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CUSTOMER INCIDENT COMMUNICATION PROCESS IMPROVEMENT: A CASE STUDY FROM THE OIL INDUSTRY

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ABSTRACT

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This thesis examines customer communication in incident situation in supplier-customer relationship. The purpose of this study is to provide perspectives for process improvement of a customer incident communication process. Additionally, this thesis aims to provide a comprehensive picture of incident handling characteristics which impact customer satisfaction in the supplier-customer relationship.

The study is conducted as qualitative research in a form of a case study. Interviews are the source of the empirical data. The study shows that communication process execution in incident situations as well as customer needs towards communication varies. Customer communication needs in incident situations are linked to quality of the supplier-customer relationship, characteristics of an incident and appropriate communication practices in the industry. The study suggests that customer communication process improvement should be examined through three areas: customer orientation, roles and responsibilities, and measuring. By considering the customer communication process from these three perspectives, a company can ensure that the process responds to customer needs now and in the future.

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Tässä tutkielmassa tarkastellaan kommunikointia asiakaspoikkeamatilanteessa toimittajan ja asiakkaan välisessä suhteessa. Tutkielman tavoitteena on selvittää, miten asiakaskommunikaatiota ohjaavaa prosessia voitaisiin parantaa. Lisäksi tämä tutkielma pyrkii selvittämään, mitkä asiat poikkeamien käsittelyssä vaikuttavat asiakastyytyväisyyteen toimittajan ja asiakkaan välisessä suhteessa.

Tutkimus on tehty kvalitatiivisena tapaustutkimuksena. Haastattelut muodostavat empiirisessä tutkimuksessa käytetyn aineiston. Tutkimus osoittaa, että kommunikaatioprosessin toteutus sekä asiakkaan kommunikaatiotarpeet vaihtelevat eri poikkeamatilanteissa. Kommunikaatiotarpeisiin vaikuttavat asiakkaan ja toimittajan välisen suhteen laatu, poikkeaman ominaispiirteet sekä hyväksyttävät kommunikaatiokäytännöt toimialalla. Tutkimuksen perusteella kommunikaatioprosessia tulisi tarkastella kolmen osa-alueen kautta: asiakasorientaatio, roolit ja vastuualueet sekä mittaaminen. Tarkastelemalla kommunikaatioprosessia näistä kolmesta näkökulmasta voidaan varmistaa, että prosessi vastaa asiakkaiden tarpeisiin tällä hetkellä ja tulevaisuudessa.

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As I am writing these words to my thesis, one chapter in my life is about to end. The time I spent in Lappeenranta was great. Thank you for all my fellow students for sharing this experience with me. With many great memories and new experiences, it is time to look forward to the new challenges.

In Espoo, 24th of September 2017
Laura Juhola

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1. Introduction

1.1 Background of the study

"Coming together is a beginning; keeping together is progress; working together is success"
Henry Ford (1863-1947)

Henry Ford said these words a long time ago but they are still true and describe the success in modern business environment well. Companies are dependent on other companies in order to survive in global competition and success of a single company is connected to the success of a big network of companies. Coming together is the start but the way to success lies in being able to work together. Working together requires collaboration, trust and investments in the relationship.

Current trends such as global competition and digitalization are rapidly changing the business environment. In order to respond to increasing efficiency requirements, many global companies have adopted a supply chain perspective. With supply chain management, companies aim to decrease costs and increase company's overall performance by coordinating the entire supply chain from raw material suppliers to the end customers. One significant factor impacting the success of a supply network is the relationship between supply partners. A good supplier-customer relationship and reliable information flow are contributing to high efficiency in a supply chain (Heikkilä 2002).

Global supply chains are exposed to disturbances which can result in negative consequences to the supply partners and thereby, impact the relationship between supplier and customer. Incidents can cause significant costs to both parties in a supply relationship and therefore, companies aim to prevent the occurrence of incidents. Incidents can negatively impact customer experience which can reflect in the value creation of entire supply network in a long run. Negative incidents can also result in destabilization of long-term customer relationships (Van Doorn & Verhoef

2008). However, no company can completely eliminate all customer incidents and some incidents will occur every now and then. In a complex business environment, even the best operating supply chains suffer from disruptions. Therefore, companies need well defined practices for handling incidents with customers. In addition to minimizing the occurrence of incidents, the impact of the incidents on the relationship should be minimized. As long as incidents occur in a supply network, the incidents need to be communicated between the supply partners in order to limit the impact on the business and the relationship.

To achieve and maintain the best possible practices in incident handling with customers, a company needs to have a customer communication process in place. There should also be a comprehensive understanding of the suitability of its customer communication process, and continuous actions to improve the process. This study seeks to understand the features impacting customer communication in incident situations by investigating the critical aspects of incident communication and aims to present perspectives for customer incident communication process improvement.

1.2 Literature Review

To stay competitive in global business environment, many companies have recognized the importance of supply chain management (Gunasekaran et al. 2004; Park et al. 2010). It has been widely argued that competition does not exist between single companies anymore but between entire supply chains (See for example Lambert & Cooper 2000). This has increased the importance of relationships and cooperation between supply chain partners. Due to increased cooperation between suppliers and customers, the management of these relationships has become more critical for all businesses.

A supplier-customer relationship is a source of competitive advantage and the relationship has been studied from different perspectives and in different environments. Pei (2011) has studied the partnership success factors in the upstream oil and gas industry and found that trust, commitment, the two-way communication and joint problem solving have a positive impact on success of the partnership. Ndubisi et al. (2007) have studied the impact of different relationship marketing strategies such as commitment, competence, communication and conflict handling to customer loyalty and relationship quality. Based on the findings, relationship marketing strategies are associated with customer loyalty and therefore, the trust and relationship quality are directly connected to loyalty (Ndubisi et al. 2007). Pradabwong et al. (2015) have studied the connection of business process management and supply chain collaboration, collaborative advantage and organizational performance. According to the findings, business process management is connected to organizational performance and supply chain collaboration. Moreover, benefits can be achieved through collaboration with supply chain partners (Pradabwong et al. 2015).

The role of information sharing and communication in the supply chain context has gained a lot of interest in academic literature. Zhou and Benton (2007) have studied the linkage of information sharing and supply chain practice to supply chain management. They used a regression model to study the impact of information sharing and supply chain practice on delivery performance. Their findings suggest that effective supply chain practices and information sharing are essential for achieving a good level of supply performance. (Zhou & Benton 2007) Interaction between customer and supplier plays an important role in maintaining the supplier-customer relationship (Paiva et al. 2008) and the effective communication has also a significant impact on trust and perceived supplier switching costs (Yen et al. 2011).

Communication's role as a central factor in the success of business relationships has been widely studied. Many other studies agree that communication is in a significant role in business relationships (Olkkonen et al. 2000; Ambrose et al. 2008). Ambrose et al. (2008) have studied the connection between the communication media choice and relationship maturity. Their findings suggest that the communication media selection in a supplier-buyer relationship is affected by the communication needs of the participants, relationship development stage and purchasing context. (Ambrose et al. 2008) Olkkonen et al. (2000) have studied the role of communication in business relationships. Business relationships and networks cannot be understood without having knowledge of the communication occurring inside of them and on the other hand, an understanding of communication processes requires considering contextual and structural characteristics (Olkkonen et al. 2000).

Impact of critical incidents on customers and relationships has also been studied in the literature (See for example Edvardsson & Strandvik 2000; Van Doorn & Verhoef 2008). Van Doorn and Verhoef (2008) have studied the impact of negative critical incidents on long-term business relationships whereas Edvardsson and Strandvik (2000) have studied critical incidents in customer relationships in a context of hotel visitors. Based on these studies, incidents can be critical events in customer relationships. Critical incidents can cause a review of customer relationship and change customer's mindset from a business-as-usual mindset to a reconsideration of the relationship (Van Doorn & Verhoef 2008). However, most of the positive and negative incidents have only minor impact on customer behavior, but as incidents are remembered they may accumulate over time, be combined with same kind of observations and lead to a reaction on the relationship level (Edvardsson & Strandvik 2000).

Based on the reviewed literature, it can be said that the important theoretical concepts for this study have been studied separately and also the relationships between these concepts have been identified. For example, Mason and Leek (2012) have studied communication practices in a business relationship context, Naoui (2014) has focused on the relationship between supply chain management and customer service, and Pradabwong et al. (2015) have studied the relationship between business process management and supply chain collaboration. Even though there are plenty of studies examining central concepts related to this study, no attention has been paid to incident communication in a supplier-customer relationship. Incidents occur in a supply chain and consequences for the supply partners as well as for the relationship can worsen if communication is insufficient. Therefore, there is a need for research aiming to understand characteristics of successful customer incident communication.

1.3 Objectives

The objective of the study is to provide perspectives for process improvement of customer incident communication process. By examining the case company's customer communication practices in customer incident situations this study aims to find out the current state of the incident communication, estimate customer satisfaction with the process and identify the most important customer communication needs in incident situation. The process improvement perspectives are formed based on reflecting the empirical findings with previous literature.

Based on these objectives, one main research question was formed:

How the customer incident communication process could be improved?

To help respond to the main research question, three sub-questions were formed:

What are customers' needs for incident communication in supplier-customer relationship?
What impacts customer satisfaction with the incident communication in supplier-customer relationship?
How do environmental and industry characteristics impact communication in incident situations?

1.4 Theoretical framework

Theoretical framework illustrates the most important key concepts and their relationships in the study. Theoretical framework shows how the the main objective of the study is accomplished through combining the concepts of continuous business process improvement, customer in a supply relationship and supply chain management in the oil industry. Theoretical framework is presented in the figure 1.

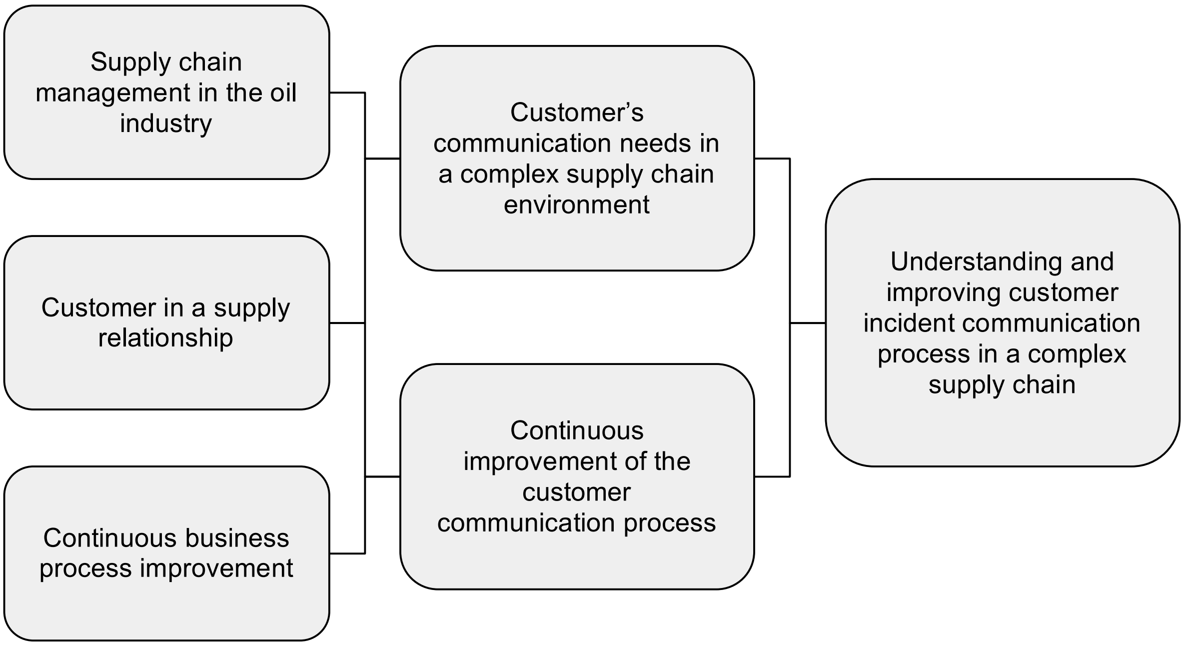

Figure 1. The theoretical framework of the study

By combining the special characteristics in the industry's supply chain management, customer satisfaction and communication in the relationship between supplier and customer, customer's communication needs during the delivery incident occurrence can be comprehensively scrutinized and understood. On the other hand, with the understanding of process thinking and principles of continuous improvement of a process, the current incident communication process can be evaluated and improved.

1.5 Definitions of key concepts

The aim of this chapter is to explain few of the most important concepts of this study. These include customer, incident and communication. Key concepts are defined in order to help the reader to understand the meaning of those concepts in the context of this study.

Customer: Customer receives or consumes output of the selling company and has an opportunity to choose between different products and suppliers. Customer is the term which can refer to many kinds of parties since a single organization typically plays several roles in the supply chain. This study is focusing on two parties in supply chain, which are a supplier and a customer of the supplier. These parties can also have different roles in the supply chain depending on the chosen perspective. However, in the context of this study, customer typically refers to the buying company in a supply chain. Customers of this study are distributors in the supply chain who also have customers. Therefore, in the context of this study customer does not mainly refer to an end user of the product.

