchasing these services without electronic information flow takes a lot of time. In other services such as elevator maintenance and cleaning, electronic support is not as important since there are fewer products and the purchase process in simpler. The more products and the more complex the pricing is, the more electronic support is needed to make the process easier.

Electronic data and automation in the purchase process in general in all aspects makes is easier. Especially reporting is one important thing that must function. The providers need to submit periodic reports of the agreed circumstances, such as the quality, price, and especially price increases, safety and environmental issues. This makes easy follow up that the providers are holding to the agreed terms. In waste collection, in addition, the customers need to report to the officials. Thus, a periodic statistics is needed from the providers.

Feeling of easiness comes when data is electronically supported in a way that makes cross referencing easy. This applies not only to comparing suppliers, but also when the delivered services are back checked against billing and what the provider says has been delivered. Invoice errors are not uncommon. Easiness also brings a sense of joy when the purchase process in general is easier, clearer and data harmonized between the suppliers themselves and the customer. Electronic trace brings a sense of confidence. For example erroneous billing can be discovered. Also, measurability of measurable things such as price, quality and speed, brings confidence to the process in situations such as following up the costs and the cost levels. Time saving is an important benefit. Electronically supported process makes information flow faster and makes it faster to analyze and perceive the overall situation.

4.2 Mechanism of value

In this chapter the value creating mechanisms discovered in the five case studies are described and categorized by values. A value creating mechanism is for example ‘not handling paper for all contracts’. The value creating mechanism is linked to the values described in Klanac’s (2008, 141) customer value framework presented in Chapter 2.3. The interviewees viewed the electronically supported purchase process to bring value in all areas of value described in Klanac’s (2008) framework. Convenience, efficiency, competence, confidence, comfort, appreciation and enjoyment were all linked to a value creating mechanism described by the interviewees.

The buyers experienced convenience through flexibility in their work and space saving. Flexibility was achieved due to self servicing and space saving due to electronic format of data which eliminated paper. Electronic support was found to save effort for example in cross referencing data. However, the buyers also described an investment in effort when learning to use new systems. This sacrifice of investing effort was described to lessen in time.

Time saving created a feeling of efficiency among the buyers. There were various ways that the buyers described time savings. Time was saved due to fast information flow and access to it. Only malfunctioning systems were described as a sacrifice in efficiency. The buyers considered that in facility services, efficiency is an important value due to intense use of human labor and its cost. The pressure of the economic and competitive environment force companies to give services with fewer employees. Thus, more efficiency is expected.

The buyers experienced competence due to various benefits. Electronic support facilitated gaining understanding in situations such as reporting, being alerted of a problem or having historical data at hand. In addition, electronically supported purchase process provided an increasingly seamless workflow. However, interruptions due to system errors, electricity shortages or other user-relater errors lessened the feeling of competence. The buyers emphasized that for example reporting was of essence in judging service quality and feeding it back to the future supplier evaluations. In facility services different providers

tend to have different format of describing their service and understanding quality. Electronic support can be of high importance and create competence by providing data in harmonized format and flowing throughout the process.

The buyers experienced confidence due to traceability of data and real time communication. In facility services it was found crucial that the buyers receive a confirmation of an order received and an estimation of when the service will be completed. Uncertainty was experienced towards supplier evaluations in the Web, however not much emphasis was put on this uncertainty. The buyers had their own trusted sources of buyer evaluations. These sources consisted of own previous experience and evaluations given by colleagues. In addition misinterpretation of data and lacking of human contact deteriorated the feeling of competence. The buyers described facility services as an area where service quality culminates into the person giving the service. Hence misinterpreting information and lack of human contact in communication can be central to how confident the buyers feel with electronic support.

The buyers experienced comfort through feeling relaxed. However electronically supported purchase process was described to bring sacrifices as well. The buyers experienced frustration and concern due to the difficulty of use or malfunctioning systems and due to several passwords.

Appreciation and enjoyment were experienced due to the ability to work remotely. Remote working was considered as fun and special. Moreover, electronic support was considered to bring an element of fun due to facilitated data handling.