Incident: The word incident refers to the occurrence of an event. Edvardsson (1992) has defined critical incident so that it differs significantly from what is normal or expected. Edvardsson and Roos (2001) have defined critical incidents as “interaction incidents, which the customer perceives or remembers as unusually positive or negative when asked about them”. Critical incidents represent aspects and points in time, which may cause a change in a relationship (Edvardsson & Strandvik 2000). Lockshin and McDougall (1998) classified incidents into five general categories which are delivery timeliness, availability, system error, personnel behavior and promise not met. Ruiz-Torres and Mahmoodi (2006) have divided supplier’s failures in deliveries in two categories, which are delay in the delivery time with the assumption that the delivery will be eventually made and a completely missed delivery in which the quality, production or human problem can not be resolved. Due to the objective of this study, incidents considered in this study are negative and refer to failures related to customer deliveries. The requirement for an incident is that the customer delivery is not completed as planned.

Communication: According to Lasswell (1948) the act of communication has five central aspects which are who, says what, in which channel, to whom and with what effect. Ndubisi and Wah (2005) have defined communication so that it means providing trustworthy and timely information. Communication occurs in different kinds of forms and it can be utilized to achieve different kinds of results. Communication in the context of this study mainly refers to the information exchange between a supplier and a customer in the specific situation, during the incident handling.

1.6 Delimitations

The main focus of this study is incident communication, and supply relationships as well as supply chain management may have some special features in the context of oil industry. Therefore, suggestions presented in this study might not be applicable for all industries. The nature and criticality of delivery incidents can differ between industries which can have an impact on customer communication in the incident situations.

Communication occurs in various forms in organizations and between organizations. Many forms of information transformation take place in the relationship between supplier and customer. However, the primary focus of this study is the communication taking place in the incident situation, aiming to decrease the impact of an incident to the business relationship. Therefore, other forms of communication occurring in the supplier-customer relationships such as marketing communications are not primarily considered in this study.

The term incident refers to both positive and negative turning points in a business relationship. Moreover, positive incidents can also occur in supplier-customer relationship. In positive incidents, the supplier exceeds the expectations of the customer. However, the situation with positive incidents is very different and communication needs during the positive incident occurrence may differ. Therefore, positive incidents are not concerned in this study. This study focuses on communication in those situations in which a transaction is not completed according to the plan or agreement, and it can cause dissatisfaction for the customers. This means that only negative incidents are considered in this study.

1.7 Structure of the thesis

This thesis is divided into two main sections which are theoretical and empirical part. Theoretical part includes three main chapters which consider important theoretical concepts for this study. Empirical part consists of chapters, which introduce the case background, research method and empirical findings.

The first chapter of this study familiarizes the subject of the study by introducing background, and important previous literature. Also objectives of the study and research questions, key concepts and limitations are presented in the first chapter. The second and the third chapters introduce the most important theoretical concepts for the context of this study. These concepts are examined based on the previous literature and the most essential models are presented. The fourth chapter describes the basis for the case and presents the research method in order to explain how this study has been conducted. This includes the data gathering method and evaluating the trustworthiness of this study.

The fifth chapter introduces the empirical results of the study. The final chapter discusses the key findings of the empirical research associated with the themes from the theory presented in previous chapters. The chapter also summarizes the findings of the research, adduces the limitations of the research and brings forth ideas for further research.

2. Managing supplier-customer relationship in incident situations

Success in a global business environment is dependent on the capability to understand the relationship between supplier and customer. Customer satisfaction is a key to a long-term business relationship and it can be impacted by handling of critical incidents. The industry environment can have an impact on the incident situations, nevertheless communication is in a critical role in determining the outcome of the incident situations.

2.1 Supply chain management in the oil industry

Supply chain consists of organizations through upstream (supply) and downstream (distribution) linkages which are involved in the different processes and activities in order to create value to the end user of the products or services. Thereby, any organization can belong to several supply chains and play multiple roles in different supply chains. Croxton et al. (2001) have defined supply chain management as managing key business processes through the supply network. Christopher (2005, 3) has defined supply chain management as managing upstream and downstream relationships with suppliers and customers to create maximum value to the customer at the lowest possible cost to the supply chain as a whole. Supply chain management aims to provide maximum level of customer service at lowest possible cost (Chima 2011). Supply chain management has some special features in the oil industry, which can have an impact on the communication during incident occurrence in a supplier-customer relationship.

Al-Othman et al. (2008) describe petroleum organizations as global entities which operate or manage crude oil production facilities from refineries and petrochemical plants to final product markets while going through all essential logistics such as warehouses, pipelines and carriers. According to Ahmad et al. (2017), supply chain in the oil and gas industry consists of a complex network of companies which are doing highly specialized activities in extremely difficult and fragile environment. Planning the activities in supply chain is necessary in this kind of complex business environment. With supply chain planning organizations aim to minimize production, storage and transportation costs as well as satisfy customer demand, maintaining market share and maximize sales revenue (Al-Othman et al. 2008).

Oil industry’s role in the society can be seen to be quite controversial. One of the most significant concerns in the oil industry are sustainability issues associated with environmental impact of the industry’s activities and products. Garbie (2015) mentions pollution, global climate and biodiversity as sustainability challenges faced by companies operating in the oil and petroleum industry. Concerns related to the impact on the environment have lead to increasing pressure for the companies to improve the sustainability of their supply chain. Ahmad et al. (2017) have stated that by solving sustainability issues occurring in the industry, some important root causes for sustainability problems at present could be eliminated. However, according to Garbie (2015) in order to implement sustainability oil and gas companies need to increase the awareness level of sustainability among public, academic and governmental offices in addition to company’s own employees. Even if oil and gas products’ future energy share is predicted to decrease, they will remain as the most important energy sources for upcoming decades (Ahmad et al. 2017).

Supply chain in the oil industry is typically divided for upstream and downstream supply chain. The upstream supply chain consists of the acquisition of crude oil, which include exploration, forecasting, production and transportation management for delivering the crude oil to refineries. The downstream supply chain includes forecasting, production, and transportation management of delivering the product from the refinery to customers. (Hussain et al. 2006) In a supply chain, a company has to be able to link its upstream suppliers with its downstream distributors in order to ensure that its customers are served (Chima 2011). Neiro and Pinto (2004) have modeled the general petroleum supply chain and their idea is presented in figure 2.

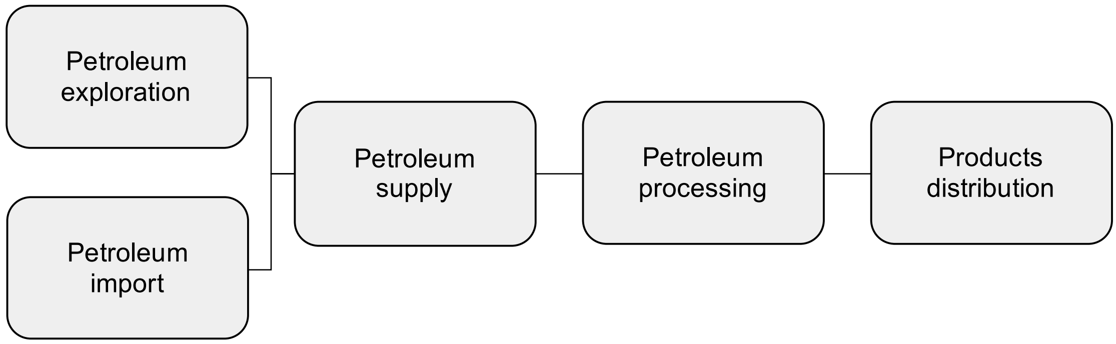

Figure 2. General petroleum supply chain (Neiro & Pinto 2004)

A model presented by Neiro and Pinto (2004) starts with petroleum exploration. Alternative option for petroleum exploration is to supply it from international sources. After that, the petroleum is transported to oil terminals by oil tankers. In the next phase, crude oil is converted to products at refineries. After that, products are transferred to distribution centers. Up to this point, transportations typically has been conducted by pipelines. After this stage, products can be transported through pipelines, trucks, vessels or trains depending on requirements of customers. (Neiro & Pinto 2004) The general structure of a supply chain in the oil industry is agreed in different studies. For example, Chima (2011) has presented the major links in the oil and gas industry in which the structure is quite similar than the model presented by Neiro and Pinto. These links are presented in figure 3.

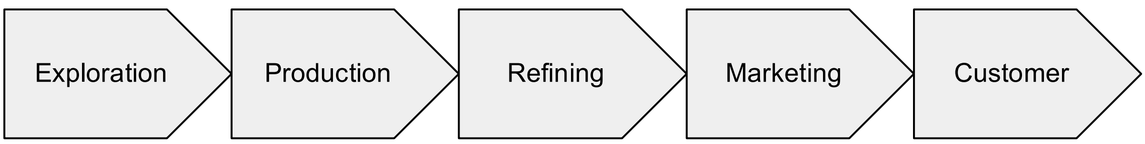

Figure 3. Supply chain links in oil industry (Chima 2011)

The model presented by Chima (2011) starts also with the exploration and goes all the way through the production to the customers. Connections between different participants in the supply chain forms separate supplier-customer relationships inside the supply chain. Production becomes a customer of exploration using the output from the exploration and with the same logic, refining operations are a customer of production whereas marketing is the customer of refining and the final consumer of the end products is the customer of marketing. In the exploration and production stages, the product is similar for all companies in the industry. At these stages, there is still very narrow product differentiation. (Chima 2011) Thereby, for exploration and production companies almost the only way to differentiate from their competitors is the ability to produce more efficiently.

Monthly planning and pre-selling are common practices in the petroleum industry. This means that the selling company determines the production volume for an upcoming time period and sells the volume before producing the product. (Al-Othman et al. 2008) When volumes are sold before the production, problems at any point of the delivery chain such as in production, transportation or storage can cause problems for customer deliveries. The quality of planning is in a very critical role in ensuring delivery performance.

The importance of efficiency in a supply chain has been emphasized previously in this study. According to Chima (2011) compared to other industries, the oil industry has a huge potential for benefits related to maximizing supply chain efficiency. One major challenge associated with the cost efficiency in the oil industry is the inflexibility of supply networks. According to Hussain et al. (2006), the most important challenges in supply chain efficiency in the oil industry are transportation inflexibility, a lack of integrated process management, information systems and information sharing, organizational restructuring and cultural reorientation.

Information sharing and collaboration are agreed to be important factors of a supply chain efficiency. Hussain et al. (2006) state that the attitudes and anxieties towards collaboration and information sharing between supply partners is a significant challenge in the petroleum industry. Chima (2011) highlights the problem of reliability of suppliers in the oil industry. If suppliers would act in a more reliable manner, many non-value adding practices such as raw material inventories, quality inspection services and rework would not be needed (Chima 2011). This could improve the efficiency of the entire supply chain. Pei (2011) suggests that trust, commitment, two-way communication and joint problem solving are the most important success factors in an upstream oil industry partnership. Moreover, trust and more reliable behavior could improve the relationship between supplier and customer and increase the efficiency of the entire supply network in the oil industry.

Delivery incidents may not be as critical in all kinds of environments, but in the complex supply environment of oil industry, delivery incidents can have significant impact to the supplier and customer. When transportation costs are high and stock levels are minimized, the failures related to deliveries can cause significant problems. Therefore, delivery-related customer incidents are critical in the oil industry and decreasing the amount of incidents is an important objective for suppliers operating in the oil industry.

2.2 Customer in a supply relationship

Importance of the relationship between a supplier and a customer has been emphasized especially in the literature related to supply chain management and marketing (see for example Dwyer et al. 1987, Heikkilä 2002 and Ambrose et al. 2008). Success in a business-to-business market is dependent on the capability to understand the relationships between suppliers and customers (Claycomb & Frankwick 2004). The relationship between supply partners is in a central role in creating organizational exchange. Partnership in a supply chain context refers to the cooperative and more exclusive relationship between an organization and its upstream suppliers and downstream customers (Gunasekaran et al. 2004).

Both parties of the supply relationship aim to leverage the relationship to gain competitive advantage (Tanskanen & Aminoff 2015). From a customer's perspective, to perceive a relationship with a supplier as valuable, needs of the customer have to be filled. To be able to stay competitive and fulfil customer's needs, the company has to gather information from the customers. Pradabwong et al. (2015) identified positive linkages between business process management, supply chain collaboration, collaborative advantage and organizational performance. Moreover, Heikkilä (2002) states that supplier-customer relationships and reliable information flow in the supply chain contribute to high efficiency. Lambert and Cooper (2000) have also highlighted the importance of continuous information flow in the supply chain in order to achieve a good customer-focused system.

A strategic supplier-customer relationship requires effort from both parties and therefore, companies select partners for these kinds of relationships carefully. Both supplier and customer have to consider their attractiveness in order to make the other party invest in the relationship. Tanskanen and Aminoff (2015) studied the attractiveness drivers in a strategic supplier-customer relationship. Based on their findings, economic and behavior-based attractiveness are very strongly present in supplier-customer relationships. Economic-based attractiveness requires that the relationship creates economic value for both parties in the relationship. The most important drivers in behavior-based attractiveness for both supplier and customer are communication, commitment, trust and respect. (Tanskanen & Aminoff 2015) Customers become relationship partners due to the need of essential resources for their business and they rely on suppliers to offer those resources (Chang et al. 2012). Handfield and Bechtel (2002) have identified two development levels in a relationship between a supplier and a customer. Industry level means that intervening forces like market power and legal contracts guide the relationship whereas, at the interpersonal and cognitive level those kind of forces play only a minor role in the relationship (Handfield & Bechtel 2002).

Once a relationship between a supplier and a customer has been created it needs to be maintained. Chang et al. (2012) describe the maintaining of a relationship as a dynamic and continuous process in which interaction factors should play a significant role. The current trend is that buying companies have reduced the amount of suppliers to be able to cooperate closer with chosen suppliers. The collaboration typically requires investments and for that reason, after the most suitable companies for collaboration have been chosen, the supply partners aim to maintain a long-term relationship. According to Mohanty and Gahan (2012) four major aspects of a successful supplier-customer relationship are organizational strategic requirements, supplier performance, mode of operation and personal factors. Strategic issues consist of partner, product and service selections. Performance include issues such as costs, quality and delivery. Mode of operation involves pricing structure, technology integrate and processes. Personal factors are commitment, trust, flexibility, openness et cetera. Information sharing is closely related to the forming of a successful supplier-customer relationship. (Mohanty & Gahan 2012) On the other hand, Griffith (2002) has recognized that a lack of inter-organizational communication can harm the effectiveness of the business relationships.

Heikkilä (2002) highlights the importance of understanding the customer end in order to improve the supply chain. Handfield and Bechtel (2002) find that improving trust in a relationship between a supplier and a customer may be helpful in supply chain responsiveness. Based on their findings, higher levels of trust can be achieved if suppliers are willing to make commitments in capacity and equipment (Handfield & Bechtel 2002). Chang et al. (2012) emphasize the importance of social bonding in order to increase trust and commitment in a supply relationship. Social bonding highlights a customer's dedication and friendship towards a supplier. Social bonding with customers can be increased by frequent contact or utilizing an appropriate technology. Suppliers should develop core competencies and ensure those are not easy to replace in order to make customers rely on them. (Chang et al. 2012)

Incidents are associated with business relationships. Critical incidents occur in a customer relationship, incidents are under the influence of the relationship and have an impact on the future of the relationship (Edvardsson & Strandvik 2000). Critical incidents have different kinds of consequences for the the relationship between supplier and customer depending on the quality of the relationship. According to Edvardsson and Strandvik (2000) two relationship aspects are in a critical role in understanding customer's reaction to incidents. Observable behavioral aspect includes the loyalty of purchase, length of the relationship and complaining behavior whereas another aspect is associated with the dynamic perceptions of both actors in relationship including for example perceived quality, satisfaction, commitment, trust and experience of critical incidents (Edvardsson & Strandvik 2000).

Edvardsson and Roos (2001) argue, that the previous incidents are stored in customer's memory and the perceptions related to them are in an important role in new critical incident. Therefore, minimizing the negative customer experience during the incident occurrence is decreasing the negative memories related to the supplier deliveries. However, to understand the criticality of incidents and their impacts to the relationship, the relationship and the context of the relationship needs to be understood (Edvardsson & Strandvik 2000).

2.3 Customer satisfaction in a business relationship

Customers are the base for any company's success and the importance of customers being satisfied can not be emphasized enough. Customer satisfaction has a significant impact on organization's performance in the present as well as in the future and it is also an important source of competitive advantage (Lewin 2009). Customers' needs have to be a first concern for all companies aiming to be competitive (Naoui 2014). Patterson et al. (1996) state that customer satisfaction is strongly linked to customer's intentions to repurchase and it also establishes a base for a long-term customer relationship. Chang et al. (2012) agree that customers need to be satisfied in every interaction in order to retain customers and build long-term relationships with them. According to Heikkilä (2002), a high level of customer satisfaction can be achieved by cooperating and implementing a joint improvement agenda together.

Customer experience is defined as customer's cognitive and affective outcome with the company's employers, technologies, processes, products services and other outputs (Buttle 2009, 165). Moreover, when customers do business with their suppliers, they are exposed to many other types of outputs besides of products. Customer satisfaction arises from the customer's expectations. Hence, if the performance is higher than expectations, customer feels satisfied but if the perceived performance does not fulfill customer's expectations, customer is dissatisfied (Jamal & Naser 2002). The gap between customer's perceptions and quality received needs to be filled in order to improve customer satisfaction (Stank et al. 1997).

Customer's experience about the service arises in the interaction between the customer and selling company's employees (Edvardsson 1992). Interaction satisfaction is linked to customers' feelings about suppliers based on their previous interactions (Chang et al. 2012). Input of employees working in the customer interface plays a critical role in customer satisfaction. Rossomme (2003) states that key contact employees have the most significant role impacting customer experience and they are the face of the company for the customer. Also Edvardsson (1998), who studied customer satisfaction in consumer context in public transportation adduces the impact of employees working in customer interface. He states that roles and responsibilities of the employees working in the customer interface should be clearly defined in order to achieve a high level customer satisfaction (Edvardsson 1998). Defined roles are critical in order to ensure a satisfying customer experience in interactions with supplier. Supply chain management and information sharing are in an important role in increasing customers' interaction satisfaction (Chang et al. 2012).

Customers have certain expectations related to the supplier's behavior. When companies are evaluating customer satisfaction it is important to understand that the customer's experience about the supplier may differ from the organization's understanding. According to Christopher (2005, 39) it is important to understand that the customer's perceptions about the customer service can differ from the company's internal measures. Christopher (2005, 40) also highlights the importance of understanding the service needs of the customer in order to become a key supplier for the customer. Customer satisfaction survey is a tool that can be used for examining customer perception about the supplier's operations.

Customer satisfaction is different in consumer businesses than in business-to-business (B2B) environment. In the consumer business, product exchanges and interactions between selling companies and customers are more transaction-based whereas in B2B organizations, they are more based on long-term relationships (Kettunen et al. 2015). Rossomme (2003) highlights two important features impacting customer experience in the B2B environment. Firstly, employees directly contributing to a purchase decision might not have a consumption experience of the service or the product. The second feature is that business customers rely strongly on rational objectives in their satisfaction judgment process over the physiological or personal objectives. Because in B2B organizations employees making purchasing decisions are not consuming the product by themselves they may value different things than the final consumers of the products or services. For that reason, rational behavior in the purchasing decision is emphasized in B2B environment. It is also important to notice that customer’s employees may have different factors impacting the experience about the supplier since some of the customer’s employees are more exposed on supplier’s sales personnel whereas some of them are only using the output of the supplier. Even though customer’s employees directly impacting the purchase decision would be satisfied with the interactions with the supplier, for example poor product quality or delivery performance can decrease the satisfaction of those employees having indirect impact for purchases. Rossomme (2003) states that in the B2B environment it is very important to measure the experience and satisfaction of both customer’s employees who have direct and indirect impact on purchases in the future. Especially in the long-run the satisfaction of those employees having an indirect impact on purchases can impact the purchasing decisions. (Rossomme 2003)

The way an organization handles conflicts in a supplier-customer relationship impacts customer satisfaction. According to Ndubisi and Wah (2005), the conflict handling includes supplier’s capability to avoid possible conflicts, solve appeared conflicts before problems emerge and the capability to openly discuss about possible solutions with customers at the problem occurrence. Handling of the conflicts and complaints in customer relationship is connected to trust and loyalty. According to Ndubisi et al. (2007) by handling conflicts properly, a supplier can increase the trust in a relationship. On the other hand, Roberts-Lombard (2011) state that the satisfactory handling of complaints can increase the loyalty of those customers compared to customers who never were dissatisfied.

In incident occurrence, credible, clear and rapid information impacts customer's experience. Delays in communication can cause dissatisfaction among customers. In order to increase customer experience in the incident situations, knowledgeable and motivated employees who are able to communicate about the incident are the most essential resources increasing quality. (Edvardsson 1992) Supplier’s employees are in an important role at the frontline of service and they have a lot of valuable knowledge about what their customers want (Roberts-Lombard 2011).

Supplier's employees' responses to incidents and the relationship quality have an impact on customer satisfaction in the incident situation. According to Johnson (2002), by responding quickly and rectifying in the unwanted situation, problems that could have resulted as major issues for customers did not impact their overall satisfaction. Also supplier's employees' efforts to correct the situation have a remarkable impact to the customer satisfaction. If customers see that employees are not making an effort to solve the situation, that will be the source of dissatisfaction rather than the failure itself (Johnson 2002). Also the quality of the relationship impacts to the customer overall satisfaction in the incident situation. According to Van Doorn and Verhoef (2008) when the relationship quality is high, even negative incidents can have a positive influence on the customer share. Moreover, very satisfied customers are more forgiving in critical incident situations than less satisfied customers (Van Doorn & Verhoef 2008). Backhaus and Bauer (2001) agree that the effect of a critical incident appears to be more critical if the satisfaction level in the supplier-customer relationship is low.

2.4 Communication in supplier-customer relationship

Effective communication is in a critical role in success of business relationships. Communication means providing trustworthy and timely information (Ndubisi & Wah 2005). Communication is a central factor in analyzing organizational relationships, as it is a critical component in a supply chain (Zhou & Benton 2007). Ambrose et al. (2008) state that effective communication is a key factor in a relationship between a supplier and a customer. Suppliers who succeed to prove their commitment in the supplier-customer relationship are able to establish the basis for further communication between the supply partners (Handfield & Bechtel 2002). The need for communication in the relationship between a supplier and a customer is driven by the need to reduce uncertainty and solve confusion.

Value creation in a supply chain is an important source of competitive advantage. One way for the supplier to improve the value creation in the value chain is to reduce buying company's operational costs. Cannon and Homburg (2001) suggest, that by reducing customer's costs the supplier can impact customer's intentions to expand purchases from the supplier. One of the factors impacting customer's costs is supplier communication (Cannon & Homburg 2001). Ulaga and Eggert (2006) suggest that benefits related to relationship between supplier and customer display a higher potential for differentiation than cost reduction. Based on their findings, service support and personal interactions are core differentiators for suppliers and right after these follows supplier's know-how whereas price showed the lowest potential for differentiation (Ulaga & Eggert 2006). Therefore, in order to take over and retain key supplier status, suppliers have to understand the value drivers from the customer perspective and understand the role of successful communication in creating trust and commitment between supplier and customer.

Paiva et al. (2008) studied the influence of supplier-customer relationship on service performance and suggest that there is a need for enhancing the interaction and communication between supplier and customer. According to Mason and Leek (2012) if business partners are satisfied with the communication interaction, it can directly or indirectly result as improved performance, increased levels of trust, commitment and cooperation. Ndubisi et al. (2007) agree that effective communication and proper handling of conflicts will ensure trust in supplier-customer relationship.

Mohr and Spekman (1994) have identified indicators for a successful strategic relationship between two independent companies and adduced the communication as one of the key success indicators. Also Olkkonen et al. (2000) have highlighted the importance of communication in relationship development. Open and honest interaction between a supplier and a customer is necessary because it is in an important role in reducing potential conflicts and achieve consensus (Yen et al. 2011). Hung and Lin (2013) state that effective communication has a remarkable role in developing a long-term relationship between a supplier and a customer. Therefore, communication has a significant impact on the relationship between a supplier and a customer.

Mohr and Spekman (1994) have presented three different aspects of communication behavior in the partnership. These are communication quality, extent of information sharing and participation in planning and goal setting. Information sharing refers to the extent to which critical information is communicated with the partner. (Mohr & Spekman 1994) According to Yen et al. (2011) effective supplier communication can improve trust and increase switching costs in a supplier-customer relationship. Effective communication can also reveal how a customer wants to be treated, and the supplier can receive important information about how services or products can be adjusted to better respond to the needs of the customer (Yen et al. 2011).

Communication media options include for example face-to-face meetings, telephone, email, fax and letter. Due to the introduction of internet technologies, the variety of available communication channels has significantly increased (Ambrose et al. 2008). Many transactions in a supply chain are completed by using electronic media. Technologies related to e-commerce enable supply chain efficiency since they can substantially decrease the amount of paperwork and improve communication between supply partners (Handfield & Bechtel 2002).