The buyers described the most extensive benefits in the areas of efficiency and competence. Efficiency was experienced mainly due to time saving. Experiencing competence resulted mainly due to data correctness and ease of finding data to make competent conclusions. A summary of the mechanisms, benefits and values can be observed in

Table 11 below.

Table 11. Value creating mechanisms

The mechanism of electronic support that brings benefits	Benefit / Sacrifice	Value
Self servicing and checking current situations	Being flexible	Convenience
Not handling paper for all contracts	Saving space	
Cross referencing data of offers and service quality easily	Saving effort	
Learning to use new systems	Investing effort	
Saving time in general in dynamic environment	Saving time	Efficiency
Having shorter response times which results in shorter downtime for end users		
Liberating service persons' time from being on the phone by automating service calls to system in order of emergency		
Not involving several people for finding information by self servicing		
Accessing information any time and not having to coordinate different people to gather at the same time		
Analyzing situations faster in general		
Finding supplier information fast in Google		
Finding customer support easily		
Directing service calls to intranet		
Malfunctioning of systems	Spending time	
Noticing a problem before it occurs by the supplier	Gaining understanding	Competence
Gaining understanding with easier to find reports, documentation and other historical information		
Gaining understanding during personnel change and there is a historical trace of data		
Following up measurable things such as speed of delivery, price and quality		
Harmonizing service descriptions in digital format		
Reporting service quality		
Communicating regarding service provided		
Supporting workflow with service calls going in order of emergency	Supported workflow	
Having more seamless purchase process		
The supplier recognizing the problem and fixing it before the buyer notices		
Malfunctioning of systems	Interrupted workflow	
-	Being inspired	
-	Being objective	
Knowing that the service request is received and it is taken care of and when the service will be performed	Being confident	Confidence
Providing real time communication		
Leaving historical trace		
Knowing that service request has been received and when it is estimated to be completed		
Not trusting supplier evaluations in the Web	Being uncertain	
Older generation not trusting electronic support		
Misunderstanding communication done without personal contact		
Misinterpreting data for example in service descriptions		
The supplier worrying about the problems for the buyer	Being relaxed	Comfort
Not being tied to a certain place		
The supplier recognizing the problem and fixing it before the buyer notices		
Handling many passwords brings discomfort	Being frustrated	
Encountering difficult-to-use systems		
Malfunctioning of systems	Being concerned	
Working remotely	Treated specially	Appreciation
-	Treated ordinary	
Being able to work remotely	Having fun	Enjoyment
Having easy to work with harmonized data		
-	Being bored	

4.3 Linking values to the purchase process

In this chapter the purchase process steps are linked to the customer value through benefits and sacrifices which are described in practical terms as observed during interviews. The general model summarizes all findings in relation to the purchase process by value.

4.3.1 Convenience

Convenience is a value that is experienced throughout the process. The main mechanisms behind saving effort, space and being flexible are due to harmonized data and availability of the Web not bound to time or location. Another aspect of gaining convenience with electronic support is the self servicing possibility. In Table 12 below convenience is linked to the process step through mechanism, benefit and sacrifice.

Table 12. Convenience

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	-	-	Convenience
General need description / Information search	Cross referencing data of offers and service quality easily	Saving effort	
Supplier search	-	-	
Proposal solicitation	Self servicing and checking current situations	Being flexible	
Proposal evaluation and Supplier selection	Not handling paper for all contracts	Saving space	
	Cross referencing data of offers and service quality easily	Saving effort	
Payment	-	-	
Customer support	-	-	
Service evaluation and feedback	Cross referencing data of offers and service quality easily	Saving effort	
General	Self servicing and checking current situations	Being flexible	

4.3.2 Efficiency

Efficiency is experienced mainly due to speed of information flow and accessibility. These two characteristics of e-commerce free employees' time and let employees use time on

other value adding tasks. Efficiency, similarly to convenience, is experienced nearly through the whole process. The electronically supported process speeds up information flow and facilitates access to data. Due to these benefits, buyers were able to have for example shortened response times and find providers' information fast. Efficiency was especially important in customer support. The buyers in most of the cases were also responsible for functioning service for the end user. Thus, fast reacting customer support by the provider was described vital, as can be observed in the quote from an interviewee below:

> *"It is crucial that the correct contact information for customer support can be found fast, preferably on the first page of the provider's website." -Interviewee*

All buyers expressed the benefit of supplier search in Google. Finding supplier information was regarded as very important. Most providers can be found in Google and it was considered the best way to find information regarding the provider. Especially finding correct contact persons was considered important but sometimes difficult. In Table 13 below efficiency is linked to the process step through mechanism, benefit and sacrifice.

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Table 13. Efficiency

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	Having shorter response times	Saving time	Efficiency
General need description / Information search	-	-	
Supplier search	Finding supplier information fast	Saving time	
Proposal solicitation	-	-	
Proposal evaluation and Supplier selection	Having offers in the same format	Saving time	
Payment	-	-	
Customer support	Finding customer support easily	Saving time	
	Having shorter response times		
	Directing service calls to intranet		
Service evaluation and feedback	-	-	
General	Malfunctioning of systems		

4.3.3 Competence

Competence was the third most emphasized value by the buyers. Competence is experienced nearly throughout the purchase process. Competence was experienced important when handling information related to the service quality such as reporting and feedback. Electronic support brings clarity and discipline to reporting, which in turn brings competence to the buyer's organization. The quote below summarizes the importance of gaining competence through reporting.

> *"It would be important to get all reporting into electronic format and in the same place." -Interviewee*

The Web allows a convenient platform for harmonizing service descriptions into clear format for the buyer. Being able to compare offers easily was considered important. Seamless workflow also resulted in feeling of competence. Workflow was described to be increasingly seamless when different systems were able to communicate. Moreover, workflow was considered seamless when manual work was eliminated. In Table 14 below competence is linked to the process step through mechanism, benefit and sacrifice.

Table 14. Competence

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	Recognizing and fixing the problem before the buyer notices	Supported workflow	Competence
General need description / Information search	Harmonizing service descriptions in digital format	Gaining understanding	
Supplier search	-	-	
Proposal solicitation	-	-	
Proposal evaluation and Supplier selection	Harmonizing service descriptions in digital format	Gaining understanding	
Payment	-	-	
Customer support	-	-	
Service evaluation and feedback	Reporting service quality	Gaining understanding	
	Communicating regarding service provided		
General	Having more seamless purchase process	Supported workflow	
	Malfunctioning of systems	Interrupted workflow	

4.3.4 Confidence

Leaving a historical trace on agreed issues, invoiced items, service quality and feedback were described as important benefits of electronic support. Historic trace creates confidence due to removing uncertainty caused by relying on memory. On the other hand, electronic communication may create uncertainty when personal contact is left out of communication. The buyers expressed several situations where misunderstandings could happen, such as when giving feedback, describing a service or even requesting a service.

Knowing that a service request has been received and it is being taken care of was found as one of the most important things. It was also important to get an estimation of when the service was estimated to be completed. The quote below demonstrates the importance of confidence:

> *"It is important that I receive a confirmation from the provider that my service request has been received and that they are reacting on it. I also want to get an estimation of when the work will be completed" -Interviewee*

The most trusted source of information for provider evaluation was considered the buyer's own past experience. The buyers emphasized that quality of the service provided was of essence when choosing a provider. Quality, being a subjective measurement, was said best judged by own experience. Buyers make short lists of providers for RFP's based on the buyer's own past experiences. At this stage many providers are already left out the bidding process. The seller has a possibility to increase buyer's trust toward provider evaluation in the Web through providing objective information about them. Recommendations and objective quality statements were considered objective. In Table 15 below confidence is linked to the process step through mechanism, benefit and sacrifice.