According to Mason and Leek (2012) communication media selection is depending on the context of what is appropriate in the relationship atmosphere. They also identified contextual factors such as the speed of response required and the importance of the information which impact the choice of communication media. They have noticed that face-to-face interactions are typically used when interactions involve problem solving. Face-to-face meetings enable social cues, greater amount of information and prompt feedback. (Mason & Leek 2012) According to the findings of Ambrose et al. (2008) communication media selection is affected by weather products or services are being purchased. For example, in product purchasing the buyer of the customer company is central to the management of the supplier-customer relationship and therefore their preferred medium has a strong impact on communication media selection. In product purchasing the customers' preferred communication channel is telephone. (Ambrose et al. 2008)

Cannon and Homburg (2001) have presented two aspects of communication: frequency and information sharing. Communication frequency describes the capability of conveying information. Face-to-face conversation is an example of a rich communication mode. It allows immediate feedback, gathering additional data through observation and customized communication. Electronic communication is an example of a less rich communication mode. Those modes of communication are an efficient choice for communicating relatively large amount of formal and standardized information. Richer modes of communication are typically utilized when issues are unpredictable and complex. On the other hand, with the mechanical and routinized problems less rich modes are typically preferred. Even if richer modes of communication provide more information they are usually associated with higher costs. (Cannon & Homburg 2001) Hence, efficient customer communication can be achieved through choosing the type of communication based on the problem being addressed. According to Mason and Leek (2012) using of richer modes of communication increased the perceived satisfaction for the business relationship. The benefit of less rich modes of communication such as email and written communication is that it enables customer to deliberate and convey information without interruption (Mason & Leek 2012).

The important question in choosing modes of communication is that even though the richer modes are perceived as more satisfactory, challenges with time and space force customers to make tradeoff decisions. Mason and Leek (2012) suggest that text messages and voicemails can be used to inform people about the willingness to further communicate with them. The problem with these forms of communication is that the information receiver might not notice the message immediately. However, text messages can be used as a last option in problematic situations when other methods of communication have been tried (Mason & Leek 2012).

Based on findings made by Tanskanen and Aminoff (2015) good communication means different things to suppliers and customers. For customers, good communication means access to information related to supplier's production processes, inventories and costs as well as rapid information of changes or potential problems. For the suppliers in turn, good communication means proactive, but not too aggressive, communication focused on opportunities. Suppliers appreciate communication related to strategies and future business development. (Tanskanen & Aminoff 2015)

The efficient communication in supplier-customer relationship requires that supply partners provide trusted information to each other. This includes providing information in a case of delivery problem occurrence, information related to quality assurance, procedural information and providing customers a possibility to give feedback. Communication is also in an important role in explaining a dissatisfied customer what an organization will do to eliminate the source of dissatisfaction. (Ndubisi et al. 2007) With communication, a common understanding can be developed and it is also in critical role in reducing uncertainty, resolving misunderstandings and explaining options (Claycomb & Frankwick 2004). Conflicts occurring in the supplier-customer relationship may interrupt the communication and major conflicts may lead to the situation in which the customer closes lines of communication (Hung & Lin 2013) During the conflict occurrence, the choice of communication media is critical. According to Ambrose et al. (2008), at the conflict resolution richer modes of communication such as telephone and face-to-face meetings bring better results.

3. Business process improvement

Business processes have become common among companies. Process thinking and business process management have gained attention also in the academic literature. Processes are used to guide many kinds of activities and they allow companies to operate more efficiently. However, processes need to be constantly improved to make sure that they support the objectives of the company. Effectively managed business processes can be a source of competitive advantage and help the company to focus on customers needs.

3.1 The concept of process

A process is commonly defined as an approach for adjusting inputs for outputs (see for example Zairi 1997). According to Hammer (2010), a process means positioning individual working activities in a larger context of other activities which together aim to achieve results. Davenport and Short (1990) have defined the concept of a business process as "a set of logically related tasks performed to achieve a defined business outcome". Davenport and Beers (1995) add customer as a target of the business outcome. They define the business process as "a structured sets of work activity that lead to specific business outcomes for customers". Nadarajah and Kadir (2014) argue that business processes are links which integrate systems, employees and processes within an organization.

Different kinds of processes exist in organizations. Hammer (2010) divides processes into three different categories. One process type is core processes which include both transactional and development processes. Core processes are essential to the organization and aim to create value for external customers. The objective of the second process type, support processes, is to create value for internal customers. Examples of support processes are information systems development and financial reporting. The third category is governing processes, which includes for example strategic planning and risk management. (Hammer 2010) Armistead et al. (1999) in turn, have assorted processes into four different categories which are operational, support, direction setting and managerial processes. Operational processes are concerned with production and delivering products or services and they constitute the main value chain. Support processes are activities that support the operational processes. Direction setting processes are associated with strategy formulation and policy deployment whereas managerial processes are part of direction setting processes. (Armistead et al. 1999)

Processes enable companies to use all of the available resources in a reliable, repeatable and consistent way in order to achieve its goals (Zairi 1997). Davenport and Short (1990) adduce two important characteristics of business processes. Firstly, business processes have customers, who are receivers of the defined process outcomes. Secondly, business processes go beyond organizational boundaries and hence, are not depending on formal organization structure. Business processes together form a business system. (Davenport & Short 1990)

Process orientation enables organizations to focus on meeting customer needs. According to Nadarajah and Kadir (2016) process orientation allows an organization to have an equal understanding about increasing efficiency in meeting customer needs. To be a process-centric organization, requires that an organization documents, manages, monitors and improves the performance outcomes of their processes (Nadarajah & Kadir 2016). By applying a proper management philosophy an organization can efficiently manage its processes.

3.2 Managing business processes

In order to improve processes, a company needs proper management for its business processes. Organizations aiming to focus on their business processes as key elements in controlling and improving the way they do business have adopted business process management (Delgado et al. 2014). Business process management is an approach for analyzing and continually improving fundamental aspects of business operations such as manufacturing and communications (Zairi 1997). Trkman (2010) has applied Zairi’s definition of business process management and defines it as an organization’s effort to analyze and continuously improve central activities such as marketing, manufacturing, communications and other important elements in company’s operations.

Business process management aims to control and continuously improve key activities in order to be able to deliver high quality products and services to the customer (Zairi 1997). Trkman (2010) states that business process management can help the organization to execute a strategic program by creating a better match between the strategy and business processes. Zairi (1997) in turn, suggests that business process management can help an organization to focus on customers by forming horizontal linkages between main activities. Vom Brocke et al. (2014) argue that business process management extends the cost-centered focus and can help managers to identify new revenue possibilities and non-monetary value-creation options such as reliable and flexible processes.

In order to successfully manage processes, an organization has to find a suitable management strategy for different processes. According to Trkman (2010), an organization needs to determine which processes have to be standardized and which processes can be performed more flexibly by the personnel of the organization. By utilizing business process management, an organization can connect important activities inside the organization in order to achieve strategic goals. Vom Brocke et al. (2016) suggest that in implementing business process management a company should also consider the context in which it is applied. They identified four contextual factors which are BPM goals, processes, organization and environment and these contextual factors need to be considered when applying BPM (Vom Brocke et al. 2016). Van Rensburg (1998) suggests that the critical success factor for implementing and sustaining business process management is the ability to understand change and its impact across all dimensions of an organization, which are people, resources, processes and customers.

Tkman (2010) suggests that business process management should be a continuous effort to constantly improve organization’s business processes. Continuous effort for improving business processes can also be conceptualized as a business process management life cycle. Van Rensburg (1998) describes the business process management life cycle as a circle, which begins and ends with the customer. Business process management is driven by the need to focus on those business processes which create value for the customer (Van Rensburg 1998). Houy et al. (2010) have presented a model for business process management life cycle. Their model is presented in figure 4.

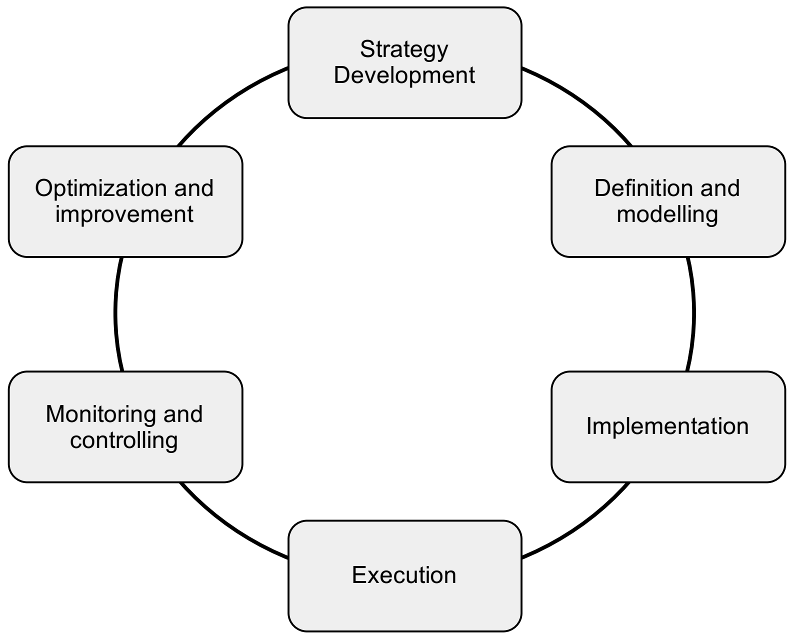

Figure 4. Business process management life cycle (Houy et al. 2010)

The life cycle model starts with developing the strategy for business process management. In the second phase, relevant processes are defined and modeled. In the third phase, the processes are implemented in organization's practices. After that, the implemented processes are executed. In the fifth phase, the process execution is monitored and controlled and in the last phase, processes are improved and optimized. (Houy et al. 2010)

After the process has been implemented, it needs to be managed continuously. Process performance should be measured with metrics related to customer needs and internal requirements. The measures should be compared to the targets which can be based on customer expectations, benchmarking or other sources. (Hammer 2010) According to Trkman (2010) the performance measurement is critical in order to achieve sustainable improvement in the process. It is common practice that business processes are tied to corporate strategy and for that reason, the management has to know what is the contribution of each business process. Therefore, some measurement mechanism must be implemented and needed data collected. Measuring business processes can be difficult because there is no single method that fits all applications. However, certain metrics can be used to overcome specific challenges. For example, survey questionnaires can be used to measure subjective metrics that can be difficult to quantify such as customer satisfaction. (Yen 2009)

An important process management issue is how to improve the performance of business processes. According to Münstermann et al. (2010), business process standardization positively impacts to process performance. They also see business process standardization as part of business process management, which aims for continuous improvement. Business process management relies on measuring to asses the performance of the process, to set targets and to deliver output levels meeting corporate objectives (Zairi 1997).

3.3 Continuous improvement of a business process

Sanchez and Blanco (2014) define continuous improvement as “the continuous process of improvement which is done by participation of all staff”. Hence, the basic idea behind the continuous improvement is that all employees impact the performance of the company by continuously making minor changes in their work processes. Ahmed et al. (1999) state that the continuous improvement is closely linked to learning. However, becoming a continuously improving and learning company requires an organization culture which continually steers the members of the organization towards continuous improvement, and a climate which conducts learning (Ahmed et al. 1999). According to Stelson et al. (2017), many continuous improvement projects aim to identify and recommend lean process improvement and develop ideas how the value maximizing changes can be sustained.

Continuous improvement can be described as a cycle of constant activities that has to be done over time. Operational continuous improvement practices have an impact on the performance of the company in forms of improvements in quality, productivity, customer satisfaction, cost and employees' problem solving skills (Oprime et al. 2011). An important part of continuous improvement is to identify new areas of improvement. (Sanchez & Blanco 2014) The success of continuous improvement is dependent on the extent to which employees understand and are committed to make a change (Stelson et al. 2017).

Continuous improvement is a central tool for achieving business excellence. According to Sanchez and Blanco (2014) the importance of continuous improvement has increased due to changes in the business environment, the need for new management systems and significance of quality management. In order to be a top class organization, traditional functionally based management approach needs to be replaced with customer-driven processes.

Process focus and continuous improvement are strongly linked to each other. According to Klee et al. (2012) continuous improvement can be sustained and broadened by process thinking. Zairi (1997) has presented a framework which shows the connection between continuous improvement and business process improvement. Zairi's framework is presented in figure 5.

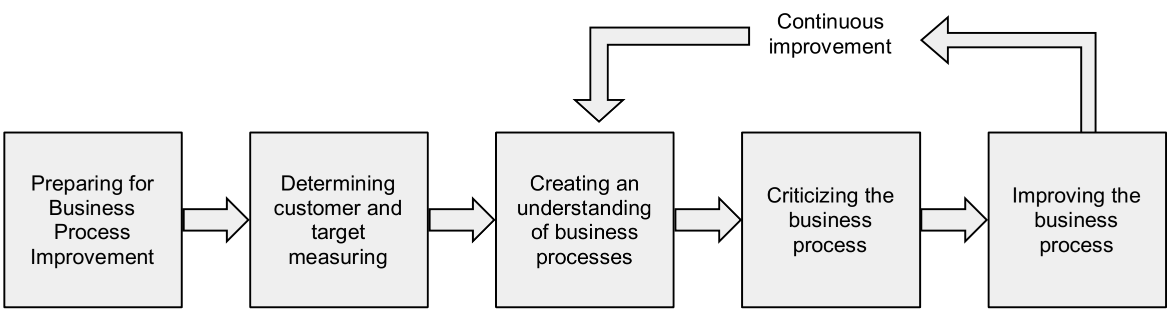

Figure 5. Business process improvement framework (Zairi 1997)

In the first phase of business process improvement, the company assures the success of business process improvement by creating understanding and commitment. In the second step, criteria for successful business process improvement are determined. After that, understanding about all dimensions of the current business process is formed. In the fourth phase, the company qualifies the best solutions to improve the quality and effectiveness of the business process. In the final phase, changes are implemented to the business process to improve the efficiency of the process. (Zairi 1997) In order to continuously improve business processes, a company has to ensure that existing business processes are understood, criticized and improved after the business process improvement has been implemented.