Table 15. Confidence

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	-	-	Confidence
General need description / Information search	Leaving historical trace	Being confident	
Supplier search	-	-	
Proposal solicitation	Trusting supplier evaluations in the Web	Being uncertain	
Proposal evaluation and Supplier selection	-	-	
Payment	Leaving historical trace	Being confident	
Customer support	Knowing that service request has been received and when it is estimated to be completed	Being confident	
	Leaving historical trace		
	Misunderstanding communication	Being uncertain	
Service evaluation and feedback	Leaving historical trace	Being confident	
	Misunderstanding communication	Being uncertain	
General	-	-	

4.3.5 Comfort

The greater part of comfort was experienced in the negative side. Malfunctioning systems were described to bring frustration throughout the process. Malfunctions were mentioned to result due to electricity shortage, jammed equipment, difficult to use user interface or any other supplier, buyer or third party reason. However, these sacrifices were not much emphasized by the buyers. In Table 16 below comfort is linked to the process step through mechanism, benefit and sacrifice.

Table 16. Comfort

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	The supplier recognizing the problem and fixing it before the buyer notices	Being relaxed	Comfort
General need description / Information search	-	-	
Supplier search	-	-	
Proposal solicitation	-	-	
Proposal evaluation and Supplier selection	-	-	
Payment	-	-	
Customer support	-	-	
Service evaluation and feedback	-	-	
General	Malfunctioning of systems	Being concerned	
	Handling many passwords	Being frustrated	

4.3.6 Appreciation

The buyers experienced appreciation as well. Due to digitalization of the society the younger generation expects to be less time or location bound. Being able to work for example from home creates value. Thus, electronic support in any part of the process is likely to increase a buyer's sense of appreciation if it enables executing the process remotely. In
Table 17 below appreciation is linked to the process step through mechanism, benefit and sacrifice.

Table 17. Appreciation

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	-	-	Appreciation
General need description / Information search	-	-	
Supplier search	-	-	
Proposal solicitation	-	-	
Proposal evaluation and Supplier selection	-	-	
Payment	-	-	
Customer support	-	-	
Service evaluation and feedback	-	-	
General	Working remotely	Treated specially	

4.3.7 Enjoyment

Enjoyment was experienced similarly to Appreciation. Being able to work remotely also gives a feeling of enjoyment in addition to feeling of appreciation. Having easy-to-work-with data created the feeling of fun for one buyer who had to work with a considerable amount of provider information. In Table 18 below enjoyment is linked to the process step through mechanism, benefit and sacrifice.

Table 18. Enjoyment

Process step	Mechanism	Benefit / Sacrifice	Value
Problem or need recognition	-	-	Enjoyment
General need description / Information search	-	-	
Supplier search	-	-	
Proposal solicitation	-	-	
Proposal evaluation and Supplier selection	-	-	
Payment	-	-	
Customer support	-	-	
Service evaluation and feedback	-	-	
General	Being able to work remotely	Having fun	
	Having easy to work with harmonized data		

4.4 Additional observations

This chapter summarizes additional observations that were found interesting regarding the research objectives. These observations were not able to be allocated in the framework to specific value or as part of the purchase process, thus the observations are discussed in this section separately.

Saving money was found to be a sum of many smaller benefits. Saving money was not found as a direct benefit due to electronic support. However, in some occasions saving money could be realized do to less manual work. In general, the buyers did not express many sacrifices due to electronically supported purchase process. Only a few individual sacrifices were pointed out which were due to multiple passwords, failures of systems and time loss in learning new applications or difficulty to use the electronic applications. Furthermore, the sacrifices described were not emphasized as important. Older generation was found not found prone to use electronically supported solutions.

Evaluating offers was not considered to gain value with electronic support. The buyers thought that it was more important to evaluate offers face-to-face with the stakeholders so that all necessary people would be in the same place at the same time for faster decision making. However, making offers easier to compare through harmonized information, was considered beneficial. It was often considered that the provider could improve communication regarding the service provided towards the buyer. Electronic applications were expected to improve communication from the provider’s side.

Value was not mentioned in connection with electronic payments. The buyers appeared to consider electronic payments as the normal situation and not creating anymore additional value worth mentioning.

5 DISCUSSION AND CONCLUSIONS

In this chapter the thesis work is summarized. The findings are concluded and tied to previous research.