Before starting to improve a business process, a company has to have a comprehensive understanding of how the process is working at the moment and what are the strengths and weaknesses of the business process (Dooner et al. 2001). Continuous process improvement aims to create high-quality processes by analyzing performance and efficiency and by starting improvement actions if needed (Heidrich 2013). Klee et al. (2012) state that continuous process improvement is used for improving working methods, recognizing waste, improving quality and standardizing work. Weak points in business processes can be considered as gaps which can cause serious consequences in the future if they are not improved (Coskun et al. 2008). Therefore, improving the weak points of any process is in a critical role in achieving a well-operating processes.

Business process improvement literature recognizes methods of improvement made in an ongoing basis or in a certain time period. Actions aiming to improve a process continuously are known as quality management or continuous improvement (Davenport & Beers 1995). These methods are based on improving processes in an unrestricted time frame. Six Sigma is a tool for continuous process improvement. The basic idea behind the Six Sigma methodology is measuring output variation. According to Kwak and Anbari (2006), Six Sigma as an approach for improving organization’s products, services and processes by continually decreasing the defects. Business process redesign refers to proposed actions that aim to radically redesign and improve working processes in a certain time period (Davenport & Beers 1995).

Heidrich (2013) has identified two major strategies for process improvement. Firstly, a process can be improved by utilizing best practices. Best practices can be elicited from internal or external sources of the company. Secondly, a process can be improved by measuring and analyzing activities and development processes and creating improvement recommendations based on analysis. However, both of these strategies have some typical challenges. Major challenges in using the best practices in process improvement include process definition and process compliance management. Setiawan et al. (2011) state that there is a lack of using the experiences and knowledge of employees performing various tasks in the business process as a source of successful practices. On the other hand, measurement based process improvement has challenges with strategic measurement, implementing measurement systems and model building issues. (Heidrich 2013)

Customers role in process improvement has to be understood since customers are typically the target group of the process output. Davenport and Beers (1995) argue that information about customer satisfaction with processes may help the organization to adjust for changes in the business environment. Chen et al. (2009) state that the focus of every business process should be to meet customer needs. Therefore, improvement of a business process should start by defining customers' needs. According to Nadarajah and Kadir (2014) meeting customer demands requires inherent and seamless relationship of the business processes since those enablers in driving the systems and people in an organization. Buavaraporn and Tannock (2013) studied the relationship between business process improvement initiatives and customer satisfaction. Based on their findings, business process improvement adaptation increases the service quality which is considered as a positive driver of customer satisfaction (Buavaraporn & Tannock 2013).

To be able to pursue constant improvement, companies need to develop capability for continuous improvement. Nakano and Oji (2017) studied the success factors of continuous supply chain process improvement in Japanese manufacturing industry. Based on their findings, three success factors of continuous supply chain process improvement in routinized activities were identified. These are planning through cooperation and coordination amongst middle managers and supply chain management employees, making evaluations which take into account cause-and-effect of supply chain management activities, and connecting improvement phase to the evaluation phase for problem solving. (Nakano & Oji 2017) According to Oprime et al. (2011), critical success factors of continuous improvement include actions encouraging employees to take a part in continuous improvement activities, capability of applying proper tools and techniques, and solutions for problems.

The global business environment is changing all the time, and resisting the change occurring in the environment may become a barrier for organizational success. Change brings uncertainty and risks, but on the other hand creates opportunities. Organizations which are able to change with the environment and continuously improve operations can benefit from the changes in the operating environment. According to Ahmed (1999), the key success factor in competitive environment is the organization’s capability to learn. Efficiency in supplier-customer relationship requires that the supply chain management adapts continuous performance improvement approach. According to Morris (2010), to accomplish continuous improvement in a supply chain context, an organization has to completely understand and describe issues, find the root causes and define corrective activities.

4. Case introduction and research methodology

The following chapter starts with the description of the incident handling process in the case company which is the subject of examination in the case study. Next, the used research methodology is described in detail. The empirical part of this study is accomplished by interviewing the customers' and the case company's representatives. The chapter will also discuss and entitle decisions made in designing of this study. Lastly, the issue of reliability and validity in of the study is examined.

4.1 Incident communication process in the case company

The case company of this study is a large multinational company operating in the oil industry. The case company aims to be strongly customer oriented. Customers' role in company's success is widely emphasized in the case company. This means that value creation is linked to the experience and capabilities of employees but also understanding customers' role as the most important partners of the company. Because customers' role in value creation is well understood, the case company pursues to reach high delivery performance and thereby better respond to customers' expectations.

Customer incidents decrease delivery performance and can have an impact on the relationship between a supplier and a customer. With efficient incident handling, the case company aims to achieve and maintain a high level of customer satisfaction through proper handling of incident situations and improved delivery performance. The organizational learning achieved from incident handling is in a key role in improving delivery performance and thereby it is one of the important outcomes of incident handling. Improving delivery performance in global competitive business environment requires that the company recognizes areas of improvement and makes continuous actions to improve its processes.

The case company categorizes incidents based on the risks and consequences of the incident. Incidents are classified as customer cases if they will or may cause negative consequences for the customer. These kind of consequences mean that a customer does not receive the product or service as agreed. The incidents can be for example quality or quantity issues, or distribution breaks. The case company has defined the roles and responsibilities for customer communication in the customer communication process. Key account manager is in a leading role in the process ensuring the quality of customer communication. In addition to that, operator, technical account manager and quality manager can be involved in the customer communication in different kinds of incidents if needed. However, instructions for the incident communication are presented mostly in higher level. Therefore, each key account manager associated with the handling is in an important role in determining how the communication between the case company and a customer is executed in practice.

The customer communication process is a sub process of the encompassing incident handling process. The customer communication process aims to ensure proper incident handling with customers. The description of the case company's customer communication process for incident situations is presented in figure 6.

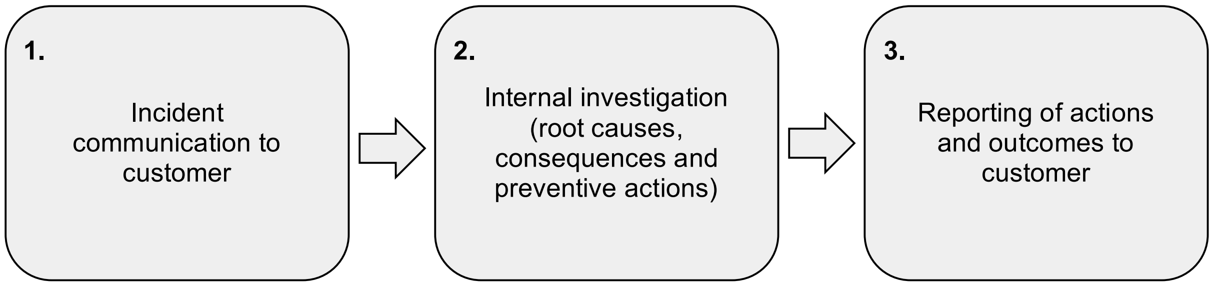

Figure 6. Customer communication process steps

In the first step of the customer communication process, an incident is communicated to the customer. In the second step, the case company makes an internal investigation in order to examine root causes, consequences and intended actions. In the final step, results of the internal investigation are reported to the customer. Execution of the customer incident communication process is monitored in a customer relationship management (CRM) system. This system can be used for communicating with customers in addition to monitoring the progression of the communication process. Key account manager has the main responsibility for a customer communication plan. Incident communication is considered completed when the case in CRM system is closed by the key account manager.

The aim of communication in incident situations is to enhance customer experience. An important outcome of comprehensive tracking and handling of incidents is organizational learning, which can decrease the amount of customer incidents in the long run and ensure that the same causes will not result in several incidents. To be able to maximize the value for customers as well as to the company itself, the case company needs to excel in execution of customer communication. For that reason, the actual execution of the customer communication process needs to be studied in order to make sure practices respond to customers´ needs and thereby, improve the customer experience in the relationship.

4.2 Qualitative research

Empirical research methods are generally divided into quantitative and qualitative methods. The aim of qualitative research is not to make statistical generalizations but rather to describe an event, understand an activity or provide theoretically reasonable interpretation for a phenomenon (Eskola & Suoranta 1998, 60). Therefore, qualitative research aims to describe and understand phenomena in its environment whereas quantitative approaches seek causalities and correlations from quantitative data. This study aims to understand, describe, determine and interpret a particular phenomena and processes inside an organization and for that reason, the selection of qualitative method was reasonable.

Case study is a research method which can be used to conduct qualitative research (Kähkönen 2011). Interviews are commonly used method for gathering information in qualitative research (Kähkönen 2011) and case studies (Yin 2009, 106). Interviews can be highly formalized and structured so that standard questions are used for each interviewee or the interview can be informal and resemble a conversation. Interviews can be divided into four categories based on the possibility for open discussion (See for example Eskola & Suoranta 1998, 87). These categories are structured, semi-structured, theme and open interviews. In structured interviews, questions are formed so that there is no possibility for free discussion, and the questions are presented in a specific order for all interviewees. Also in semi-structured interviews, the questions are same for all but interviewees are allowed to use their own words in answering to the questions. In theme interviews, the interviewer goes through designated themes. The order and extent of each theme can vary between interviews and the interviewer can have a list of covered issues. In an open interview the situation strongly resembles a common discussion between an interviewer and an interviewee. In open interview, the topic for the discussion has been determined, but all themes related to the topic might not be covered during the interview. (Eskola & Suoranta 1998, 87) The benefit of non-standardized interview is flexibility which can be used to exploring complexity of the topic (Saunders et al. 2007, 319).

The use of theme interview is justified based on strengths of the method which are central for achieving the objective of this study. Firstly, theme interview allows interviewees to talk freely so that the data represents the opinions of interviewees as such. Secondly, themes ensure that same topics have been discussed with all interviewees. Themes also provide an approach for data analysis. (Eskola & Suoranta 1998, 88) In this study selected cases are used to provide information about communication execution in different types of incidents which ensures that generalizations made in this study are applicable for different incident situations. Different issues can be highlighted in different cases with different customers and the use of theme interview allows interviewees to express their opinions extensively. Moreover, using themes helps keeping the focus in essential tissues, managing time allocation and analyzing gathered data.

Non-standardized interviews can be conducted in groups. Hirsjärvi et al. (2009, 210) argue that a group interview is an efficient data collection method, because it allows the researcher to gather information from several people at at the same time. The group can also help if interview requires remembering details or correct misunderstandings (Hirsjärvi et al. 2009, 211). Group interviews can lead to productive discussions as interviewees respond to the questions presented by the interviewer and evaluate points raised in the group (Sauders et al. 2007, 339). The use of group interview in this study is justified because several people from customer organizations actively participate in incident communication and therefore, may have different kinds of experiences and opinions. Therefore, groups were formed based on purposeful selection which allows selecting the employees which were involved in the incident handling. According to Rabiee (2004) a focus group can provide information about a range of ideas and feelings people have about specific issues.

4.3 Data collection

Nine semi-structured theme interviews provide the data for the empirical part of this study. To create a comprehensive understanding about the studied issue, both customer representatives and case company's key account managers were interviewed related to each case. Edvardsson (1992) suggests that in order to create a comprehensive understanding of critical incidents both customers and the employees of the company should be involved in the the same critical incident. Customers suitable for this study were limited to the key accounts of the case company since the incident communication process is currently implemented only for those customers' incident handling processes. Three customers were chosen based on suitable incident occurrence for this study. The requirement for the suitable case was determined so that the incident has to be unpredictable and have a potential for causing negative consequences for the customer. Therefore, cases having minor potential impact for customers as well as close shaves were left out since it was believed that the actions of the case company as well as customer's needs come forth more clearly in severe situations. In total five incident cases were used in gathering the data for this study and therefore, two of the customers were involved in two cases. However, both of those cases were seen to be important and they were concerned with different representatives from the customer and therefore, both are used as separate cases in this study.

Customer interviews were carried out as group interviews in order to ensure that all relevant information related to the incident communication come forth. Customer interviews were conducted at a suitable location for customers. The location can impact to the responses of interviewees (Saunders et al. 2007, 321) and therefore, locations were selected so that they are as convenient for interviewees as possible. Designated representatives for each case were chosen based on their involvement in the incident communication process.

In addition to customer representatives, four key account managers of the case company were interviewed to get more information related to the cases and customers. Key account managers were chosen to provide additional information since they are responsible for customer communication process execution during the incident situation and they have a lot of valuable knowledge about the execution of incident communication and customers' needs. Key account managers were involved in the study based on chosen key account customers. Their interviews were also carried out at the most convenient way which led to the situation that three of the interviews were done in the case company's location and one was a phone interview. The length of interviews was limited to one hour each. The table 1 summarizes the information about each interview.

Table 1. Description of cases and interview groups

Case	Customer	Root cause for the incident	Number of interviewed customer representatives	Customer Interview Location	Case company's interviewee	Case company interview location
Case A	Customer 1	ICT problems in loadings	2	Customer's' location	Key Account Manager 1	Case company's location
Case B	Customer 1	Human/Process failure	3	Customer's location	Key Account Manager 2	Case company's location
Case C	Customer 2	Human/Process failure	4	Case company's location	Key Account Manager 3	Phone interview
Case D	Customer 3	Problems in loading scheduling	2	Customer's location	Key Account Manager 4	Case company's location
Case E	Customer 3	Unclear roles and responsibilities in document sending	1	Customer's location	Key Account Manager 4	Case company's location

Table 1 shows that a total of 16 people was interviewed in gathering the data for this study. Interviewees were enabled and to talk freely and the interview situation was made as open as possible. In order to build trust between the interviewer and interviewees, representatives were told that any names of individuals or companies will not be used in the study and interview recordings were only used for the purpose of this study. Same themes were used in all interviews but the perspective for the theme was slightly different between case company's and customers' interviews (see appendix 1).

4.4 Data Analysis

Interviews are the main source of data for the empirical part of this study. The interview data consist of approximately 72 pages of transcribed speech written in Arial font size 12 with line spacing of 1,5. Interviews include group interviews for customers and individual interviews for case company's representatives. The interviews were carried out during summer 2017. Interviews were transcribed within few days from the interviews and because the emphasis of the study is rather context than characteristics of interviewees or their speaking, expletives were left out from the transcribed text.

The nature of the qualitative data has an impact on its analysis. Saunders et al. (2007, 474) suggest that due to the non-standardized and complex nature of qualitative data, it should be grouped into categories before analyzing it. Themes provide a possible categorization for the study. To make sure that interviews were treated equally, all interviews were first analyzed separately and after that, compared with each other to identify emerging and recurrent themes. The qualitative data analysis follow the general procedures outlined by Saunders et al. (2007, 479-484). The procedures involve following activities:

- Classifying data into meaningful categories
- Linking units of data to appropriate categories
- Identifying the relationships
- Developing conclusions (Applied from Saunders et al. 2007, 479-484)

4.5 Validity and reliability

In order to reduce the possibility of getting wrong results, reliability and validity of the study have to be considered. According to Kähkönen (2011), evaluating validity and reliability of a study is one of the most important issues in research. Validity refers to trustworthiness of the research. It is concerned with whether the findings of the study certainly are what they appear to be (Saunders et al. 2007, 150). Validity can be divided in internal and external validity. External validity refers to the generalization of the study and internal validity means the trustworthiness of the study. Validity of the research can be increased with proper research design, concept formation and sampling. (Metsämuuronen 2009, 65)

In addition to validity, reliability is a criterion for assessing the quality of the study. Reliability refers to objectivity of the research findings. According to Yin (2009, 45) the reliability of the study indicates whether same answers can be reached if the research is repeated. Therefore, reliability refers to the ability to not produce coincidental results (Hirsjärvi et al. 2009, 231). Moreover, reliability aims to minimize errors and bias in the study. In qualitative research, the reliability can be increased by describing the execution of the research (Hirsjärvi et al. 2009, 232). Careful documentation of procedures of the study enables other researchers to repeat an earlier study and also allows one to repeat his own work (Yin 2009, 45).

One possible threat to the reliability of the research is participant bias, which can lead to unreliable interview answers caused by expectations toward the interviewees (Saunders et al. 2007, 148). This was taken into account by keeping interviewees anonymous, so that they can express their opinion freely. The data was analyzed carefully in order to ensure that data is interpret correctly. Finally, to increase the reliability of this study, all research phases were carefully documented so that other researchers can repeat the investigation. Generalizing results of this study outside of the research environment should be careful. The sample used in this study represents a small group from the perspective of the entire customer incident communication phenomenon. Therefore, it was left for the reader to consider the extent to which these results can be generalized outside of this research context.

5. Empirical results and findings

Before the improvement of the communication process can begin it is important to create a detailed picture of how the process is currently functioning, and therefore execution of the customer incident communication process was examined. Also customer satisfaction towards incident handling of the case company in more general level and customers' communication needs during incident occurrence were examined. The internal perspective was taken into account to provide important knowledge for successful in process improvement. The process will be criticized by identifying the gap between customer satisfaction and needs, and the execution of current process.

5.1 Customer communication execution in the cases

Creating an understanding of the current state of the process is an essential part of process improvement. Thereby, execution of the incident communication process was discussed with customer representatives in chosen cases in order to create a comprehensive understanding of the incident communication in practice. Using a case as a basis for the discussion provided very concrete perspective to the incident communication and evoked lot of discussion in the interview situation. The main objective was to find out how the communication during the incident cases was executed and how customers experienced it.

The goal of the first interview theme was to examine the execution of the communication from the process perspective. Therefore, the main focus was how the case company conducted steps one and three of the process in which the customer is involved in the process. These steps are the initial communication of the incident to customer in the acute situation, and reporting of actions and outcomes of incident investigation for the customer.

5.1.1 Acute communication

In three cases out of five, the customers described that the acute incident communication was done from the initiative of the case company. In these cases, the case company observed the incident and proactively communicated it to the customer. In the three cases in which the first contact was made by the case company, the terminal messaging system was used as the communication channel for the initial incident announcement in one of the cases. In another case the customer was called about the incident, and in the third one customer was informed by email. In these cases, the customer feedback about the acute incident communication was mostly good.

According to the interviews, in each of the three cases in which the case company communicated the incident proactively, the communication channel selections appeared to be suitable. As an example in case A, the loading break was informed via the terminal messaging system. Terminal messaging systems is designed for announcing exceptions in loading. The terminal sends the announcements through the system to all parties who have subscribed to the announcements. The announcements are received through the communication channel which has been chosen by the subscriber, for example email or text message. With this communication channel, the case company is able to reach the customers as well as other relevant partners such as transportation companies efficiently.

In two of the cases, the incident was noticed by the customer and therefore, the customer made the first contact related to the incident. In these cases, the customer had to make the effort to find out what had happened and initiate the conversation with the case company. They perceived this unpleasant, time consuming, it caused customers extra work, and slowed down their processes. A customer with whom the case company failed to be proactive in acute communication expressed that they are in a role of a customer and it is not their responsibility to find out why the delivery is not as agreed.

"We are a customer and we don't see it is our responsibility to investigate why the delivery is not made as agreed." Customer representative of case D

Internal information transfer was seen as a barrier for acute communication in these two cases, in which the customer noticed the incident before the case company had communicated about it. Customers perceived that the problems in acute communication were caused by internal communication challenges in the case company. Customer representatives of case D commented that the proactive approach for communication in the acute situation would make it look like the case company is well aware of its operations.

“Internal link between sales and loading departments would make it look that the case company reacts and knows what is happening.” Customer representative of case D

5.1.2 Reporting of outcomes and actions to the customers

In one case of five, customer representatives expressed that investigation outcomes and actions were reported for them. In this case, the customer received incident description, analysis, preventive actions and summary related to the case. They expressed that it was good that this case was handled thoroughly with them.

“It [reporting of outcomes and actions] was absolutely beneficial. In the serious incidents it is important to make proper investigation so that we get information.” Customer representative of case B

In the other four cases the incident handling was limited mostly to solving of the acute situation. Customer representatives expressed that they were not aware of any investigation outcomes and actions related to the incident cases.

“I think I have not seen any preventive actions via email or I have not been contacted how these issues have been investigated and which kind of causes there has been.” Customer representative of case A

One customer representative described that in the case they were communicated about the what was done to solve the issue and what were the consequences of the incident. However, it was not reported what the causes for the incident were. The deficiency of investigation outcome and actions reporting caused some customers to make own speculations related to the root causes. Customers also considered the possibility that the root causes of the incidents were such that the case company preferred not to communicate them.

5.2 Satisfaction towards incident handling

The second theme of the interviews was the customers' satisfaction towards incident handling. The aim was to find out if there are some sources of satisfaction or dissatisfaction in the incident handling. This information can be used to improve dissatisfactory elements in the communication process and to exploit the satisfactory elements even further to increase customer satisfaction.

5.2.1 Satisfaction for acute actions

One significant factor impacting the customer satisfaction with the incident handling is the success of the acute communication, and a key decision in the acute communication is the choice of communication media. Identified communication channel options for acute communication about an incident include phone calls, emails, messaging through a CRM system and terminal messaging system for loading breaks. All customers agree that in critical situations, they prefer using the phone. Email or CRM messaging can be used in support of a phone conversation to provide details. Also the use of any channel in which the information can be stored allows both parties to check agreed details afterwards if needed.

The terminal messaging system came up in many interviews and the use of the system for acute communication about loading issues was perceived as very positive and efficient way to communicate by the customers. Customers expressed their satisfaction towards the terminal messaging system especially in informing about loading breaks in terminals. The benefit of this communication channel was that it reaches many parties involved in the delivery chain.

"Most of the trucks receive information directly on the way and we are informed about the acute breaks as well. It is a really well functioning system, because the coverage is very high." Representative of customer 2

In three interviews customers expressed that they see that the sales department communicates proactively about incidents. Even if in all cases the key account manager did not know about the incident and therefore was not able to communicate it to the customer, customers thought that when the sales organization of the case company receives information about an incident, they communicate it proactively.

5.2.2 Customer satisfaction for investigation outcomes and actions

The second step in the process involving the customer in the incident handling and thus impacting the customer's experience about the incident handling is reporting of investigation outcomes and actions. For this step, three communication channels were identified in the interviews: email, communicating through CRM system and operative face-to-face meetings. Compared to the acute communication, in this step the customers' preferences were more divided between the communication channels. One of the customers strongly preferred the use of CRM system for communicating investigation outcomes and action whereas another customer thought that email is the most suitable channel. All customers agreed that the face-to-face operative meetings are a good channel especially for discussing more serious incidents. Operative meetings were also seen suitable for more detailed communication related to unclear and serious incident cases and summarizing closed incidents.

In one case in which the investigation outcomes and actions were communicated to the customer, the customer was satisfied with the incident handling. However, in this incident, the customer brought fort that it took a lot of time before the customer received investigation outcomes. In two of the cases in which the investigation outcomes and actions were not reported to the customer, they expressed that they would have wanted more detailed information about the outcomes and actions related to the incident investigation. On the other hand, in two of the cases customers did not see that comprehensive reporting of investigation outcomes would have benefitted them.

"It [investigation of outcomes and actions] has probably been made, but how it has been communicated with the customer that side we have not seen. That is what we have always wanted." Representative of customer 1

“For us it is enough if the product is on-spec and we can sell it. It is what the agreement between us and the case company requires.” Representative of customer 2

Informing the customer about the investigation outcomes and actions were seen to improve the trust in the relationship and show that the case company takes responsibility and really strives to make an improvement.

“It shows that supplier is caring about the issue and tries to fix mistakes as well as avoid those in the future. As long as a human does things, mistakes occur but it impacts to the trust if supplier takes responsibility.” Representative of customer 1

5.2.3 General satisfaction with the incident handling

Involvement of other employees in addition to the key account manager in incident handling came up in two customer interviews. The feedback for the involvement of a technical account manager was positive. Technical account manager’s actions in one of the cases of this study were seen to be in a significant role in making sure that damages caused by the incident could be minimized. Technical account manager’s involvement was perceived to bring positive results. In addition to technical account manager, another mentioned party was commercial operator, who actively sought for information about the incident.

In addition to selected cases, other incident situations came up in the interviews. In one interview, the customer described an additional situation in which they were dissatisfied with the communication. The customer had received an announcement from terminal employees regarding of a planned loading break. Customers perceived the communication inappropriate due to the inadequate communication message. Planned timing for the loading break was unsuitable for the customer due to changes in the operating environment. However, the loading break was quickly rescheduled when the sales organization, who knew about the changes in the operating environment, was included in the situation. Although, the sales organization was able to prevent a delivery incident from happening the situation caused a dissatisfactory experience for the customer because of the inadequate communication.

“It would be reasonable to consider what is the best way to inform about this kind of issue and with what kind of message, and also consider the operating environment.” Representative of customer 3

Customers were also asked how they perceive the case company’s ability to identify relevant incidents and do they think that such incidents occur which are not identified as incidents by the case company. In three interviews, customers were satisfied with the case company’s ability to identify incidents. They perceived that the case company actively addresses incident situations. Respondents in one of these interviews emphasized that if the customer does not react to a situation, they do not consider it as an incident. However, in two interviews representatives identified situations which were not classified as incidents by the case company. The first situation was related to product features and the other one to documents involved in loadings. Even though both of the situations were communicated with the customers, they would have wanted more information about investigation outcomes and actions.

“The feedback was given and the response was provided by the case company, but maybe we would still have desired a more systematic approach. Maybe the root causes would then have been familiarized more.” Representative of customer 2

Customers were also asked to provide a grade to reflect their satisfaction towards the incident handling. The average grade for the satisfaction with incident communication was approximately eight. The lowest given grade was seven plus and the highest eight and half out of ten. In addition to giving the grade, some representatives explained why they graded the incident handling of the case company how they did. For example, one customer representative explained that in terminal and quality related incidents, the satisfaction towards the handling is around nine but in other kinds of incidents and other situations, there is more room for improvement and therefore the entire incident handling was graded eight and half out of ten. The representative of the least satisfied customer described that at the best, the incident handling of the case company is close to eight, but usually lower than that. One customer explained that the satisfaction would be higher if the case company would react quicker in incident situations and inform customers immediately when the situation is known.

One customer emphasized that cooperation in the relationship is an important factor for the customer experience. As long as communication and cooperation work well, incidents were not seen as significant issue in the relationship.

"General cooperation is very important. Even though some mistakes will happen, it does not matter so much because the communication works otherwise very well. Attitude and other things matter more than the amount of mistakes. "Representative of customer 3

5.3 Communication needs and value drivers

Communication needs and value drivers aim to identify, what in the incident handling creates value for the customer and which kind of needs they have towards the supplier's incident handling. These are in a critical role in understanding how the incident handling process should be improved in order to better respond to customers' needs and add value to the relationship.

Customer information needs varied depending on the incident handling process steps. When the incident is observed, the situations have different communicational requirements than in the step of reporting about the incident investigation outcomes and actions. Therefore, the needs and value drivers in both situations are examined first and after that those value drivers which do not directly belong to either of the process steps.

5.3.1 Needs and value drivers for acute communication

Customers emphasized the role of acute communication in successful incident handling. Proactivity was seen highly valuable in acute communication. An important factor in making the acute communication successful was quick information availability. Interviewees emphasized that with prompt communication, the best possible actions in the situation can be made and consequences of the incident can be minimized. One customer representative highlighted the importance of acute communication because when the cargo is on its way to the terminal, there is not much that can be done anymore. But if the communication is done promptly it allows cooperative planning to solve the issue. Quick communication allows the customer to react to the situation and open information sharing increases the trust in the relationship.

"Quick information flow in an incident situation could increase trust between supplier and customer." Representative of customer 1

The terminal messaging system for loading break communication came up in many interviews even though it was used for communication in only one case. The use of the terminal messaging system in acute incident announcement was seen as effective and well functioning by the customers. However, customer representatives in each interview emphasized the role of phone calls as the most important information channel in critical situations. According to the respondents, a phone call is the most reliable way to reach them.

"I keep the phone with me all the time but e-mails for example might not be noticed, especially outside the working hours during weekends. But for the phone calls I answer always." Representative of customer 2

The most important information the customers need at the acute incident situation are a description of the incident, how it will impact the customer's operations and whether the incident requires actions from the customer. This information is in a critical role in preventing the harm from spreading. If the customer is informed about the extent of the problem, it allows them to make changes in their operations in order to reduce damages. One customer also emphasized that in those cases in which it is unknown how much time is needed to solve the incident, a loading brake for example, it would be important to receive an estimate about to the duration of the problem if possible.

"If supplier has any civilized estimate that there is no quick fix for the problem, it would be good to communicate that this will not be fixed in one or two hours." Representative of customer 1

Customers also valued an open and honest communication at the incident situation. In those cases, in which the cause of an incident was still unknown at the time of customer communication, customers prefer honest and proactive communication. One customer emphasized the value of honest communication about current efforts made to fix the issue.

"It is moderate level if we know that there is an ongoing situation which is tried to be fixed. Preferably an honest communication that the issue is being solved and the next announcement at XX. "Representative of customer 1

5.3.2 Needs and value drivers for reporting of outcomes and actions

Desired information channel related to investigation outcomes and actions were divided among the customers. One customer who was convinced about the benefits of the CRM system of the case company preferred it as the communication platform because all messages are retained in the system and all conversation are available for people who have access to the system. Another customer preferred the use of email. Generally, customers agreed that the third step in incident communication process should be executed by using some less time consuming communication channel and then more serious cases can be gone through in face-to-face operative meetings if needed.

"In my opinion this is a good system that we received a presentation couple days beforehand so that we had time to familiarize with it and when someone came to go through it, we had a chance to ask questions." Customer representative of case A

The needs for information about investigation outcomes and actions were divided. The customer who was comprehensively informed about the investigation outcomes and actions in the case perceived it valuable. In two interviews, customer representatives expressed that they would have wanted to receive more information than was offered related to the investigation, especially root causes of incidents. The conjunctive factor behind these incidents was repetitiveness of incidents. The repetitiveness of the incident without investigation outcomes made customers skeptical about the improvement and organizational learning achieved by the case company.

"As an example, those problems which recurred during the last year, we did not have any information if the earlier cases have been handled or is it the same root cause always behind them." Customer representative of case B

However, in two of the cases customers did not see that comprehensive reporting of investigation outcomes and actions would have brought them more value. One customer highlighted that sharing root causes is not typical in this industry and that it is more important to get things done and move on from the incidents. However, they said that in more serious cases the comprehensive root cause investigation could be needed. Both of these customers also mentioned that in repetitive cases they would want more comprehensive information related to the root causes and other investigation outcomes.

One of the customers mentioned that the case company's investment in thorough incident handling could benefit them also in the relationships with their own customers. Having the information about the investigation outcomes and actions would make it easier for the case company's customer to communicate with their customers if they were impacted. The customer saw that the information sharing would important in order to increase trust and improve their image in the eyes of their customers. The customer expressed that their customers have high expectations towards them and it is not enough if they tell that there is a problem but they do not provide a cause and further actions.

5.3.3 Additional needs and value drivers

The special features of the industry and their impact also came up in the interviews. One customer representative described that the actions the case company is taking in order to handle incidents and learn from them are not common in the industry.

Therefore, investing in incident handling and communication was considered as valuable by the customer.

In two interviews, customer representatives adduced cases which customer perceived serious or harmful, but which did not fill the requirements of an incident from a case company's perspective. These cases were linked to shortages of documents related to loadings or situations in which the delivered product does not work as expected. In the latter case, product might not be off-spec according to the contract but does not work as customer has expected. Representatives of these two cases thought that it would have been beneficial if these would have been handled with them more systematically.

Customers expressed also specific needs related to the incident situations. One customer emphasized that in order to understand the importance of incidents, an estimate of the financial costs of the incidents should be received. Another customer would want more information sharing related to the exceptions in loading situations. This kind of needs were specifically mentioned as possibilities for adding value to the customer, but other customers did not bring these issues forth.

5.4 Internal perspective to incident handling with customers

A comprehensive picture of the current state of incident communication was completed by interviewing the customer representatives and the key account managers. The representatives of the case company were utilized to adduce a supplier's perspective to the incident communication. The knowledge of the case company's key account managers provided additional information related to the incident communication. They were expected to bring a valuable viewpoint related to customer needs and it was also considered important to find out if there are some challenges in executing the process which should be improved.

Key account managers perceive that proactive communication in the incident situation is vital. One of the key account managers emphasized the importance of an honest communication in the acute situation. It is very important that when an incident occurs, the customer is told what the supplier knows. What is told to the customer, should include only facts instead of speculation. The same key account manager brought forth that it is very important to use the communication channel agreed with the customer in incident handling. Key account managers of the case company agreed that a phone call is the most efficient information channel in urgent situations.

The importance of cooperation and trust in the customer relationship came up in key account manager interviews as well. All key account managers recognized the importance of reporting investigation outcomes and actions in building trust in the customer relationship. Trust was the most emphasized result from the reporting of outcomes and actions to the customer. Reporting investigation outcomes and actions was viewed as a way of showing appreciation towards the customer.

“It builds the trust that we take issues seriously and investigate root causes. How we success to report those to them depends on the situation.” Key account manager of customer 2

“If we inform them proactively, customer feels appreciated because we tell them and they can react. That is cooperation at its best.” Key account manager of customer 3

Key account manager interviews brought forth that customers’ information needs for the incident communication can depend on the situation. One key account manager recognized that customers needs for investigation outcomes and actions increase in repetitive incidents. Moreover, key account managers were aware that customers might not be interested in investigation outcomes and actions in all incidents. These include situations in which there is no apparent impact to the customer. Key account managers also emphasized the importance of listening to customers in the incident handling.

“It is important that we listen to them [the customers] because it is possible that we do not always know what it will cause them if we make a mistake.” Key account manager of customer 3

The key account managers were also asked about the challenges in customer communication. Couple of challenges came up but mostly the customer communication process was seen as a well functioning system. One key account manager brought fort an issue of remembering to execute the customer communication and unclear sometimes overlapping responsibilities in the customer communication. Another key account manager brought forth that CRM system is a tool which has made incident related customer communication easier. On the other hand, third key account manager emphasized the role of the CRM in informing key account managers about the incident details. This key account manager added that cases should be comprehensively registered to the CRM system to ensure successful customer communication.

One key account manager explained that sometimes customer communication is delayed if the root cause investigation is not finished in a timely manner. This key account manager expressed that a routine incident handling time could help in executing the customer communication. The key account manager also mentioned that confusion related to contacting responsibilities sometimes disturbs proactive communication to the customer.

The support to the incident handling provided by the other members of the organization was also discussed with the key account managers. They described that they are supported by technical account manager and quality manager if needed. One key account manager expressed that sometimes overlapping in responsibilities can cause challenges in customer communication. For example, the key account manager and technical account manager can sometimes assume that the other takes care of customer communication. In one interview a key account manager stated that utilizing also other experts such as IT employees to provide subject area expertise could increase the quality of incident handling and customer communication in some situations.

One key account manager suggested that the measuring of the customer communication process could be improved. Another key account manager proposed reporting incidents for customers over a specific time period. For example, a yearly summary of the incidents could be provided to the customer including descriptive statistics about incidents in the relationship.

6. Discussion and conclusions

In the last chapter, the empirical results of the study are scrutinized based on the literature and research questions are answered. Moreover, the results are evaluated and process improvement suggestions presented. The limitations of the applications of this study are discussed, and directions for the future research adduced.

6.1 Improving the process

By examining the empirical findings of this study and reflecting on previous literature, three fields emerged which require further discussion. Firstly, variation in the seriousness of incidents, differences in customer communication preferences and different perceptions of criticality of incidents between customer and supplier drive the need for increasing customer orientation in the process. Secondly, roles and responsibilities need be clarified in order to make sure that the correct person handles the communication by using the appropriate channel with the support of essential employees. Thirdly, previous literature strongly supports the idea that the process should be measured in order to ensure that the process execution is in a line with the company's objectives.

Customer orientation

The need for customer orientation emerged in various contexts in the empirical study. Empirical findings show that communication in acute incident situations is more established and current practices are in line with customers' needs. However, deeper cooperation in the incident handling is still seeking its form. Information sharing in the form of reporting of investigation outcomes and actions is a part of the process which requires further attention.

Customer communication seems to be well stabilized in acute incident situations. The case company and the customers seem to have a common understanding of suitable practices. Acute communication received mostly good feedback from the customers and it was executed according to the process. Both, the customer and the case company agreed that a phone call is the best communication channel in critical situations. It has also previously been noted that in product purchasing relationships, telephone is often preferred as a communication channel (Ambrose et al. 2008). The parties also agreed on the information needs in acute incident situations. The empirical findings show that the most important details in acute communication are description of incident, incident's impact to customers' operations and actions required from the customer. Success factors in the acute incident situation were open information sharing and honest communication. This finding is supported by the literature since open and honest communication between supplier and buyer has also previously been recognized to help reduce potential conflicts and achieve consensus (Yen et al. 2011). Moreover, credible, clear and rapid information sharing has been noticed to impact customer experience in incident situations (Edvardsson 1992). The empirical findings also show that the success of acute communication strongly contributes to customer satisfaction.

Based on the empirical findings, communication in acute incident situations has become relatively stable, but practices in reporting of investigation outcomes and actions are still seeking their form. The findings show that there was more variation in the execution of this step of the process and in most of the cases, the investigation outcomes and actions were not reported to the customer at all. Several factors impacting the incoherencies in communicating of investigation outcomes and actions were identified.

First of the factors is that customer and supplier can experience the importance of incidents differently. The empirical findings show that an incident can be perceived differently by supplier and customer. The literature has also recognized situations in which the perceptions of supplier and customer differ from each other. For example, Christopher (2005, 39) states that the customer's experience about customer service can differ from the supplier's understanding. The difference in perceptions can have a significant impact on how much value the incident handling can create to the customer. It needs to be ensured that the seriousness of incidents is understood from the customer perspective and that the outcomes and actions of the investigation are communicated with them in the important cases. This enables optimizing the process to create the highest possible value for the customer.

The second identified factor is the variation in customers' needs for reporting incident investigation outcomes and actions. Empirical findings brought fort that customers have different preferences and needs in different incident situations. Seriousness and repetitiveness of incidents were identified as the two main aspects impacting the information need. In more serious cases customer information needs towards the investigation outcomes and actions were higher, whereas in less serious cases the interest towards the investigation outcomes and actions was lower. However, if the incident had recurred multiple times, the importance of the investigation outcomes and actions reporting increased. Repetitiveness caused dissatisfaction among the customers in the form of uncertainty. Literature recognizes the importance of communication in explaining the dissatisfied customer how the source of dissatisfaction will be removed (Ndubisi et al. 2007). Therefore, comprehensive communication needs to be utilized in situations which can result in dissatisfaction for the customer including serious and repetitive incidents.

The third factor is customers' different preferences in communication channel selection. Empirical findings suggest that preferred information channel for the reporting of investigation outcomes and actions varies among the customers. It has been previously noticed that communication media selection is dependent on the context of what is appropriate in the relationship atmosphere (Mason & Leek 2012) which might also cause the variation in preferred channels in the empirical findings. However, empirical findings brought forth that in serious situations, the investigation material should be reviewed in operative face-to-face meetings. Richer modes of communication are recognized to provide more information in complex situations (Cannon & Homburg 2001) and increase the perceived satisfaction in the business relationship (Mason & Leek 2012).

Last of the identified factors is the industry. Extensive incident handling in business relationships was not perceived to be typical in the industry. Attitudes towards information sharing between supply partners has been recognized as a challenge in the petroleum industry also by the literature (Hussain et al. 2006). In addition to this, the prior research has identified the issue with the reliability of suppliers in the industry (Chima 2011). Therefore, features of the industry can impact what is expected to be typical practice and hinder adapting different ways of working.

Empirical findings of this study highlight the importance of cooperation between supplier and customer. Customer incidents were not seen as a critical source of dissatisfaction if the cooperation in the relationship was on high level. It has been observed in previous literature that in a high quality relationship even negative incidents can have a positive impact, and that cooperation and implementing a joint improvement agenda are drivers for a high customer satisfaction (Van Doorn & Verhoef 2008; Heikkilä 2002). In the empirical study it was commonly agreed that communication about investigation outcomes and actions increases the trust in the relationship between the customer and the supplier. This is supported by previous literature findings which suggest that the effective communication is in an important role in ensuring the trust in the relationship between a supplier and a customer (Ndubisi et al. 2007; Yen et al. 2011).

The communication practice in the acute situation is better established from the two steps of the process which include the customer. The execution of the third step of the process seems to have more room for improvement. The challenges to execute this step include different perceptions of incident seriousness, variety in customer needs and channel preferences as well as attitudes in the industry. To ensure customer satisfaction in complex and various situations the process should have a stronger customer focus. This is supported by varying customer needs, the specific communicational characteristics of each customer relationship and importance of understanding the criticality of incidents from customer perspective. Comprehensive incident investigation is in a critical role in continuous organizational learning and should be always carried out carefully. The degree to which the customer is involved in the incident handling process, should be carried out with customer orientation since it is the part of the process which is focused on creating value to the customer. Ensuring active cooperation when it is the most important to the customer results in increased customer satisfaction and further strengthens trust in the relationship.

Roles and responsibilities

Based on the empirical findings, when acute communication is initiated by the supplier, the customer is generally more satisfied with the incident communication. In the empirical study the incidents in which the supplier failed to proactively communicate the incident can be linked to misunderstandings in roles and responsibilities. Since timely information availability was an important success factor in acute communication, failures in acute communication were identified as a source of dissatisfaction. Challenges in internal information transfer were identified as a barrier for effective execution of customer communication.

In order to improve the effectiveness of communication and customer satisfaction with the communication, the roles and responsibilities need to be clearly defined. This is supported by the literature since inefficient internal communication has been proven to impact the long-run effectiveness of the relationship (Griffith 2002). In addition, roles and responsibilities of employees working in the customer interface have been identified to be important in achieving a high level of customer satisfaction (Edvardsson 1998). In the empirical study the issue of overlapping responsibilities was noticed to harm customer communication in some situations, which can cause dissatisfaction to the customer.

One important decision to make is whether there should be one point of contact or if the customer can be contacted by multiple employees. The empirical results show that the understanding of the customer's business environment is important and that inappropriate communication causes dissatisfaction for the customer. It is crucial for the execution of the communication that customer contact persons are well informed about the customer's situation. Empirical findings showed that supplier's representatives have a lot of knowledge of each customer's preferences. This is supported by previous findings that highlight the importance of supplier's employee in the customer service and with the knowledge related to customers needs (Roberts-Lombard 2011). Also the key contact employee's connection to customer experience is recognized in previous literature (Edvardsson 1992; Rossomme 2003) When the required expertise exists in the supplier organization, the tasks can be performed with customer orientation.

Even if the key customer contact person knows the customer's needs well there can be situations in which the support of specific experts can bring improved results. Based on the empirical findings, involving experts such as a technical specialist in incident communication can increase the customer satisfaction with incident communication. The findings have also showed that when experts are used it can lead to misunderstandings with roles and responsibilities. Therefore, if subject area experts are brought into the incident communication also their responsibilities should be clear for all involved in the process.

Measuring

At the moment, there are no metrics measuring the performance of customer communication process. Based on the empirical findings, measuring two aspects of the process would be beneficial. These are customer satisfaction with the process and lead time of the process. Measuring of process performance is supported in previous literature. Business process management relies on assessing the process with measures (Zairi 1997), which should be related to customer needs and internal requirements and compared to set targets. (Hammer 2010)

To ensure that the customer communication process is continuously improved, the customer satisfaction towards the process should be measured. The literature emphasizes the importance of understanding customers' needs and sources of customer satisfaction in process improvement (Chen et al. 2009; Davenport & Beers 1995). Using survey questionnaires has been suggested for measuring subjective metrics such as customer satisfaction (Yen 2009).

Empirical findings show that investigation outcomes and actions were reported to the customer slowly. Supplier representatives experienced that the long handling times make carrying out the customer communication process more difficult. From customer perspective, the ability to move on is important in the less serious incidents. Standardizing the time for the execution of the customer communication process could increase the efficiency of the incident handling for both parties. Standardization of business processes has also previously been proven to improve process performance and strive continuous improvement (Münstermann et al. 2010). Table 2 summarizes the discussion and findings of this study.

Table 2. Summary of process improvement areas

Drivers for improvement	Process improvement	Improvement objectives
• Different kinds of incidents and different perspectives for the seriousness of incidents • Different preferences of customers	Customer orientation	• Focus on the right things in the incident handling • Optimization of time used by customers and the case company • Increased customer focus and satisfaction
• Unclear responsibilities • Lack of internal communication • Failures in customer communication	Defining roles and responsibilities	• Optimization of human resources • Decreasing the amount of mistakes in the process execution • Increased efficiency
• Customers' need to move on and get things done • Variation in handling times and practices • Challenges in remembering to execute customer communication	Measuring the process performance and satisfaction towards the process	• More standardized practices • Quicker process lead time • Possibility to monitor the process • Foundation for continuous improvement

The empirical findings together with the previous literature show that improvement for the current process lies on three main fields. Firstly, the customer orientation needs to be strengthened to improve the experience of the customers. Secondly, roles and responsibilities needs to be defined in order to ensure the efficiency of the process and decrease the amount of mistakes in the execution of the process. Thirdly, the process performance and satisfaction towards the process needs to be continuously measured with proper metrics in order to standardize incident handling and making continuous improvements of the communication process possible. These improvements further increase the efficiency of customer communication process and ensure the high level of customer satisfaction.

6.2 Conclusions

Success in the global business environment is tied to the success of an entire network of companies. These networks include numerous business relationships involving customers and suppliers. The relationships are important for the whole network and the needs of both parties should be fulfilled. Communication is a vital part of the relationship, and successful communication becomes evermore crucial during incident situations. The aim of this study was to find out how customer incident communication process can be improved. The goal was achieved by studying how the case company's customer communication process is currently working, and scrutinizing it based on customers' needs. These empirical findings were then reflected with the literature in order to provide perspectives for customer communication process improvement.

Several factors were identified to have an impact on the practices and customer needs in the incident situation. These factors impact customer communication in incident situations. The factors are industry, characteristics of the incident and quality of the supplier-customer relationship. The industry defines the norms and appropriate practices in the business relationship, and therefore it is important for companies to recognize the impact of the industry. Characteristics of an incident have an impact on the customers' interest towards an incident and expectations towards the incident handling. Especially in serious and repetitive incidents the information need of the customer increases. Quality of the relationship impacts the practices and expectations in incident situations trough the general level of cooperation in the relationship.

Fulfilling customers' expectations towards incident handling has an impact on customer satisfaction. By fulfilling the expectations, it is possible to maintain the trust in the relationship. As long as the trust is maintained in the relationship, incidents can have only a minor impact on the supplier-customer relationship. Communication in incident situations is connected to the trust in the relationship and therefore, the importance of successful communication especially in unwanted situations is in a key role in maintaining the trust and customer satisfaction in the supplier-customer relationship.

To succeed in customer communication in incident situations, a company needs to have a customer incident communication process that responds customer needs. The process has to maintain customer orientation, employees need to be aware of their their roles and responsibilities, and the performance of the process has to be measured. By examining the customer communication process from these perspectives, a company can ensure that the process fulfills customer expectations and aims for high customer satisfaction, that the process is effectively executed by the correct experts, and that the foundation for continuous improvement exists.

Each business process of an organization should be continuously improved to stay competitive and be able to respond to customers needs also in the future. Today's best practices become common ways of working in the future and may not be a source of competitive advantage anymore. For these reasons, it is crucial that the achieved knowledge related to the communication process is kept up-to-date, the communication process is criticized and improved. Even though companies aim for zero defects, incidents having an impact on customer will occur occasionally and then the consequences to the relationship with the customer can be minimized with the appropriate communication. Only by continuously examining the process, a company can make sure that the communication process can respond to customers' needs at present and in the future.

6.3 Limitations and directions for the future research

The generalization of the results of this study has limitations. The research was limited to three supplier-customer relationships of a single multinational seller company. Although the small sample is a limitation, it is balanced by the experience and expertise of the respondents. While a variety of different incidents were examined, the research findings have limited applications due to a single case company that was studied. The study was carried out in a business-to-business context and the application of the results to customer-to-business relationships can be limited. Also the application of the results to a service purchasing relationship can be limited since the study was conducted with product purchasing relationships. Since industry characteristics were noticed to impact customer communication in incident situation, the application of the results may be limited in other industries.

This study brought forth a few intriguing topics for further research. The study was conducted in one case company and therefore, it would be interesting to examine customer incident communication in other contexts to find out how the results of this study apply in other environments. A multiple case study, or a survey of various companies could bring new perspectives to the incident handling between industries and different kinds of companies. Since this study is concerning product purchasing, studying customer incident communication in service purchasing would be interesting direction for future research due to the differences between product and service purchasing. Because a business and a consumer act differently as purchasers, incident handling with consumer customers could also provide new perspectives for customer incident communication research. Moreover, in this study measuring the incident communication process turned out to be in an important role in ensuring the effectiveness of communication and therefore studying it in more detail would be beneficial. It would be interesting to study what are the aspects that should be measured and how the measuring should be carried out.

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Appendices

Appendix 1. Theme Interview

Theme interview for customer representatives

1.Incident case

- Incident details
- Consequences and seriousness of the case
- Acute communication
- Investigation actions and outcomes communication

- Satisfaction with case communication

2. Satisfaction towards incident communication generally

- Successful/unsuccessful incident communication experiences
- Customer's experience about the case company's ability to avoid mistakes and learn from incident handling
- Evaluating general satisfaction towards incident handling
- Case company's ability to observe and register incidents
- Actions taken by the case company: is the case company putting enough effort to handle incidents and prevent their occurrence

3. Customer incident communication needs and value drivers

- Added value from incident handling, the most valuable and invaluable components in handling
- Preferred information channel in incident occurrence, information quantity in incident situation, examples of situations in which more or less information would have been desired

Theme interview for the case company's representatives

1.*Incident case*

- Incident details
- Incident impacts to the customer
- Incident handling
    - used communication channels, support provided by the organization, customer satisfaction towards the process, organization's capability to learn from incident cases and improvement ideas

2. Customer satisfaction towards incident handling generally

- Used communication channels, communication support from other parts of organization, customer satisfaction and feedback
- Internal learning from cases

- Improvement ideas

3. Customer's needs and value drivers related to incident communication

- Incident handling process value for customer, the most valuable and invaluable components in handling
- Preferred information channel in incident occurrence, information quantity in incident situation, examples of situations in which more or less information would have been desired
- Key account manager's needs to enable meeting customers needs in incident communication