5.1 Summary of the study

The first chapter of this thesis introduced the need to research how an organizational buyer experiences value of electronic communication in the purchase process. This observation formed the research problem which was lack of research of customer value in B2B e-commerce, and more specifically in facility services. The practical relevance of the research problem was supported by several observations. E-commerce has grown in percentage value of sales and the growth of e-commerce has changed the purchase environment and tools, and buyer-seller communication. Customers have become increasingly informed which has changed the balance of power in buyer-seller relationship. The sellers are forced to become increasingly customer focused. These observations supported the objective of this research to analyze how B2B service customers experience value of electronically supported purchase process.

Qualitative research methods were used in this thesis. Using interviews, 5 case studies were constructed supported by previous research in e-commerce, the purchase process and customer value. E-commerce literature review argued for benefits and growth of e-commerce. Moreover, application of e-commerce and its effects on the purchase process were discussed. The purchase process research examined an organizational buyer's behavior and how a buyer perceives value. In addition, the purchase process steps were described. The distinctive features of each step in the context of e-commerce were discussed. The previous research on customer value presented findings regarding an organizational buyer's value formation. Moreover, value formation was examined in the context of e-commerce and the purchase process.

The case studies were analyzed using the conceptual framework that links customer value to the purchase process through mechanism that creates benefits and sacrifices. Each of the 7 values was analyzed individually.

5.2 Conclusions

Previous research for example by Turban et al. (2010, 77), Laudon & Traver (2010, 12-8) and Roberts (2003, 94-95) suggest that e-commerce creates several benefits for a buyer. Table 4 in Chapter 2.1.1 summarizes some of the benefits. Findings regarding the benefits in this thesis as is illustrated in

Table 11 are in line with the findings made in previous research. In addition, the sacrifices demonstrated in the findings in Table 11 were also found to be in line with the previous literature summarized in Table 3.

However, deriving from my empirical findings I argue that the previous findings can be extended by the following aspects:

1) distinguishing specific features of value perception in the B2B facility services and
2) demonstrating different importance between the values.

Turban et al. (2010) suggest that e-commerce creates new purchase opportunities. The benefits of B2B e-commerce suggested by Laudon & Traver (2010, 12-8), Roberts (2003, 103) and Turban et al. (2010, 242) are shown in Table 4. However, my findings show that in facility services the buyers prefer using their own experiences and personal contacts for selecting suppliers over information on the Internet. As explained in the findings in Chapter 4.3.4 the buyers emphasized service quality when choosing a provider.

Laudon & Traver (2010, 12-8) and Roberts (2003, 103) suggest that e-commerce creates greater price transparency (See Table 4). The analysis of the case studies in Chapter 4.2 shows that price transparency was not mentioned as a value creating mechanism. The buyers explained that due to the nature of facility services, pricing is done case by case. Therefore, comparing different services and comparing how the pricing is formed, is difficult.

Drawing a conclusion based on empirical findings, I argue that electronic support provides significant combined value to a buyer due to uninterrupted information flow throughout the process. A buyer feels increased efficiency and competence through saved time, gained understanding and supported workflow as can be observed in Table 13 and Table 14. For example, a provider's service quality is evaluated throughout the purchase process from provider search, offer evaluation to service evaluation. When these service evaluations can be utilized in the same form throughout the process it creates convenience, efficiency and competence. This seamless flow of information is important in purchasing facility services due to a big quantity of data in different formats.

Lacking in the current literature is the understanding of which benefits of e-commerce are found essential. Drawing from my empirical findings I argue that efficiency, competence and confidence are of most essence for facility service buyers. In Chapter 3.1.2 it is discussed that due to the nature of facility services certain values are emphasized more than others. Efficiency is important due to a dynamic environment of facility services and benefits that create efficiency are appreciated. Competence is important due to the quantity of data that needs to be interpreted. E-commerce was found to increase competence in a variety of ways such as cross referencing data and leaving historic trace. Confidence as well was regarded an important value due to the nature of facility services. A buyer is dependent on service providers to deliver the services and e-commerce delivers value for example in a form of faster communication.

Electronic support was found to create a sense of comfort as shown in Table 16. However, supported by the empirical evidence, it can be argued that comfort is the most delicate one to lose its value. Value loss was experienced due to several sacrifices such as handling multiple passwords and malfunctioning systems.

Last, supported by findings detailed in
Table 17 and Table 18, I suggest that buyers are increasingly able to experience appreciation and enjoyment in their work in the near future due to electronic support. Appreciation and enjoyment were experienced on a personal level due to the possibility of working remotely.

Blaxter et al. (2006, 221) explain that a research is reliable when the same results could be achieved if the research was conducted again. Reliability of these findings can be supported with several arguments. The data received in the case studies was consistent without contradicting views. The interviewed companies had different mode of operations and still all interviewed buyers shared common views regarding the questions. The interviewed persons all had a significant role in purchasing services together with several years of experience. Thus, I believe their comments were well grounded. Therefore I argue that that the results are reliable and replicable in the same circumstances. Validity of the findings can be supported with the chosen research methods discussed in Chapter 3.1.1. It is

explained that qualitative methods are chosen to achieve depth. In addition qualitative methods support analyzing customer value perception which is influenced by unique nature of time, location and the person. Blaxter et al. (2006, 221) refer to validity of research as the dimension that explains how well the chosen methods fit to research the problem.

To summarize, electronic support is an important means for increasing efficiency, competence and confidence in areas where the buyers have pressure to operate fast and to process a lot of data. Electronic support also increases appreciation and enjoyment among the younger generation.

5.3 Implications for future research

This research was focused only on the buyer's perception of value. As discussed in Chapter 2.2.1 a buying centre comprises of several roles that have an influence on the buying decision. In order to understand better the value creation of electronic purchase process, value creation research should be widened to include various roles within the purchasing company.

The practical implication of this research is to provide input for the provider organizations. The following step should be to research how the provider can improve their processes to increase customer's value as argued in this thesis.

In order to widen research on electronic support in B2B services, other industries should also be studied in addition to facility services.

5.4 Concluding note

Customer value of e-commerce in B2B services has been a neglected area in research. Research on customer value of e-commerce for end customers in products and services and

on e-commerce on B2B trade on products is to be found. In this thesis I expanded the existing research with arguments on how customer value is experienced in B2B services. These arguments are supported by empirical findings.

In addition to what previous research suggests on customer value of e-commerce as discussed in Chapter 2, I present new arguments distinctive to customer value perception of e-commerce in B2B services. I expect my arguments to be of value for service providers who can develop e-commerce solutions that can provide excellent customer value.

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APPENDIX 1

1(2)

Company background information

- The purchasing model
  - Buys services for the company's own use
  - Negotiates service agreements for a third party
  - Manages services for another company
  - Buys services and manages them for a third party

- The role of the interviewee
  - Makes purchases as the main role. Buying services count for xx% of all purchases
  - Makes purchases as one of many roles. Makes purchases xx% of time, where services count for xx%

1. **a) In your experience, how much is purchasing services supported electronically?**
   b) Where could electronic support be more utilized (underline)?

Problem or need recognition	General need description/ Information search	Supplier search	Proposal solicitation	Proposal evaluation and Supplier selection	Payment	Customer support	Service evaluation and feedback

Purchased services (can be extended)	How is purchasing this service supported electronically? The purchase process steps above can be used as a support Evaluate mainly using: **N**ot at all / **P**artly / **C**ompletely
Waste care	
Elevator maintenance	
Cleaning	
Security	
Catering	

APPENDIX 1
2(2)

a) What benefit/sacrifice can/could the buyer get from electronic support?
b) How does/could it show (brainstorming)?
c) Underline the important ones

Saving effort	(Investing effort)
Being flexible	(Being inflexible)
Saving space	(Taking space)
Saving time	(Investing time)
Gaining understanding	(Losing understanding)
Being inspired	(Losing inspiration)
Being objective	(Being subjective)
Supported workflow	(Interrupted workflow)
Being confident	(Being uncertain)
Being relaxed	(Being concerned)
Treated specially	(Treated ordinary)
Having fun	(Being bored)
Saving money	(Spending money)

Process step	Brings / Could bring +	Takes / Could take -
Problem or need recognition		
General need description / Information search		
Supplier search		
Proposal solicitation		
Proposal evaluation and Supplier selection		
Payment		
Customer support		
Service evaluation and feedback		

Open comments: