The Impact of Strategy to Real Time Chat Process

A Qualitative Multi-Method Study in the E-commerce Context

Authors: Dinesh Damodaran
         Fanni Helminen

Supervisor: Jan Bodin
Abstract

While retail e-commerce keeps on clicking the examination of its strategic business and operations requirements for success emerges as crucial. In terms of achieving competitive advantage, no longer is it sustainable for e-retailers to solely focus on traditional dimensions of providing high quality and low cost for their target customers. As a substitute, they must adapt to the ever-changing competitive environment by endowing customers novel ways to interact with the website before, during and after the purchasing decision. One such way is real time chat, which is quickly becoming one of the most desired methods of contact between customers and websites. Although many e-retailers acknowledge the relevance of real time human-to-human contact, and the utilization of the real time chat in enriching the websites and consumers’ shopping experiences, the strategic and operational value that chat generates to the business itself it is still not explored by academic scholars. This forms the basis for our study.

Purpose – This thesis aims to describe and explain the main business and operations strategies that determine the design of real time chat in B2C e-commerce companies. The paper used models and theories from strategic management namely strategic orientation, and strategic typologies. CSFs were derived from combining concepts from strategy, operations management, information systems and e-commerce disciplines while service delivery systems literature from service operations management literature.

Design/methodology/approach – Using an abductive approach a cross-sectional study was conducted using a qualitative multi-methodology. The data was collected through semi-structured interviews with four B2C e-commerce firms from the Nordic and Western European regions. Further, the data collection was enriched through observation and document analysis using real time chat logs. The data was then analyzed using the theoretical frame of reference to provide a strong theoretical base for our findings.

Findings – The study established links between strategy, operations and service delivery systems with respect to real time chat. Particularly the combination of orientation with the Miles & Snow model (1978) informed the various strategic options a firm has. Furthermore, when combined with the perspectives on operations strategy informed how real time chat can be used while also taking into consideration the resources, product category and industry of the firm. The derived e-commerce service operations strategy CSFs despite being unique for each of the studied firms showed three recurring factors that were common to them. These were service provision, customer acceptance/focus and flexibility. Synthesizing all perspectives helped in developing a model that provides an overview of B2C e-commerce firms can align strategy, operations and service delivery systems with respect to real time chat.

Originality/value – The thesis contributes to adding knowledge to the under researched area of real time chat in B2C e-commerce settings. It also synthesizes disparate concepts of strategy, operations and service delivery systems and develops a guideline in helping firms using real time chat to improve their existing service process efficiencies. Concurrently the paper also serves as an evaluative tool for firms that are considering real time chat implementation to understand the various aspects that influence it and help them to better plan and design the service process.
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Fanni Helminen
Umeå University, May 19 2016

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Umeå University, May 19 2016
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1. Introduction

This chapter starts with presenting the reader with our choice of subject followed by a background on the e-commerce industry and particularly the research object of the study, which is real time chat. Subsequently, specific theoretical background and knowledge gaps are presented. Thereafter, the purpose and research question will be described to state the focus of the study. Finally, the objectives are discussed as well as the academic and practical contributions are highlighted.

1.1 Choice of Subject and Background

We are both students of Management, who have studied OM as part of our program. The subject interests us due to both our intellectual curiosity in the subject of OM as well as our respective work experiences. We are also keen on gaining an in depth understanding of OM in an e-commerce setting as one of us has worked in the e-commerce industry and the other has worked in ICT oriented firms that have provided services to a host of e-commerce firms. Given the highly volatile and dynamic nature of businesses in general as well as e-commerce and internet firms in particular, it is our observation that organizational pressures to stay profitable and efficient are notably high in this segment. We also acknowledge the lack of research covering SOM. Especially the absence of studies concerning services in e-commerce is observable. This offers us an opportunity to study services in a specific e-commerce context. Hence, we have chosen to focus on real time chat as a proactive and reactive tool.

Shut Up And Take My Money!


Electronic commerce (e-commerce) as a segment is gaining saliency around the world in general and Europe in particular. In a report published by E-commerce Europe (2015, p.4), the total value of e-commerce as a segment in the continent is valued at €423 billion, an increase of 13.6% over the previous year. It is estimated that more than 2 475 000 jobs are generated by the industry and over 715 000 e-commerce websites exist in the region (E-commerce Europe, 2015, p.4).

The speed and degree to which e-commerce is permeating our social and business worlds, makes an examination of its strategic business and operations requirements for success critical. In today’s hyper-accelerated and competitive e-commerce environment, new sources of product and process innovation are continually being explored to increase the competitive advantages of companies (Chua, 2005, p.270). In order to control the challenges, disequilibrium and change resulting from the competitive settings, it is no longer sustainable for electronic retailers (e-retailers) to set priority solely on traditional dimensions such as low cost and good product quality to attract and retain more consumers. Instead, they must adapt to the constantly changing rules of the game by providing innovative ways to interact with customers before, during and after the purchasing decision.

To complement the traditional Computer Mediated Communication (CMC) channels, such as email and self-service functions (Dimension Data, 2015, p.4), the focus of e-retailers has shifted to real-time human-to-human communication methods. Among these,
real time chat is a popular method adopted by websites to interact with their customers. It is used passively as a support tool to respond to and resolve customer grievances, as well as an active sales tool to help customers make purchase decisions. Real time chat is preferred by many shoppers for the benefits it offers. Some of the customer benefits outlined by for the use of the channel include convenience, no wait times, allows the user to multi-task and use the channel during office hours as well as provide a record of the conversation (Borowski, n.d.).

In a market analysis done by Datanyze (n.d.) 7.1% of the top one million websites in the world based on Alexa rankings use a real time chat software. 84 different chat software vendors provide their services to the aforementioned websites. In Sweden, 1941 websites use a real time chat software from 41 different software vendors. Furthermore, real time chat is a channel that is particularly used by many e-commerce websites around the world. BoldChat, a real time chat software vendor conducted a market survey among consumers and found that 17% of its respondents preferred using real time chat on a website (2013, p.6). Taking a European context, 45% of the respondents indicated that they used a real time chat service and approximately 11% of the total respondents considered it as their preferred medium (BoldChat, 2013, p. 21). 23% of the respondents also said they were more likely to purchase from the website after a real time chat interaction (BoldChat, 2013, p.23).

Many e-retailers have already realized the importance of real time human-to-human contact, and the utilization of the real time chat in enriching the websites and consumers’ shopping experiences. However, the level of strategic and operational value that the service brings to the business itself it is still not well explored by researchers. Thus, in addition to employing such a technology based on information systems and software driven arguments, the key business strategy and operational strategy factors influencing the design and implementation process of real time chat must be understood.

1.2 Theoretical Background and Knowledge Gaps

Having briefly presented the main research object of this thesis, the next sections elaborate the theoretical background and knowledge gaps on which we base our study. Particularly, we discuss the concept of e-commerce and elaborate the need for aligning business and operations strategies to face the competitive environment within the context. Also, the need for e-commerce firms to understand the relevance of service delivery systems is introduced. Thereafter, the recognized knowledge gaps are discussed by finally presenting the background for the chosen research object of real time chat.

Virtual Retaility

The development of electronic computers and the packet network systems in 1960s has created a world beyond the real world; a world termed as Virtual Network or The Sixth Continent that will continue its triumphal procession by shaping society to new dimensions (Leiner et al. 2009, p. 23). Today, it is hard for many of us to think of our individual lives, our communities, or as a matter of fact, a world without the internet. The internet revolution and the development of communications technology (ICT) together, has established a new marketplace (Nezu, 2000, p.75), which greatly affects the way today’s businesses compete and operate.

Perhaps one of the most revolutionary outcomes of the rapid growth of the internet is e-commerce. According to Drucker (2002, pp.3-4) and Qin (2009, p.4), the explosive
emergence of the internet has made it a major worldwide distribution channel for goods and services, and an opportunity for managerial and professional growth. Over the past 15 years, e-commerce has emerged from what many people believed to be a convenient innovation to the largest contributor of retail sales growth (Morgan Stanley, 2013, p.4). According to Statista (n.d.), in Europe, the business to consumer (B2C) e-commerce revenue was about $270 billion in 2012. As consumers are becoming increasingly mature in their purchasing behavior and spend a higher average amount than before, the revenue has forecasted to grow up to $535 billion by 2018 (Statista, 2016).

The term e-commerce refers to a wide range of online business activities for goods and services. In this thesis, we will use e-commerce in the broadest sense, which includes the perspectives of business process, service, communication and online transaction (Chaffey, 2011, p.11; Surjadjaja et al., 2003, p.40). Together these perspectives determine e-commerce as the use of electronic communications and digital information processing technology in business transactions of goods and services to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals (Chaffey, 2011, p.11; Mohaptra, 2012, p.73). More specifically, the term is considered in the context of e-tailing, which refers to retail conducted online and implies sales of goods and services to individual customers, that is, B2C e-commerce (Turban et al., 2012, p.42).

Due to the dominance of e-commerce in today’s economy, e-commerce research has increased drastically since the beginning of the 2000’s (Schniederjans & Cao, 2002, p.37). Thus, the success and volume of e-commerce has been widely reported in academic research (Delone & Mclean, 2004, p.32; Molla & Licker, 2001, p.131) and such research has largely focused on the adoption, use, and value of e-commerce (Straub et al., 2002). Both popular and academic literature proposes many benefits that can be derived from e-commerce. Particular benefits include, among others, obtained competitive advantage (Jahanshahi et al., 2013, p.859), and improved operations efficiency (Chang et al., 2003, p.664). E-commerce further provides innovative ways to attract and retain customers (Yasin et al., 2006, p.258). The myriad of benefits is the driving force that is luring many organizations to embrace e-commerce. In essence, according to Damanpour (2001, p.16), e-commerce is seen increasingly as something that must be pursued at all costs.

Dotcommonsensical
Characterized by mature companies and third-wave e-commerce strategies, where commerce is driven by mobile technology (Kourouthanassis & Giaglis, 2012, p.7), the early days of fast growth have been replaced with a competitive scenario within the B2C e-commerce market of today. Despite the benefits e-commerce provides, adopting it does not solely provide an edge in the market because the used technologies are accessible to rivals (Lord, 2000, p.40). Thus, companies are forced to construct novel strategic narratives to grasp innovative approaches for their businesses and operations (Yasin et al., 2006, p.258).

As the use of the internet as a channel for the sale and distribution of goods continues to grow, so does the interest it garners from Strategy and Operations Management (OM) researchers. In a business context, strategy implies the directions an organization chooses to follow in order to face its competitive market environment to survive in the long run (Slack et al., 2010, p.62). Stated by Greasley (2007, p.12), whether or not an organization is able to do this is depends largely on the ability to align these strategic directions with
operations. Further pointed out by Griffis et al. (2012, p.282), the OM function is under continuous pressure to enhance system and company level benefits. Thus, the task for operations managers is to design an operating procedure that combines resource and process configurations and results in competencies that align with the organization's desired strategic competitive position (Schniederjans & Cao, 2002, pp.8-9). An immediate effect of grounding competitive strategy in operations is the need to develop special performance requirements, also called Critical Success Factors (CSF) (Schniederjans & Cao, 2002, p.25). Identified as an essential component in e-commerce OM success, CSFs are especially necessary in contexts of high competitiveness, low barriers to entry, and potentially high returns (Grunert & Ellegaard, 1992, pp.7-12), which are typical attributes of e-commerce (Shin, 2001, pp.165-169).

In line with contributing to achieving superior business performance, the objective of the operations is to produce and offer the products and services required by customers whilst managing resources as efficiently as possible. E-tailers recognize the need to provide excellent choice of product range with low prices to the increasing crowd of potential customers (Turban et al., 2012, p.137; Brynjolfsson et al., 2006, p.67). While it is obvious that consumers profit from lower prices online, Brynjolfsson et al. (2006, p.67) however state that great benefits are drawn from another important nature of online markets, namely the ability of online companies to help consumers locate, evaluate, and purchase a wide variety of products by simultaneously reducing search costs. Thus, e-retailers with the most experience and success in the market acknowledge that the critical determinants of success or failure are not merely conventional dimensions such as low cost, good quality, and fast and reliable delivery. Due to an increasing influence of service-focused paradigm within the sector, they also include more sophisticated factors such as how companies interact with customers during the process of evaluating and purchasing a product. Therefore, to meet the volatile markets in the competitive context, e-commerce firms must by necessity undergo continuous strategic revision (Calisir et al., 2011, p.468; Schniederjans & Cao, 2002, p.241) to utilize the resources that determine the extent to which the company can successfully pursue specific performance objectives.

Electronic SOMnipresence
OM, prior to the growth of the service economy was commonly referred to as Production Management (Johnston, 1999, p.106). As a discipline, it studied principles and techniques used in the production and manufacturing processes of a company. It was not until services started contributing more than 50% of the UK’s GDP that OM researchers started to consider the possibility to extend traditional production practices into services (Johnston, 1999, p.106). As a result, this created the opportunity for Service Operations Management (SOM) to become an area of research in itself.

The maturation of service industries has resulted in rising customer expectations, revenue pressures, competitive pressures, increased expenses and regulatory pressures (Allway & Corbett, 2002, p.46). In response to this, service companies in most instances can be viewed and organized as supply chains (Portioli-Staudacher & Tantardini, 2012, p.88). Services experience high variability and unpredictability in demand due to the involvement of customers in the process, resulting in more customer centric emphasis on operational processes (Angelis & de Lima, 2011, p.92, Seddon & Brand, 2008, p.8). This is further exacerbated due to the presence of many players or phases in the service disbursement process and resulting in more complex supply chains especially in contexts that involve the internet (Portioli-Staudacher & Tantardini, 2012, p.88; Razmi et al., 2015,
Further, the growth of technology and the internet has led to the proliferation of virtual service channels. The internet in general and the e-commerce ecosystem in particular facilitates rapid and real-time decision-making, reduction of information asymmetry and automation of traditional activities (Razmi et al., 2015, p.62). By extension e-tailing characterized by direct customer relationships necessitates timely order fulfillment to ensure customer satisfaction and demand (Razmi et al., 2015, p.62).

Due to the disparity in what constitutes a service it follows that defining the concept would not find agreement among academia. Therefore, as researchers of this thesis we choose to defer to a generic definition of service as posited by Hadid & Mansouri (2014, p.754) that considers a service firm as any organization that is not engaged in the business manufacturing, agriculture, mining and construction industries. Thus, combining the definition with the above elaborated service supply chains in the internet technology context allows us to assert that B2C e-commerce can be considered as a service. E-commerce firms thereby create value by eliminating the time and costs in the activity e-commerce transactions and providing the service in a timely and convenient manner, which aligns with the notion of service as a supply chain process.

In line with the need for firms to encounter the competitive environment by revising business and operations strategies (Calisir et al., 2011, p.468; Schniederjans & Cao, 2002, p.241), the argument of e-commerce being a service brings about an additional dimension to the ensemble. This obligates online companies to focus on various service delivery systems, which are concerned with how a specific service will be provided to the customers, being simultaneously influenced by the various strategic and competitive priorities that an organization considers.

Zapping the Gap
B2C e-commerce has been studied from multiple academic viewpoints. One perspective from which it is studied extensively is the marketing, branding and service quality area (Chiu et al., 2014; Cox & Dale, 2001). Consequently, this has created a skew in highly external oriented, customer focused and service quality/excellence driven studies that gathers empirical data from customers (Lee & Park, 2009; Zeithaml, 2002). Even though there are studies exploring the B2C e-commerce by utilizing internal orientation on strategy and operations, these researches mainly outline e-commerce business models (To & Ngai, 2006) and profitable web-based business strategies (Dubosson-Torbay et al., 2002, p.278) to name a few. The general trend above leads us to consider the strategic aspects of e-commerce in a more holistic and multidimensional perspective emphasizing the inside-out approach (Schmid et al., 2001, p.278), thus, directing us to scrutinize the afore-described alignment of strategy and operations.

OM literature in the domain of e-commerce has been examined from a supply chain, perspective (Bakker et al., 2008). However, in general, the combination of the spheres appears to be scarce, broad in scope, or tends to focus on the most successful case in the segment, a study of Amazon that focuses on its email and call center function is an example (Epstein, 2005; Keblis & Chen, 2006). From a general point of view, research in OM as it has matured has observed the inadequacy of generalizing best practices as universally applicable and valid thereby calling for context specific validity (Ketokivi, 2006; Sousa & Voss, 2008, p.697). While many of the arguments have been made in the realm of manufacturing, there is a recognition that the universal validity of practices is difficult to apply in different manufacturing context. Therefore, it can be reasonably
concluded that these arguments can be extended to service operations management due to the variety and complexity of services as outlined earlier.

Several researchers in their studies have pointed to the lack of sufficient research coverage for services and SOM with as few as 6.35% of the OM journals publishing articles in SOM between 1982 & 1987 (Meredith et al., 1989). The number dropped to 2.71% between 1992 and 1997 (Pannirselvam et al., 1999). Another particular pertinent observation is that B2C e-commerce in general receives a lot of attention in information systems and technical journals (Yasin et al., 2006; Lee & Park, 2009). Interestingly, however, technology in services as an area in itself receives less than 10% of the overall coverage services receives in OM (Machuca et al., 2007, p.593). Only few studies are available when it comes to examining B2C e-commerce from a SOM perspective, which, again, indicate a high customer centric predisposition (Voss, 2003). As such, the technology or e-commerce is not considered as a pertinent sector of activity conspicuous by its absence (Machuca et al., 2007, p.598). Thus, the above stated serves as an indication of the gap that exists in considering B2C e-commerce from a SOM perspective.

The perceptible absence of literature as stated above in our chosen area of study, namely in the alignment of business and operations strategy, and the ensuing skepticism in the area of SOM presents a strong opportunity for us to study services in an e-commerce specific context. Hence, the scope of this particular research is narrowed to service functions utilized by e-commerce companies. More specifically, a specific CMC method (Goes et al., 2011, p.3), namely real time chat, is the targeted research focus for this study.

From the CMC methods, such as the self-service, frequently asked questions (FAQs), e-mail response, and real time chat (Bradshaw & Brash, 2001, pp.521- 522), telephone communication has garnered interest over the years. For OM and SOM researchers, call centers have been a fertile area of research in several domains including forecasting, capacity planning, queuing, and personnel scheduling (Aksin et al., 2007, p. 665). While telephone is commonly used service tool in e-commerce context, websites have been increasingly accompanying it with real time chat function that has rapidly grown in popularity in the past few years (Burke, 2002, pp.427, 430). Real time chat is a vital channel for communicating with customers online, and is particularly utilized to increase sales and provide customer support (Goes et al., 2011, p.1). Despite its widespread use in websites around the world, it has only recently begun to receive attention in research literature with a predominant subject focus on the technology, the customer perspective, segmentation and the human interaction or relationships (Elmorshidy, 2013; Goes et al., 2011). Further, intrinsic aspects such as motivation and knowledge or service aspects like service quality have been researched (Kang et al., 2015; Kim & Hawamdeh, 2008).

Even though real time chat has begun to be recognized as a benefit for e-commerce firms, the actual potential it provides for businesses is still untapped and calls for academic exploring. Thus, the present study is motivated by the requirement to fill the gap regarding the service delivery systems determination of how real time chat design can be maximized effectively in order to improve e-commerce firm’s performance.

1.3 Aim and Research Question

Given the overall introduction the following research gaps have been identified:
• Inadequacy of studies linking the alignment of business and operation’s strategic aspects to the implementation and performance of technology oriented service processes in B2C e-commerce.

• Scarcity in research pertaining to service operations management within B2C e-commerce.

• Academically underexplored area of the real time chat utilization in B2C e-commerce.

Given these gaps in our chosen subject area we are motivated to study B2C e-commerce firms and their real time chat process in a more comprehensive context. Our research question is formulated not only taking into consideration the operational aspects of designing and implementing a real time chat in an e-commerce website, but also consider the strategic factors that possibly determine its implementation. It is also our intention to validate how the performance of this process aligns with the strategic dimension. Therefore, in line with the recognized knowledge gaps concerning e-commerce in the context of business and operations strategy in general and service operations management in particular, the aim of this study is to gain an understanding on the real time chat design and function. Thus, our research question aims towards identifying the main business and operations strategies determining the design. Identifying these will help verifying how usage of the real time chat and its design can be maximized effectively to improve e-commerce firm’s operations. Based on these reflections we formulate our research question as follows:

*What are the Business and Operations Strategies that determine the design of real time chat process in a B2C e-commerce company?*

### 1.4 Research Objectives

Given the highly volatile and dynamic nature of e-commerce and internet firms, the need to design and implement innovative and flexible operations processes in e-commerce settings is relevant (Calisir et al., 2011, p.468; Schniederjans & Cao, 2002, p.241). Furthermore, it is our observation that organizational pressures to stay profitable and efficient are notably high in this segment. Therefore, in line with Calisir et al. (2011, p. 468) and Grunert and Ellegaard (1992, pp.7-12), it is necessary to counter the competitive environment by simultaneously assuring great operational performance, identifying and pursuing company specific strategic components.

Corresponding to the targeted research object for this study, namely the real time chat, this thesis’ goal is to describe how the real time chat process is designed. Thus, the research enquires about the concepts of business and operations strategy that determine the service delivery system of the chat function. More specifically, the thesis inquires what business and operations strategies the e-commerce companies follow to obtain the most optimal usage of the real time chat, thereby improving the performance of the business. By utilizing the extant literature of strategy, operations and service operations management, this study conducts a research that addresses the need of e-commerce companies to pursue specific strategic and operations strategic directions. These will further enable the e-commerce firms to cope with the service delivery systems and determine how the specific service of real time chat will be provided, not only to create
customer value, but also to efficiently make usage of the inner strengths and capabilities of the firm.

In summary, the following objectives are identified:

1. To use existing literature and empirical findings to create an understanding of how the real time chat design can be maximized effectively to improve e-commerce firm’s performance.

2. To describe how real time chat processes is designed in a B2C e-commerce context by understanding how technology, processes and human factors interact dynamically.

3. To identify how business level strategy influence operational processes and at the same time seek to establish links between operational / business performance and business strategy.

1.5 Contributions

We next present the study’s theoretical and practical contributions that will be further elaborated in the conclusion chapter.

1.5.1 Theoretical Contributions

1. Our literature review indicated the B2C e-commerce to have been studied from a multiple academic viewpoints. However, these studies mainly represent customer focused and service quality/excellence driven studies gathering empirical data about customer preferences (Lee & Park, 2009; Zeithaml, 2002). Thus, we will contribute to the extant B2C e-commerce research by providing a study that utilizes an inside-out orientation on operations.

2. Additionally, we will contribute to the B2C e-commerce literature by offering an a comprehensive view on the operations by aligning business and operation’s strategic aspects (Slack et al., 2010, p.62) to the implementation and performance of technology oriented service processes.

3. There is scarcity in research pertaining to service operations management in general (Meredith et al., 1989). Based on our observation, this scarcity exists within the B2C e-commerce context as well. Thus, in conducting this study by focusing on the real time chat service will advance the SOM research in this area.

4. The most extensive theoretical contribution will concern the academically underexplored area of the real time chat utilization in B2C e-commerce, on which our study is particularly targeted at.

1.5.2 Practical Contributions

1. This study is relevant to B2C e-commerce that are small and faced with constraints of people and money and who seek to strategic and operational solutions to these challenges.
2. This study provides Small B2C e-commerce companies with an overview to understand and link their strategic orientations right down to the granular design of a specific process namely the real time chat.

3. It will also help identify gaps between current and ideal process states and give managers in organization with the means to alter and change their strategic and operational choices to work towards optimization of different functions.

4. Managers can also understand the trade-offs and challenges involved with each of their chosen CSF’s which will help small e-commerce firms to take more informed strategic and tactical decisions.

5. This thesis will contribute to aiding e-commerce companies implement real time chat in a manner that is strategically apropos to their overall objectives.

### 1.6 List of Abbreviations

*Table 1. List of Abbreviations.*

<table>
<thead>
<tr>
<th>E-commerce</th>
<th>Electronic Commerce</th>
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<tbody>
<tr>
<td>CMC</td>
<td>Computer-Mediated Communication</td>
</tr>
<tr>
<td>ICT</td>
<td>Communications Technology</td>
</tr>
<tr>
<td>OM</td>
<td>Operations Management</td>
</tr>
<tr>
<td>CSF</td>
<td>Critical Success Factors</td>
</tr>
<tr>
<td>SOM</td>
<td>Service Operations Management</td>
</tr>
<tr>
<td>IS</td>
<td>Information System</td>
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<tr>
<td>EBS</td>
<td>E-commerce Business Satisfaction Model</td>
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</table>
2. Theoretical Frame of Reference

This chapter is divided in two parts in line with the purpose and research question of the study. First, concepts concerning strategic aspects are presented by highlighting the firm’s strategic orientations, typologies and critical success factors. Thereafter, in order to explain the alignment of strategic and operational choices, the term operations strategy is presented by providing a view on operations strategy influencers, firms’ competitive priorities and service operations strategy CSFs. The second part of the theoretical frame of reference starts by elaborating the fundamentals of SOM and service process design. Here, the most relevant theories relating to the process design of the real time chat are described. Subsequently, a brief review of the limited available theory on real time chat is presented and these are linked with the aforementioned SOM concepts. Finally, we pictorially depict the theoretical frame of reference for easy assimilation.

2.1 Strategy

Johnson et.al. (2008, p.3) define strategy as “the direction and scope of an organization over the long term, which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectation.”

With the internet effecting changes to the business environment, the need for a comprehensive approach to online businesses seems necessary. Kearns (2005) in his paper observed that firms had an e-commerce strategy that was disparate from its business strategy. However, with the increase in traditional firms adding an online presence to their business model and stand-alone internet companies, the need to examine how strategy is formulated is gaining currency. In a study done by analyzing CEO’s communication to stakeholders it was acknowledged that an integrated e-commerce and business/corporate strategy could lead to better overall business performance and allow firms to be more efficient and effective (Chang et al., 2003, p.671). It follows that e-commerce and business strategies require alignment. This entails employing tried and tested business strategies that maximize e-commerce output in terms of performance and ROI (Kearns, 2005, p.1024).

Strategy can be examined on two fronts namely content and process (Sabherwal & Chan, 2001, p.12). Content of the strategy helps answer the question of what, that is what type of strategy a firm is presently following. Process corresponds to the question of how, or how does a firm formulate and incorporate its strategy. To get an overview of the strategic orientations of the e-commerce companies of our study and how they position themselves strategically both in terms of content and process, we refer to two strategic orientations; market and selling (see e.g. Narver & Slater, 1990; Noble et al., 2002), and to a model developed by Miles & Snow (1978).

2.1.1 Strategic Orientations

Narver and Slater (1990, pp.21-22), explain the conceptualization of market orientation by dividing it into three components, namely customer orientation, competitor orientation, and interfunctional coordination. According to Chang et al. (2003, p.665), customer oriented firms put the customer’s interest first and reflects the understanding of its target buyers in order to be able continuously to create value for them. By emphasizing
customer knowledge the orientation acts as an intangible asset that is difficult to be 
imitated by competitors and, thus, raises the entry barriers. As Chang et al. (2003, p.665), 
进一步 explain, firms that are, in turn, driven by competitor actions, watch costs closely, 
quickly matches the marketing initiatives of competitors, and focus on having an edge in 
technology. Such firms can be defined as being willing to identify, analyze, and respond 
to competitors’ actions, and thus beat the competition by having the ability to offer 
products and services, which are comparable with rivals. Together market oriented firms 
are able to coordinate the firms inter-functionally by focusing on its internal resources 
and capabilities, and thereby steer its operations towards generating customer value, 
outperforming competitor or both.

Stated by Noble et al. (2002, p.26), an alternative for market orientation is selling oriented 
strategizing, which is based on the view that consumers will purchase more goods and 
services when intense sales and advertising methods are utilized. These include 
promotion and price-focused strategies. The sales-oriented business also relies on the 
strength of its sales force to move its products or services. This approach emphasizes 
profit-driven actions, which is why from a customer relationship-building perspective, a 
selling approach is likely to stimulate short-term sales, resulting in low customer loyalty 
and repeat business (Noble et al., 2002, p.26).

2.1.2 Strategic Typologies

The Miles & Snow (1978) model of strategic typologies is widely acknowledged as robust 
and applicable to a variety of industries and organizations (Kearns, 2005; Levenburg et 
al., 2005, Snow & Ketchen, 2014). The model has also been used in SOM literature and 
this served as an additional rationale to use in our theoretical 
frame 
of reference (Kellogg 
& Nie, 1995). Miles & Snow (1978, p.550) identified 4 main strategy types in 
organizations namely defenders, prospectors, analyzers and reactors.

Defenders are firms that look at consolidating or maintaining their market position in 
established markets and current products rather than on new markets and products 
(Levenburg et al., 2005, p.55). Defenders are known to operate in niches, focus on cost 
and quality leadership, rely on the continued patronage of their customers and are adroit 
at adapting formal planning mechanisms to suit proven strategies (Kearns, 2005, p.1024).

Prospectors also known as innovators are firms that have a significant appetite for risk, 
and grow by developing new markets and products that leverage technology and 
marketing competences (Kearns, 2005, p.1024; Levenburg et al., 2005, p.55). These firms 
are characterized by differentiation, flexible organizational structures and informal 
planning (Kearns, 2005, p.1024). Analyzers follow market leaders closely thereby 
adopting a hybrid approach that combines the strengths of prospectors and defenders, 
with formal planning used in mature, unfluctuating markets and informal planning in 
more volatile markets (Kearns, 2005, p.1024).

Reactors as the name suggests only change their strategies and market approaches when 
forced by extraneous circumstances - a characteristic often identified with unsuccessful 
companies (Levenburg, 2005, p.55). Their strategies are considered a hindrance to their 
performance. The use of planning frameworks do not allow them to stay abreast of the 
dynamic business environment and is further exacerbated by miscalculations in 
understanding the said environment, mal-adoption of technologies and strong path
dependent behavior (Kearns, 2005, pp.1024-25). We do not anticipate reactor firms with
to be present in the e-commerce context and hence this will be excluded from the final
theoretical frame of reference. We consider the Miles & Snow (1978) model relevant in
classifying e-commerce companies’ strategic position based on the various aspects
mentioned above.

2.1.3 Strategic Orientations and Typologies in the Context of IS

Process is largely concerned with the steps taken to make the strategy meet its objectives.
This emphasizes the need to identify priorities, resources and actions that will aid the
meeting of objectives (Lederer & Sethi, 1996, pp.57-58). This is especially valid when
implementing technology oriented strategies, as is the case of e-commerce in general and
the real time chat process in particular. Priorities refer to the order in which the various
activities relating to the strategy and its implementation are ascertained. Resources refer
to various organizational assets that include people, skills, money and knowledge
identified and deployed to successfully implement a specific plan or process in order to
achieve objectives (Lederer & Sethi, 1988). Actions refer to the actual steps and
processes required to fructify a plan or strategy on the ground. Specific actions or
processes should align or match the actions of other processes within the organization to
ensure stability. Actions act as a means to support a specific strategy or organizational
objective (Hoffer et al., 1989). Given the afore-mentioned arguments in favor of an
integrated business and e-commerce strategy, we take this argument a step further by
likening the technology aspect of e-commerce as an IS.

Sabherwal & Chan (2001, p.12), define an IS and its ensuing strategy as one that
emphasizes how technology is given a business oriented case and application. We argue
that companies that conduct their business in the e-commerce domain are in effect an IS
that apply various technologies that help provide products, services and information to
their customers with the objective of conducting a transaction. Within the IS spectrum we
are primarily concerned the real time chat function. There is no explicit reference to such
a system in extant literature and the closest IS typology is concerned with marketing
information systems that focus on product sales and by extension the customer
(Sabherwal & Chan, 2001, p. 16).

Connecting IS to the strategic orientations, both market and selling orientations appear to
be relevant approaches for businesses in the IS-linked e-commerce industry. It is
beneficial for sales oriented e-commerce companies to utilize IS, and IT in particular, to
drive external communication (Ciborra, 2000, p. 219) and enable sales personnel to
perform tasks relevant to their role (Hunter & Perreault Jr., 2006, p.97). For market-
oriented companies, in turn, e-commerce technologies are suited to provide a responsive
and interactive means through which an organization can both obtain and counter in-depth
knowledge that concerns competitors and customers (Chang et al., 2003, p.666).

Focusing on the real time chat service in e-commerce settings in this study, we argue for
the need to understand the market and selling orientation in the particular context of IT.
Viewing both orientations through a technology outlook allows us to identify the sales-
driven orientation as typically using technical tools to cross-sell, which is the action of
selling an additional product or service to an existing customer, whereas the market-
driven orientation enable the organization to establish strong relationships with customers
by utilizing IT (Higgins, 2003, p.35).
Reflecting the strategic typology through the lens of IS allows us to categorize defenders as firms that use IS for efficiency, prospectors emphasize flexibility and analyzers consider comprehensiveness as important. Both prospectors and analyzers give higher focus to marketing information systems than defenders (Sabherwal & Chan, 2001, pp. 15-16).

Based on our reflections, we assert the need to consider e-commerce in a perspective that combines business and IS perspectives in order to reach theoretical rigor in our study. Therefore, combining the theory of strategic orientations and Miles & Snow (1978) model of strategy typology with the IS strategic theory we have a comprehensive foundation on which to study the e-commerce firms and find linkages between strategy and operations. Many of the CSFs that will be discussed in the subsequent chapters also feature in IS literature thereby confirming our choice of theory to be appropriate at the outset.

2.1.4 Critical Success Factors

Critical Success Factors (CSFs) are those aspects in a firm that need to function optimally as they have a direct bearing on performance (Rockart, 1979, p.85). It follows that any negative outcome in these areas will have consequences in firm’s performance. As a result, CSFs are usually actively tracked and measured by top management (Rockart, 1979, p.85). They support the attainment of organization goals. Goals can be expressed as targets in terms of the ideal destination that an organization seeks to reach (Rockart, 1979, p.85). Lediecker & Bruno (1987, cited in Flynn & Arce 1997, p.311), suggest that CSFs require proper sustenance, maintenance and management to be effective. Freund (1988, pp.20-21), notes that CSFs must be articulated as action items, not as the result or end point of a process and should be compatible as well as pertinent to all companies operating in the same industry with similar objectives.

As CSFs are the limited number of key areas where things must go right for the business to flourish, it is advised to keep the amount of CSFs between three to eight factors (Bullen & Rockart, 1981). CSFs give organizations the opportunity to develop and enhance competitive strategies through concentrated investments to resources in areas that maximize benefit. Thus, according to Bullen and Rockart (1981, pp. 14-17), CSFs are tailored to specifically match each firm depending on the situation that faces it. In other words, situations such as industry, competitive strategy and industry position and environmental factors lead to prioritizing different critical success factors.

In order to ensure a comprehensive level of understanding of CSFs, we consider literature that examines the concept from a strategic, technological, project as well as an e-commerce perspective in order to extract the most pertinent aspects to inform our study. Some of the most commonly stated CSFs in different academic literature are as follows:

- Support and commitment from top management and senior management (Holland & Light, 1999, p.31; Trkman, 2010, p. 30).
- Re-engineer business process to suit the new technology, i.e. avoid re-design of the software (Bingi et al., 1999, p.10; Sumner, 1999, p.301).
- Earmarking existing workforce for re-skilling and training based on predetermined strategies (Wu et al., 2012, p.192)
Support & Commitment from Top & Senior Management
When implementing any strategy, business process, change or software, its success is determined by the efficacy of the implementation process (Trkman, 2010, p.130). Support and active involvement from top and senior management is often cited as a key element in successful implementation especially where norms institute separate goals and objectives (Chen & Popovich, 2003, p.685). This is true for any organization that builds an internet strategy notably e-commerce companies (Eid et al., 2002, p.112). Senior management commitment and support is attributed to higher success rates in adoption of new systems and technology (Yu, 2007, p.87). Strategic implementation while largely recognized as a top-down approach employing rational processes (Freund, 1989, p.23; Ansoff, 1991, p.457) should not ignore the importance of senior and middle level management and involve them (Raps, 2005, pp.141-142). Raps (2005, p.142), observes employees in the operational areas cannot link their roles with the overall strategies of the organization due to the absence of communication from management. A way to remedy this situation is to make strategy a continuous process and foster ways and means to learn and adapt strategy (Kaplan & Norton, 2001, p.154).

Re-Engineering Business Processes
When implementing new systems, software and technology the need to re-engineer an existing business process emerges (Bingi et al., 1999, p.10). Top management in many cases tend to treat implementation of enterprise wide technology as an IT exercise without accounting for the organizational changes that take place (Umble et al., 2003, p.245). This implementation has implications for customer-centric processes since a cultural shift and the participation of employees is required (Chen & Popovich, 2003, p.685). It is, therefore, suggested that implementation should be done from a business perspective rather than IT (Chew et al., 1991). A common response in most organizations is to alter the technology to fit the business process but this approach results in exceeding budget and in many cases implementation failure (Sumner, 1999, p.299). Despite these arguments, there are exceptions where an organization may choose to persist with an existing business process and alter the technology that is to be implemented. Research indicates that even the best software tends to meet only 70% of an organization’s criteria. Therefore, either a software is customizable to the organization or the organization adapts to the software (Bingi et al., 1999, p.10).

Training and Re-Skilling Workforce
Achanga et al. (2006, p.467), emphasize the need for good leadership that nurtures knowledge and skills among its workforce. Training employees is challenging and involves costs but considered important (Bingi et al., 1999, p.13). Wu et al. (2014, p.81) argue that training the workforce in appropriate IT skills is critical especially in an e-commerce context. Successful organizations tend to have a higher propensity of managers who serve as process owners and are responsible not only for designing, measuring a process and its performance but also training front line staff and inculcating an appreciation for the whole process rather than a specific task (Hammer & Stanton, 1999, p.109). Chen & Popovich (2003, p.685) observe that training not only augments employee knowledge and skills but also fosters motivation and commitment that reduces resistance to changes. Wu et al., (2012, p.184) propose not only relevant and pertinent IT skills training but also suggest that it be done frequently. Training is considered an important component of this process and many researchers assume it is a necessary requirement by default (Lu et al., 2006, p.401). In fact, Freund (1988, p.23), in his study suggested that management frustration that arises in the implementation of a CSF can in many instances be linked to poor or deficient front-line training.
2.1.5 E-commerce Business Satisfaction Model CSFs

Reiterating on the criticism already leveled earlier that the predisposition of e-commerce research being heavily skewed towards customer oriented perspectives, the need for a more business-oriented perspective is called for. In response to this gap, Gide & Wu (2007, p.312) developed a comprehensive model termed as e-commerce Business Satisfaction model (EBS). This approach is expected to be a better measure of e-commerce success when compared to the common approach of customer satisfaction.

Gide & Wu (2007, p. 312) define EBS as “A measurement for overall satisfaction that a business has with an e-commerce system meeting its requirements and expectations.”

The original study proposed over 73 different CSFs to measure EBS that were categorized into broad factors namely human resource factors, technology factors, website factors, security factors, management factors, relationship factors, finance factors, marketing factors, ethics and law factors and culture factors (Gide & Wu, 2007, p.317). These factors were rigorously tested in an ensuing study and subsequently in a cross-sectional study of e-commerce firms based in China and Australia reduced to 50 factors (Wu et al., 2012, p.172). Through continuous refinement of the factors it was brought down to 15 and categorized into five components namely knowledge and skills, managing change, website effectiveness and costs, management support and customer acceptance and marketing (Wu et al., 2014, p.73). We exclude marketing from our perspective as it is more concerned with marketing plans that in our opinion are not germane to our study.

Knowledge & Skills

Knowledge and skills of the top management, senior management as well as employees is an important CSF in determining the success of an e-commerce firm. These are especially pertinent when it comes to specific skill sets such as IT and e-commerce/e-business knowledge (Jennex et al., 2004). Cloete et al., (2002, p.4) confirms that for higher likely success of an e-commerce site the top decision maker owner of a firm must be knowledgeable in e-commerce and IT. Viitala (2005, pp.439-440) concurs that technical competence, skills and knowledge is required by the individual manager to deal with the contents of their role. These are normally concerned with specialized knowledge and skills, which the manager has acquired largely through education. Various studies highlight the importance of knowledge and skills with varying emphasis on what constitutes a priority for a company. Walsh and Linton (2001, p.170), in their competence pyramid model propose managerial and technical competences categorized by industry types with knowledge embedded services being associated with technology oriented industries. Viitala (2005, p.439) on the other hand, suggests that technical competences are the most important knowledge/skills required followed by business competence. In our study we accept the both views suggested by different researchers on competency models and are only concerned that they are present. Given how e-commerce has both a technical constituent as well as a business aspect it follows reason to consider both aspects in our study. The other CSF is training of employees on relevant skills has already discussed.

Managing Change

Managing change refers to the ability of a firm to be flexible in its processes so that it can adapt based on changes in the business process (Gide & Wu, 2007, p.317). Given the dynamic environment in which e-commerce firms operate, a successful firm should be able to continually adopt and respond to changes in its internal and external environment.
Feindt et al. (2002, p.56), agree that ability to change or improve processes is a necessary condition for e-commerce firms to maintain or increase competitive advantage. Business process improvement or change is advocated to any e-commerce firm that seeks a high level of volume and activity in its business (Jeffcoate, 2002, p.129). Another CSF in the managing change cluster is the ability of the firm to cope with the rate of technology change that takes place in the external environment (Wu et al., 2014, p.81). Technology is considered important for any firm, if it has a notable impact on a firm’s performance or alters the industry structure (Porter, 1985, p.61). It can also be seen as a source of competitive advantage as it can have a direct bearing on cost, uniqueness and differentiation (Porter, 1985, pp.63-64). Being a pioneer or early adopter of technology can also be a means to achieve first mover advantage as an added benefit to what the technology offers by itself (Porter, 1985, p.64). Firms coping with change face it predominantly from the external environment which is a source of uncertainty and hence need to pay attention to it (Tushman & Nadler, 1978, p.614). Considering the e-commerce perspective firms must track and keep up with technological change and developments in order to remain competitive.

Website Effectiveness & Costs
Web effectiveness is related to the appearance and features on the website that add to the overall experience a user perceives when they navigate through the various pages. Brown (2001, p.18) observes that providing a service using the internet as a medium to a demanding and knowledgeable customer base is replete with technological and psychological constraints. The challenge for e-commerce firms is to recreate customer service in a virtual environment that mirrors that of its physical world counterparts. This essentially means that e-commerce firms need to foster trust among their customers through the website through some form of communication. Mayer et al., (1995, p.712) define trust as the voluntary susceptibility a party/individual subjects themselves to with respect to the actions of another party in the anticipation that they will fulfill their roles and responsibilities without the active monitoring or control by the first party. While face-to-face interaction is attributed with creating the highest level of trust, different technology mediated communication and interaction channels build varying degrees of trust (Olson & Olson, 2000, p.42). Other aspects of a website that increase trust of a customer are speed and responsiveness, easy navigability, secure payment options and respect for customer privacy and secure storing of data (Laosethakul & Boulton, 2007, p.10; Xu & Gutierrez, 2007, p.73). Manchala (2000) developed a range of metrics to measure and evaluate trust in customers transacting on the web that considered factors such as transaction history, guarantees against loss, spending patterns, system usage, time and location. Internet specific trust can be divided into three stages namely trust in the internet and the particular website, trust in the information displayed and finally trust in terms of delivery and fulfillment of the service (Urban et al., 2000, p.40). Gide & Wu (2007, pp.318-319) underscore the response of an e-commerce website is an important CSF. Another CSF is the ability of an e-commerce website to measure the costs associated with the upgrade and maintenance of its system.

Management Support & Customer Acceptance
We have already dealt with support of top and senior management earlier. Therefore, we focus only on customer acceptance aspect. Customer acceptance is considered to be a customer or competitor initiated CSF due to presence of an external stimulus that influences e-commerce firm’s success. Customer acceptance in particular is a significant determinant in predicting e-commerce firm’s success. Liang & Huang (1998, pp.30-32), consider that the acceptance concept helps the e-commerce firm decide on what products
to market on the web and is built on the premise that not all products and services are suitable for the internet medium. Acceptance is influenced by a number of factors namely perceived acceptance of the online channel, transaction costs associated with the search, evaluation and purchase, asset specificity and product/process uncertainty.

### 2.2 From Operations Strategy to Service Operations Strategy

In a business setting, strategy is concerned with how an organization faces the competitive market environment to survive in the long-term (Slack et al., 2010, p.62). Stated by Greasley (2007, p.12), whether or not an organization is able to do this is depends largely on the decisions and actions taken regarding its *operations*. Combining the concepts lead to the formation of *operations strategy*, which relates to the pattern of strategic decisions and actions that determine operations in terms of their role, goals and the functions carried out (Slack et al., 2010, p.62).

One of the research streams in operations strategy has focused on the alignment of strategic priorities across the business and functional levels of an organization, and its impact on performance (Joshi et al., 2003, p.354). Just as Likert (1961, cited in Joshi et al. 2003, p.354) underlined the importance of aligning business and functional priorities with strategies of the firm so did Porter (1996, cited in Joshi et al. 2003, p.354) point out that despite the difference in the nature of strategy and operations they are both essential to superior business performance and need to be aligned. Furthermore, according to Kaplan and Norton (2008, pp.1-2), no matter how carefully planned, a visionary strategy that is not linked to operational processes cannot be implemented. Similarly, operational excellence may lower costs, improve quality, and reduce process lead times. However, without the vision and guidance of strategy, it is not likely that a company obtains sustainable success solely from its operational performance.

Just as highlighted earlier in the study’s strategy section, in accordance to Chang et al. (2003, p. 671), the above-discussed presumptions should be true for all types of industries, including e-commerce. E-commerce involves not only buying and selling over the internet, but also includes broader related issues of strategic orientation such as being customer-centric and, thus, focusing on serving customers (Schniederjans & Cao, 2009, p.2537). Together with our decision to consider e-commerce as a service, is service focused paradigm gives our thesis a purpose to consider operations strategy from the perspective of service operations strategy. A key principle of the service operations strategy is that it has to be aligned with the target market requirements (Boyer et al., 2002, p.177). Thus, just as the alignment of business and operations strategy is discussed, so too in a service operations strategy context issues such as customer order winning, qualifying and retaining capabilities are jointly determined by integrating operations perspectives in the strategic discussion.

Advances in IS and allied technologies bring with them new possibilities to shape the expectations of customers. Therefore, organizations are under pressure to improve their business strategies and operational processes to advance their competitive positions using these technologies (Rust & Kannan, 2003, p.38). Therefore, traditional e-commerce gives way to a paradigm known as *e-service*, which represents a coherent point of view that challenges many of the traditional assumptions of how to enhance the organizational performance (Rust & Kannan, 2003, p.37). This suggests an outward-looking view on the alignment of business strategy and operations in e-commerce, i.e. focusing on
understanding the customers and market environment, to complement the inward-looking
view that focuses the internal aspects facing the linkage of strategy and operations.

Given this overview, our thesis researches the design of a real time chat process in the
context of the business and operations strategies that determine it. As the chosen strategic
determinants were already identified in the previous section, the next step is to elaborate
the main operations and service operations strategic factors outlined for this study. As
improving operational performance alignment is essential to providing competitive
advantage (Johnston, 1994, pp.52-53; Slack, 2005, pp.323-324), we must also combine
the strategic, operations and service operations strategic determinants. Aligning and
adjusting key systems, processes, and decisions of the firm includes consideration of its
external and internal factors. These can be understood as forces affecting the business
decisions, which influence choices regarding organizational performance objectives and
priorities (Joshi et al., 2003, p.354). Therefore, we next describe the perspectives on
operations strategy and thereafter, characterize competitive priorities, particularly in the
context of service operations strategy. Lastly, relevant service operations strategy CSFs
are explained.

2.2.1 Perspectives of Operations Strategy

To understand the fundamentals of operations strategy, it is essential to consider the
surroundings influencing it. Firms are influenced by several factors, such as the business
environment, customer needs, and competitor actions, as well as internal resources
(Prajogo & McDermott, 2011, p.466). These are highly similar to the aforementioned
factors affecting the strategic orientations and typologies. However, in order to
understand the operational level influencers enabling us further to connect them with the
real time chat design, we see it crucial to highlight the surroundings of operations strategy
as well.

As stated by Slack et al., (2010, p.65), the surroundings can be categorized in four
approaches through which an operations strategy emerges; top-down, bottom-up, market-
led and operations-led. By balancing these elements, firms can establish competitive
priorities to gain competitive advantage and achieve full potential of organizational
performance. The four perspectives on operations strategy describes as follows: (illustrated in figure 1)

- **Top-down**: The operations strategy is formed in pursuit of the business and
corporate strategy, which starts with senior managers defining a mission. Then
they progressively expand this to give the corporate, business and functional
strategies. These, in turn, are passed down the organization in steps, with each
level of managers adding details that define their own operations and set the
context for lower decisions (Slack et al., 2010. pp.65-66).

- **Bottom-up**: The formation of the strategy based on the actions and decisions taken
with operations. This perspective suggests that senior managers do not design a
strategy in a single step, but it emerges over time from the actions of managers
and employees lower down the organization. These lower managers continually
respond to actual conditions, making practical decisions to cope with new
problems as they arise, and the sum of their decisions eventually emerges as a
• **Market-led:** The operation strategy is formed in response to market requirements. According to this view, firms gain competitive advantage through identifying external opportunities in new and existing markets or market niches and then aligning the firm with these opportunities (Brown & Blackmon, 2005, p.795).

• **Operations-led:** The strategy formation takes the resources that build capabilities within the operations into account. This perspective suggests that the firm should assemble and deploy appropriate resources that provide opportunities for sustainable competitive advantage in its chosen markets to maximize returns (Brown & Blackmon, 2005, p.796). In OM, the resources can be viewed as the five M’s, which consist of men, machines, methods, materials, and money Holstein (n.d.).

![Figure 1. Perspectives on Operations Strategy. Source: Slack et al. (2009, p.65).](image)

### 2.2.2 Competitive Priorities

In 1984, Hayes and Wheelwright coined the term *competitive priorities* and defined it as strategic preferences or the dimensions along which a company chooses to compete in the targeted market. Within operations strategy settings competitive priorities are understood as strategic capabilities, reflecting the future direction and supporting organizations in creating and sustaining a competitive advantage (Ibrahim, 2010, p. 870), and achieving satisfactory level of performance (Joshi et al., 2003, p.354).

Most researchers, particularly in the manufacturing sector, have pointed out the importance of four specific competitive priorities, namely quality, dependability, speed
and cost efficiency (Takala et al., 2006, p.339). These priorities that contribute to the organization’s manufacturing strategy is based on Ferdows and de Meyer’s (1990, cited in Takala et al. 2006, p.338) sand cone model, which is an illustrative way to describe the named competitive priorities that are of a multi-focused, multidimensional or hierarchical nature. As Takala et al. (2006, p.338) further puts it, quality is the most profound priority, and serves as a foundation for the rest of the cone.

Due to the emerging nature of services, whether offering physical goods or not, all industries are fundamentally focused on the exchange of services and not the products themselves. Therefore, there has been an evolution of competitive priorities and their constructs in the operations literature from manufacturing to service oriented businesses (Ibrahim, 2010, p.871). Competitive priorities in service settings puts emphasis on strategically developing the service capabilities that can improve an organization’s position in the marketplace (Prajogo & McDermott, 2011, p.467). Thus, the normal set of manufacturing derived competitive priorities is no longer solely valid to cover the different factors service providers prioritize when competing. This leads to an extended collection of competitive priorities tailored to the service sector.

While the above mentioned terms of quality and costs continue to remain as valid priorities for the service sector, the literature has subsequently suggested various, more broadly-defined competitive priorities that can provide benefits for service organizations (Prajogo & McDermott, 2011, p.468). Thus, as this study focuses on the e-commerce sector defined as a service, and particularly on the real time chat that is a pure form of service, the chosen collection of the particular competitive priorities elaborated in this study are chosen by taking these circumstances into account. The specific collection of the chosen factors is categorized in line with Phusavat and Kanchana (2008) and Ibrahim (2010) including the following:

- **Quality:** Organizations seek to do things right; that is, not make mistakes, and satisfy customers by providing error-free goods and services that fit for their purpose. Quality covers performance, design quality, expectation as well as perceived quality as in the extent to which an organization is capable of offering service quality that would fulfill customer’s expectation.

- **Costs:** The aim of operations is to do things economically; that is, produce goods and services at a cost that enables them to be priced appropriately for the market while still allowing for a return to the organization. Thus, costs imply the ability to produce at low cost by productively managing the operational costs, and other relevant features such as quality.

- **Customer Focus:** To understand the importance of customers in process delivery is crucial. Therefore, this term refers to the organization’s customer knowledge and its utilization for fulfilling customer expectation.

- **Service Provision:** Organizations try to do things with speed and efficiency that is considered as delivery. Here the definition of delivery is widened to also include the terms of agreed quantity and quality of the delivered service and not just timely delivery.
Flexibility: The ability to change what is done is vital, meaning that organizations must be able to vary or adapt the operation’s activities to cope with unexpected circumstances or to give customers individual treatment. Therefore, flexibility is defined as the ability to deploy and/or re-deploy resources in response to changes in agreements primarily initiated by customers.

Know-How: Know-how is important to be able to make improvements to existing offerings and processes, introduce new as well as adapt to the changing market environment. The term know-how deals with the issues of change management, continuous learning, and skills development.

Based on the studies regarding the competitive priorities, two types of priorities have been identified: order qualifiers and order winners (Voss, 2003, p.95). Order qualifiers are competitive elements that can prompt a customer to consider a purchase, but are incapable of acquiring their business. Order winners, on the other hand, are characteristics that, if present and assuming the order qualifiers have been met, will be sufficient to win a customer’s business (Greasley, 2007, p.15). However, as Barnes (2008, p.25), Slack et al., (2010, p.54) and Greasley (2007, p.15) argues, because of the scarcity of resources firms cannot pursue all competitive priorities simultaneously. Also, an attempt to be best at everything results typically in being mediocre at everything, which is why to succeed simultaneously in all of the identified competitive priorities is not likely. Therefore, organizations often give a priority to one or a few of the objectives, which leads to a trade-off. Based the concept of trade-off, identifying a single or a particular set of priorities for operations is needed because choosing the correct set is the key to the achievement of competitive advantage, which in turn, is directly linked to business performance (Prajogo & McDermott, 2011, p.467).

2.2.3 E-Commerce Service Operations Strategy CSFs

For clarity in this study, we combine the above described strategic CSFs and competitive priorities within services. Therefore, we use the aforementioned strategic CSFs in combination with the competitive priorities as the grounds for an e-commerce company’s successful performance. Since the present study focuses on the e-commerce sector with a service-focused paradigm (Schniederjans & Cao, 2009, p.2537), we must connect the inward-looking view that focuses on the firm’s internal aspects with the outward-looking view, i.e. focus on understanding the customers, and understand how these are linked to the successful mixture of business strategy and operations in e-commerce. Based on this, we have decided to focus on factors representing both of the sides and call the combination as the e-commerce service operations strategy CSFs, which are defined in much the same way as those listed previously in the study’s theoretical frame of reference. Thus, we next describe eight e-commerce service operations strategy CSFs, which are formed by combining the most commonly stated CSFs in different academic literature, the CSFs of the EBS-model and the operations strategy competitive priorities.

Quality: Delivering quality refers to the e-commerce firm’s ability to fulfill customer expectation by performing better than what was expected, and simultaneously exceeding the level of competitors’ performance (Phusavat & Kanchana, 2008; Ibrahim, 2010). In line with Takala et al. (2006, p.338), in this study quality is considered as multi-focused and multidimensional, serves as a foundation for the rest of the CSFs.
• **Change management / Re-engineering business processes**: Change management concerns the ability to cope with the changes occurring in external environment that force companies to adapt their businesses accordingly. The ability to change or improve processes is a necessary condition for e-commerce firms to maintain or increase competitive advantage Feindt et al., (2002, p.56). Re-engineering further refers to the ability of an e-commerce firm to change or adapt its business process and change it organizational principles based on new systems, software and technology implementations (Bingi et al., 1999, p.10). Since these implementations affect customer-centric processes, thus requiring a cultural shift and the participation of employees (Chen & Popovich, 2003, p.685), top management’s ability to lead the change process based on business rather than IT-centered way is crucial.

• **Management Support**: Management support is a key element whenever carrying out any strategy, business process, change or software, including the e-commerce companies (Trkman, 2010, p. 130; Eid et al., 2002, p.112). This is, because having the support and active involvement from management enables employees in the operational areas to link their roles with the strategies, processes or changes of the business (Kaplan & Norton, 2001, p.154; Yu, 2007, p.87).

• **Know-how/Training**: No matter whether considering a particular area, technology or the overall business, it is vital for the actors (i.e. both management and the staff) within e-commerce firms to have the required knowledge, skills and innovativeness, to contribute the success of the operations (Wu et al., 2014, p.81; Summer, 1999, p.299). In the e-commerce context, when new processes and technologies are continually implemented making them different from the established norms in the organization, it is furthermore important to train employees to have the required skills to be able to perform their tasks accordingly (Wu et al., 2014, p.81).

• **Customer acceptance/Focus**: The CSF includes the level of knowledge of the target customers and how to utilize this knowledge for fulfilling their expectation (Phusavat & Kanchana, 2008; Ibrahim, 2010). This helps the e-commerce firm decide relevant operations directions such as what products to sell (Liang & Huang, 1998, p.30), which online channels to use, how to deal with transaction costs (Liang & Huang, 1998, p.32) and how to consider web effectiveness in terms of the appearance and features on the website that add to the overall experience a user perceives Mayer et al., (1995, p.712).

• **Service Provision**: It is vital for an e-commerce company to be dependable and speedy in fulfilling what has been agreed on with customers in terms of quantity and quality (Phusavat and Kanchana, 2008; Ibrahim, 2010). Thus, given the terms, service provision reflects how a company tries to create a relationship of accountability with customer.

• **Flexibility**: Flexibility refers to the ability to deploy and/or re-deploy resources in response to changes in agreements primarily initiated by customers (Phusavat and Kanchana, 2008; Ibrahim, 2010). Thus, keys element for an e-commerce firm is to be flexible in its operations in terms of having the capacity to offer a broad
range of services, products and technologies, being able to cope with unexpected circumstances, or having the capability to be flexible in customizing the offerings.

- **Costs:** Implies the ability of an e-commerce company to produce its offerings at a low cost by proactively managing the quality of the operations (Phusavat & Kanchana, 2008; Ibrahim, 2010; Gide & Wu, 2007, p.319). These include including both back office operations namely accounting, finance, inventory, order fulfillment, distribution and shipping, and front office systems focused on customers and refer to activities such as sales, marketing and customer service (Slack et al., 2010, p.6). Further, the ability of an e-commerce website to measure the costs associated with the upgrade and maintenance of its system is crucial.

### 2.3 Summary of Part One

Choosing the theory of strategic orientations as one of the premises for our study is reasoned by considering the study’s abductive nature allowing us to flexibly change the theoretical frame of reference based on the empirical findings. After a while spent in the empirical field we noticed the need to scrutinize this particular strategic dimension to be able to picture a richer analysis. Therefore, based on our findings, it was noticed that particularly the customer, competitive and selling orientations needed emphasis. These orientations were further seen to be able to connect to the other strategic theoretical contexts of this study.

In choosing the Miles & Snow (1978) strategic typology the exclusion of the more seminal works of Porter (1980) and Mintzberg (1988) are conspicuous by their absence. Our reason for considering Miles & Snow (1978) typology is motivated by two reasons. First, the typology has been tested among small firms and proven to be a good fit (Ibrahim, 1993). The e-commerce firms that we have attempted to reach out to in our study fall within the ambit of a small firm thereby confirming a strong theoretical fit. Second, it has been used in conjunction with service management literature (Kellogg & Nie, 1995). This serves as a bridge to connect the strategy typology with the service classification typologies that we use in our theoretical frame of reference (discussed in the next section).

The exclusion of Porter’s strategy types in our study was motivated by the following reasons. First, Porter (1980, cited in Ibrahim 1993, p.14) suggests the typologies of focus, cost leadership and differentiation. Focus refers to having a niche, while cost leadership as the name suggests focuses on reducing costs and finally differentiation considers uniqueness. We argue that the focus component of this typology is covered in Miles & Snow’s (1978) typology that is typified by defenders who focus on niche categories and create barriers to entry (Ibrahim, 1993, p.14). Cost leadership is something that we posit all firms pursue regardless of strategy and in an e-commerce context one of the derived benefits of the model is cost. The differentiation strategy is not explicitly covered in the Miles & Snow (1978) model. However, it could be alluded to the prospector who continually scans new markets and opportunities which in our opinion is a stronger fit for e-commerce firms that are not bounded by geographies. Mintzberg (1988, cited in Kotha et al. 1997, p.30) introduced his strategy typology in response to the shortcomings he criticized in Porter’s body of work and proposed a generic strategy types largely focused on differentiation through price, image, support, design, quality and imitation. The singularity of Mintzberg’s proposed typology i.e. a narrow focus on differentiation, aided
our decision in not considering it. It is also our opinion that together the chosen strategic orientations and Miles & Snow (1978) typology allows us to link them to the operations strategy concepts, i.e. perspectives of operations strategy propounded by Slack (2010) and operations strategy competitive priorities presented by Phusavat and Kanchana (2008) and Ibrahim (2010) more logically than it would have been possible to do with the afore-mentioned disregarded concepts. Given these considerations we decided to use the chosen model for our study.

As a starting point, inspired by Singh and Sharma’s (2010) research, we relate our e-commerce service operations CSFs to the strategy pursued by firms, i.e. orientations and typologies. To be able to take the operations strategy dimension into account, we additionally relate them to the perspectives influencing operations strategy. Therefore, we consider the strategy orientations, typologies and operations strategy perspectives as a foundation for how the firms relate to the strategic CSFs and competitive priorities.

*Table 2. Basis for the Formation of E-commerce Service Operations CSFs.*

<table>
<thead>
<tr>
<th>Critical Success Factor</th>
<th>Information Systems Literature</th>
<th>E-commerce Business Satisfaction Model</th>
<th>Competitive Priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Management / Re-engineering Business processes</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Support &amp; Commitment from Top &amp; Senior Management</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Knowledge &amp; Skills / Know-how</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Training and re-skilling workforce</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Acceptance / Focus</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Service Provision / Website Effectiveness</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Costs</td>
<td></td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

We present in table 2, the various CSFs that form the basis of our e-commerce service operations CSFs. We draw on three primary sources to create our model namely IS literature, the EBS model and OM & SOM literature. Here it is important to clarify why we decided upon the specific literature and the sources. Most management students and professionals, especially the ones who have studied *Project Management* (PM), will be aware that CSFs exist in PM literature. Projects are short term activities with fixed start
and end dates. Since we are studying a process that does not have a defined start or end and is expected to exist for an indefinite period of time, we decided to look for a germane source to our area of study.

In looking for alternative sources of literature, we came across Information Systems literature that covered areas that included both software as well as e-services. E-commerce as a business does include a technology element and therefore, a logical fit to explain aspects that traditional management literature namely OM & SOM lack in. The IS literature has a very technology oriented focus and this perspective is important when considering E-commerce as well as real time chat, and as a consequence reasoned that its inclusion would be theoretically relevant. Another important consideration in choosing IS literature is that it had CSFs that pertain to both strategic and operational aspects thereby validating their encompassment.

Subsequently, we chose to build on the IS literature with theory that was derived more specifically to the industry of our study, namely e-commerce. This led to the use of the EBS model (Wu et al., 2014) in our frame of reference. In doing so we were able to assimilate IS literature with a contextual focus. Furthermore, the EBS model (Wu et al., 2014) also had a very pertinent and granular applicability to SME’s. Based on our experiences in reaching out to e-commerce companies in our targeted sample for data collection, we have observed that most of the companies are SME’s. This adds veracity to our choice of theory and literature.

Finally, we combine the pertinent competitive priorities from OM and SOM literature to complement the IS and EBS theories. A quick perusal of the table will indicate to certain overlaps in literature. This has been done deliberately to ensure that we maintain a consistent train of thought between the disparate literature sources. It is also important to call to attention here that the different disciplines use similar nomenclatures that in essence propound the same arguments. While we have referred to them in their original euphemisms in the above discussion they have been combined in the table to further substantiate our choices. The change management/re-engineering CSF serves as an example of an overlap in IS and EBS literature, while customer acceptance/focus CSF illustrates the overlap between EBS and OM/SOM concepts.

Another important consideration is the comprehensiveness of using the three sources in conjunction. IS covers the technology dimension, EBS covers the e-commerce dimension from a business and strategic perspective, while the competitive priorities of OM/SOM covers operational as well as strategic perspectives. The table also serves to indicate that we have concentrated a significant part of our focus on the EBS model and competitive priorities and use the IS as a basis to provide context to the technological elements of our study.

In combining concepts in this multi-dimensional perspective, we are able to formulate our E-commerce Service Operations CSFs model that strengthens our approach to our study as comprehensive.

2.4 Service Delivery Systems

Part two of the theoretical frame of reference begins in this section. Service delivery is concerned with how a specific service will be provided to the customer. The design of
services is influenced by the various aforementioned strategic and competitive priorities that an organization considers. Roth and Menor (2003) propose a framework for determining a service delivery system. They divide the entire process into three areas namely Strategic design choices, Realized service delivery and Customer perception of value of the service. Since the main focus of the thesis is process design the strategic design choices will be discussed in detail, realized service delivery system will be discussed briefly while customer perception will be excluded to maintain our focus on the internal aspects of the organization.

2.4.1 Strategic Design Choices

Roth & Menor (2003, p.151) divide strategic design choices into structural, infrastructural and integration aspects. Structural choices refer to the design of the physical aspects of the service facility, service process models, technology and equipment and capacity planning. Infrastructural choices consider those aspects of the service that focuses on employees, customer processes and performance. Integration choices refer to how the service is integrated internally with other functions and externally with vendors. We adapt the model proposed by Roth & Menor (2003) but simplify the nomenclature based on three aspects into broader themes. In the design phase we can see that design exists on multiple dimensions that is there is the design of the facility that includes the website, the service process, technology, and capacity planning. Facility here is taken in the broadest sense to cover both the externally visible and internal aspects of the service that are required to function effectively. The other aspect can be abstracted to people, performance and co-ordination. In other words these are the aspects that allow the facility to be used in the best possible way to deliver the service. The figure 2 below depicts the simplified version of Roth & Menor’s (2003) model.

![Figure 2. Service Delivery Systems. Source: Adapted from Roth & Menor (2003).](image)

2.4.2 Service Process Model

Besides considering e-commerce from the e-servicescape perspective with the website as a facility it is also important to consider how the entire e-commerce service is delivered by the company as a whole. The service process matrix is predominantly used in service operations management literature to help define and categorize different service organizations. Schmenner (1986), attributed with introducing this matrix. The vertical axis of this matrix considers labor intensity from high to low. The horizontal axis on the
other hand represents the degree of customization and interaction. Schmenner, (2004, p.339) however revisited the matrix in order to make it more pertinent to the current business context. The author replaced labor intensity with relative throughput time in the vertical axis. This represents the time it takes for a service to be completed and the customer leaves satisfied. In the horizontal axis customization and interaction was changed to variation in the customization and interaction with customers. Again it must be noted that variation here does not consider the prevalence of many choices if such choices are predetermined by the service provider. While profitability can be attained in any part of the matrix, it is argued that for an organization to be productive it must to the service factory quadrant that is typified by low variation and low throughput time (Schmenner, 2004, p.340).

The limitation in Schmenner’s (1986) model is that it only considers two aspects of a service namely the labor in conjunction with customization and contact time in a dichotomous way. Silvestro et al. (1992) addressed this shortcoming by including more factors and considering it in a continuum. He proposed (see figure 3) volume of customers served in the horizontal axis while including elements such as people focus, process orientation, front office orientation on the high end of the vertical axis, while equipment focus, back office orientation and product orientation on the low end of vertical axis. Customization and interaction are also included along with discretion to the employee. People focus takes precedence over equipment where the service is dependent on the contact employee (Silvestro et al., 1992, p.67). In the context of our study we consider technology in the ambit of equipment. Process orientation exists when how the customer buys the product is given more emphasis, product orientation on the other hand gives emphasis to what the customer buys. Front-office orientation is present when there are more employees in customer contact roles when compared to the back office and back-office orientation implies the opposite. Front office can be likened to the place where the customer enters the store, while the back office is where the goods are replenished (Schmenner, 2004, p.340). In an e-commerce context the website can be considered as the front office and the customer support team as the front office employees, while all supporting teams such as sourcing, warehousing and others are categorized as back office. Discretion is where the front office employee can make changes to the service offering without having to refer to a superior. The advantage of this model is that it is more comprehensive and allows for companies and individual processes to be mapped within a continuum (Silvestro, 1999, pp.416-418).

Companies that score high on customer volume, product, back-office, equipment focus and low discretion can be considered companies that offer mass services. Companies that rank high on people, process, discretion and front office orientation are considered professional services. Companies that have a mix of the above can be considered to be service shops. We anticipate B2C e-commerce websites to fall in the category of either service shops or mass services.

Our prior understanding of e-commerce websites leads us to estimate the presence of high customer volume in conjunction with back office orientation, low interaction, product orientation and technology focus. Sung-Eui (2005) however is able to resolve if B2C e-commerce falls in based on considering a few additional aspects namely tangibility of product, delivery method, substitution into online and standardization. Products that are tangible are those that have a physical form with intangible products being the contrary. Delivery method refers to how the product can be delivered namely online or offline.
Substitution into online is the ability to replace an offline purchase of a product or service with an online one. Standardization is concerned with how standard or nonstandard the product is in terms of volume or in other words can the product be procured in bulk. Since we are concerned with e-commerce with tangible products the delivery method is offline and usually through parcel services and the type of products are usually standard products that can be ordered from different manufacturers and in high volume. When considering these factors in the light of the classification Sung-Eui (2005) e-commerce sites we intend to study it comes in the category online mass services.

![Figure 3. Service Process Model. Source: Silvestro (1992).](image)

We combine the strategy typology of prospectors, analyzers and defenders with the service process model based on the classification proposed by Kellogg & Nie (1995, p. 330). They suggest that defenders be placed in the mass services dimension, while prospectors are placed in the professional services dimension with the analyzer placed in between in them in the service shops dimension. Since we anticipate that the e-commerce firms in our study to have different strategic approaches while at the same time falling in the online mass services dimension, it will be interesting to see how we can develop this aspect using our empirical results.

### 2.4.3 Design of Facility

A facility is defined as “something designed, built, installed, etc., to serve a specific function affording a convenience or service.” (Dictionary, n.d.). Most of the physical and virtual facilities in the creation and delivery of services could be categorized under this definition. This definition takes into account that a facility can also exist in a manner that is intangible and suits our study that has both a physical and virtual dimension. Facility forms a critical component in the design of a service process (Goldstein et al., 2002, p.121). However, in order for the visible facility to function properly even the aspects that
take place in the areas that are not visible must be given due consideration. Each of these aspects are discussed in the subsequent paragraphs.

**e-Servicescape**

Bitner (1992) describes the physical location where the service is provided to the customer as a servicescape. Servicescapes takes into consideration who performs the actions namely the customer alone, the employee alone or both as well as the design and layout of the whole facility (Tinnilä, 2012, p.275). In the case of e-commerce the location and facility where the different actions are performed is the website itself. It is possible for the customer to complete the entire shopping process by themselves, or with the help of an employee should they encounter a problem or difficulty. An e-commerce website that is proactive in its communication using the chat function could possibly initiate an action towards a customer who has spent a lot of time on the website but is not taking any action. While the servicescape concept is useful in understanding facility design, it does not account for service actions that take place in virtual environments namely on the internet (Jeon & Jeong, 2009, p.1). Given the increase in internet based services ranging from e-commerce to social media, there has been a call to expand the scope of servicescapes (Tinnilä, 2012, p.288).

Jeon & Jeong (2009) came up with the concept of e-servicescape to include interactions in online environments and facilities. Derived from the concepts put forth by Bitner (1992) they proposed four key dimensions in ascertaining e-servicescape facilities. These dimensions are ambient conditions, design aspects, search aids & slogans and functional aspects (Jeon & Jeong, 2009, p.3).

Ambient conditions refer to the background characteristics that provide the website visitor various communication cues. These cues are generally palpable such as colors, sounds and effects, virtual tours and product reviews depending on the context. Aesthetic appeal of website is also a consideration in influencing customers indirectly through the use of aspects such as size of fonts, readability of text, use of high resolution pictures and clean design that does not clutter the information and presentation of the site (Jeon & Jeong, 2009, p.4).

Design aspects in the e-servicescape context refer to the layout of the website, ease of navigation and use of space on the website. Website design plays a critical role in converting a website visitor into a customer (Geissler, 2001, p.497). Websites with good design will play a role in influencing the customer to stay on the page while badly designed websites have the opposite effect as the visitor may be confused if the website they have arrived on is the correct one (Jeon & Jeong, 2009, pp.4-5). In our personal experience as researchers, web design is an important consideration as it affects the time customers spend on the site and the number of pages they view.

Search aids and slogans refer in the context of e-servicescapes refer to the logo, symbols, company name, metatags and keywords that help the visitor locate the website and gain awareness about it (Geissler, 2001, pp. 493-494). The location of the website in a search result is an important consideration and this can be likened to a sign or symbol that allows the customer to navigate to the right destination (Jeon & Jeong, 2009, p.5).

Functional aspects refer to the intrinsic benefits of using a website by way of saved time, convenience, satisfaction due to the ease in navigation and adequacy of pertinent and timely information on the website (Williams & Dargel, 2004, p.310). Information in the
context of a website may refer to available services, prices, features i.e. anything that aids the customer in their decision making (Jeon & Jeong, 2009, p. 5). Other functional aspects refer to the speed at which pages download that result in saved time for the customer (Jeon & Jeong, 2009, p. 6). Interaction with the owner or website employees is another function that can be considered important. While Jeon & Jeong (2009, p. 5) consider functional aspect as a way to eliminate time consumed in communicating through traditional channels such as phone, fax and email the authors have overlooked the aspect of real time chat that is inherent to the websites in our study. Therefore, we include this in the functional aspect.

**Technology & Equipment**

Roth and Menor (2003, pp. 151-152) focus on technology choices as to what technology should be procured and where it is installed. They also include the decision to build in-house or outsource. All e-commerce companies based on our observation seem to buy/outsourcing real time chat from third party vendors, therefore the above questions are impertinent to our study. Slack et al., (2010, pp. 222) provides a set of decision criteria in evaluating the right technology. First is technology fit between technology and process. It is important that the technology chosen can work for current and future requirements without the need to change frequently. For this the degree with which it can be automated is considered. Highly automated technology is usually associated higher volume and lower variety. Real time chat in our view is feature rich but still has a level of manual intervention. Special purpose software tend to be highly automated in processing volume of tasks while less automated technology depend on skilled workforce to use it. Second, scale needs to be considered, large scale technology tend to be cheaper than narrow specialized technology but require high volume to be effective. Third, coupling of technology refers to the ability to link disparate activities using a technology. Tight coupling refers to an intimate link between all processes but is considered expensive. If the coupling is more open it implies that the linked processes involve a lot of variety. Huete & Roth (1998, p. 48), emphasize the need to choose delivery channels based on the type of services offered and highlight self-service technologies. Self-service technologies are associated with lower cost advantages but concurrently with missed opportunities to sell due to absence of human mediated interaction. Xue et al., (2007, p. 536) examine virtual channels that are either self-service oriented or employee assisted and highlight the issues of performance since customer actions and capabilities cannot be controlled. Most websites are designed to facilitate the purchase process without human intervention. The presence of employee assisted support such as real time chat help with mitigating the drawbacks of a pure self-service system such as a website.

**Capacity Planning**

Forecasting demand and planning resources available to meet the demand is one of the challenges organizations that have customer interactions struggle with. This is especially exacerbated with the advent of technology. Prior to the infusion of technology demand forecasting was considered predictable and incremental in consistent patterns. However, ever since call centers have been incorporated demand has seen sharp peaks and drops (Betts et al., 2000, p. 185). We extend this argument to e-commerce since the challenge of ascertaining the visitor traffic to a website presents similar demand forecasting issues as mentioned above. Variations in demand can be attributed to seasonal as well as yearly, monthly and hourly fluctuations. Sometimes these are triggered by specific events such as advertising campaigns (Betts et al., 2000, p. 186; Slack, et al., 2010, pp. 302-304). Majority of the e-commerce firms operate in small teams and therefore the need to
accurately measure capacity is critical in their ability to ensure they have the resources to respond to any surge in demand in a timely manner. In a website, the resource allocation can be considered from both a technological as well as a people standpoint. The technological standpoint includes having sufficient server capacity to ensure all visitors to the site are able to navigate the website with ease while the people standpoint considers having enough people to respond and resolve various customer queries and issues.

Various strategies are adopted to handle capacity issues. Most notable are level capacity, chase and queuing (Slack et al., 2010, pp.311-322). Level capacity proposes maintaining a fixed amount of resources despite a peak or drop in demand and is most suitable for non-perishable goods and services. Chase demand as the name suggests advocates matching demand with the appropriate number of resources. Capacity is managed in various ways normally by adopting overtime and idle time strategies as well as annualized hours in order to offset the costs incurred by changes in demand (Slack et al., 2010, pp.313-314). The size of the work force can be increased or decreased through hire and fire policies that are generally considered unethical, hiring of part time staff as well as subcontracting or outsourcing. However, in general services where the output cannot be stored there is a preference to use the queueing method to address demand and capacity planning issues (Slack et al., 2010, p.322). When employing this system it is important to understand the rate at which customers arrive seeking to be attended to, the average waiting times and the reneging rate. The arrival rate is usually not steady and predictable and defined in terms of probability. Average wait times is the period of time a customer is willing to wait before being attended to and reneging an associated concept refers to the time after which a customer may leave the queue (Slack et al., 2010, p.322). Real time chat unlike email and telephone is a synchronous process and allows the e-commerce employees with the ability to serve more than one customer at the same time (Bradshaw & Brash, 2001, pp. 521-522; Goes et al., 2011, p.2). Our investigation is made interesting when considering this aspect of real time chat and understand how e-commerce companies view and manage capacity.

2.4.4 People, Performance & Co-ordination

This aspect in service design choices is concerned with the guidelines, schedules and behavioral aspects of service (Roth & Menor, 2003, p.152). Roth et al (1997, cited in Roth & Menor 2003, p.152) present the service management model that provides a framework to determine the infrastructural aspects of service. The model focuses on two aspects namely practice drivers and performance outcomes. Practice drivers deal with decisions that affect the long term and include empowerment of employees in the people aspect, the moment of truth in the service process aspect and definition of service standards. The performance outcome aspect is derived from the aforementioned people and process aspects and includes service quality, customer growth, cost, productivity and other business performance metrics in its ambit.

Empowerment

Empowerment refers to the degree of discretion and autonomy in decision making an employee is given to meet the requirements of the customer in the service process without having to get authorization from a superior (Silvestro et al., 1992, p.67). Services with high level of discretion tend to be highly customized and personalized as opposed to services with low level of discretion. Empowerment is also linked with psychological
aspects of the employee’s feeling of belonging to the organization as well a higher job satisfaction which leads to better customer satisfaction (Wilder et al., 2014).

**Moment of Truth**
This element concerns itself with the interaction between two important groups of people in the service process namely the customer and the employee. Specifically, we concern ourselves with the moment of truth which refers to the point when the customer’s action overlaps with that of the employee. One useful way to improve service process is the use of a visual technique called service blueprinting (Shostack, 1984). This technique traces the entire customer journey throughout the service process. It is a particularly effective method in process control and is known to proactively identify failure points in a service process (Bitner et al., 2008, p.71). Bitner et al. (2008, pp.72-73) explains the five components of blueprinting namely customer actions, visible contact employee actions, invisible contact employee actions, support processes and physical evidence. Customer actions involve all measures taken by them in the service delivery process. The customer is the focal point of the entire process and all other actions and processes are subordinate to it. Visible contact employee actions are those which involve interaction with the customer. This is often referred to as the moment of truth. It is important to note that even a customer interaction with a self-service technology sometimes qualifies as a moment of truth. Any action that is taken in the back office or out of view of the customer but integral to providing a service to the customer is considered invisible contact employee actions. Any actions taken by employees that are not in direct contact with the customer can be presumed to be support services. Finally, there is physical evidence which represents the palpable aspect of the service for every customer action and moment of truth that influences the perception of quality. Websites can be considered physical evidence of the service (Bitner et al., 2008, p.76). The service blueprinting template is added to the appendix 1.

**Performance Outcomes**
Performance outcomes refer to the various metrics that determine if the processes and the people performing them are satisfactory. These metrics include but are not limited to costs, quality, customer growth, business performance and organizational productivity (Roth & Menor, 2003, p.152). It is our observation that these various performance metrics correspond with the CSF’s pertaining to operations strategy that have already been delved into and hence do not require further elaboration.

**Integration**
Roth & Menor, (2003, p.153) suggest the need to consider integration choices in order to coordinate and unify various aspects of the service with other functions of the organization. Kahn and Mentzer (1998, p.56) define integration “formally defined as a process of interdepartmental interaction and interdepartmental collaboration that brings departments together into a cohesive organization.” Some aspects that are considered in this include service supply chains, integrating technologies and organizational knowledge and learning. Integration exists in external and internal dimensions. External integration refers to the relationships in the service supply chains that are developed and nurtured external to the organization namely with suppliers and customers (Stock et al., 1998, p.46). Internal integration on the other hand refers to the intra organizational functions that need to be seamlessly bound in order to ensure strong link between strategy and business performance (Stock et al., 1998, pp.45-46). The internal perspective considers how relationships are developed internally, communication between different functions,
actors as well as interfaces that will bridge processes between different functions like marketing and finance among others. In our study, it is important to understand the extent of external integration with the third party real time chat software vendor. Given the above considerations it is important to understand how different departments and their functions affect the service delivery process with respect to the real time chat and how they cooperate to serve and resolve customer issues and requests.

Organizational knowledge and learning focuses on how it can be documented as well as transferred seamlessly. So & Bolloju (2005, p.39) suggest that building a positive culture where sharing of knowledge is encouraged especially when the knowledge is reusable is important. Recognizing the contributions of employees by top management is also a key consideration here.

2.4.5 Realized Service Delivery System

In the previous sections we have discussed the various considerations that go into designing a service. Roth & Menor, (2003, p.153) refer to the realized service delivery system encompasses the execution, assessment and renewal of the delivery system. These considerations determine the efficacy of the operations strategy. These in turn inform how an organization can develop competitive capabilities. It is important to distinguish competitive capabilities from the competitive priorities discussed in the operations strategy section.

Renewal, Service Failures & Recoveries

Roth & Menor (2003, p.154) provide a disambiguation between competitive capabilities and priorities. Competitive capabilities can be likened to order winners that help a customer evaluate and distinguish the organization from its rivals. These are the tangible and achieved capabilities that are derived from the execution of a service delivery system. Having a set of competitive capabilities can be used to exploit the service delivery weaknesses of competitors (Menor et al., 2001, p.274). Competitive priorities on the other hand are the ideal state that an organization plans to achieve. In other words, in reality there always exists a gap between what is planned and what is realized. Managers therefore constantly evaluate and assess the gap in order to incorporate where possible, changes back into the design and execution of the system. This is referred to as renewal.

In e-commerce retail the need for renewal is particularly germane because of the likelihood of greater service failure and as a consequence recovery strategies to mitigate the aforementioned failures. Forbes et al., (2005, pp.282-287) propose a typology of failures grouped under two broad categories. First, system/product failure which includes website failure, packaging mistakes and product defects to name a few (see table 3). Second, response to customer needs and requests which consider special order requests and customer initiated errors while using the service. Service recovery strategies include simple apology, discount, refunds, replacement, and store credit amongst others. Through constant assessment of the service delivery system, changes can be made to avoid future service failures (Roth & Menor, 2003, p.155). In the context of the real time chat function some e-commerce firms use this feature to provide customer support and we anticipate that service failures constitute a significant reason for the use of the service.
Table 3. Service Failures.
Source: Forbes et al. (2005).

<table>
<thead>
<tr>
<th>Service Failure Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow Service</td>
<td>Unavailable Service</td>
</tr>
<tr>
<td>System Pricing</td>
<td>Customer wrongly charged due to incorrect list price</td>
</tr>
<tr>
<td>Packaging Errors</td>
<td>Wrong shipment or partial shipment sent</td>
</tr>
<tr>
<td>Out of Stock</td>
<td>Product not available after placing order</td>
</tr>
<tr>
<td>Product Defect</td>
<td>Product damaged or broken</td>
</tr>
<tr>
<td>Bad Information</td>
<td>Mismatch between product description and actual performance</td>
</tr>
<tr>
<td>Website &amp; System Failure</td>
<td>Website does not work, confusing to use or user unable to complete purchase</td>
</tr>
<tr>
<td>Special Order</td>
<td>Failure when customer made a special request</td>
</tr>
<tr>
<td>Customer Error</td>
<td>Customer ordered wrong product or entered wrong information</td>
</tr>
<tr>
<td>Size Variation</td>
<td>Product does not fit the customer</td>
</tr>
</tbody>
</table>

2.5 Real Time Chat

We now consider the limited theory that is available that specifically considers real time chat. Real time chat is considered a synchronous computer mediated communication channel implying two-way communication that is instantaneous (Goes et al., 2011, p.2). This necessitates firms to have resources that ensure customers are responded to immediately with little or no delay. Real time chat, when compared to other communication channels like email and FAQ’s it follows that resource allocation and queueing based on demand forecasting is relatively easier in the case of the latter. Goes et al., (2011), proposed a measure to mitigate the resource burden that could arise from unexpected surge in demand by assigning customer support agents using a priority system that gives precedence to customers categorized as high class and low class. As a consequence important customers have reduced wait times on the site and results in higher satisfaction.

Kang et al., (2015, pp.131-132), in their study confirm that real time chat as a channel increases trust and intention to purchase due to perceived interactivity. Real time chat is also attributed with reducing information asymmetry through information transfer. Receiving timely information is especially pertinent in reducing shopping cart abandonment midway through the purchase process in e-commerce (Leggett, 2014, p. 2). Real time chat is also known to provide more customer satisfaction than asynchronous channels like email and FAQ’s (Goes et al., 2011, p.2). Real time is also a preferred over voice process of a call center due to lower costs, and the ability of the customer support agent to engage in multiple chat conversations concurrently (Leggett & Schoeller, 2015, p.2).
In a study that outlined the key aspects of driving a successful proactive chat process to drive sales Leggett (2014, pp.5-9) proposed six key elements for efficacy. First, mapping out clear customer journeys and identifying specific scenarios where they would benefit most from a chat engagement, classifying them both by businesses and customer value. Some of these scenarios include product, seller and payment assistance, product availability, social referrals, cancellations, memberships and rewards, price matching and pre-orders. Of the above product availability, product assistance and payment assistance are considered of high value to the customer and company and require real time chat. Low value scenarios are considered candidates for automation and should be avoided on real time chat. Second, focus on clients who have the highest intention to purchase ascertaining this through various CRM and data analytic tools available through the website. This conforms to the concept of service blueprinting discussed earlier as well as the priority system discussed above. Third, knowing when to intervene in the customer journey. This is divided into defensive actions and opportunistic actions. Defensive actions include cart abandonment, session inactivity on product page, and session inactivity with products in cart, customer lifetime value and shopping cart value. While opportunistic actions include opportunities to cross-sell or upsell, page referrals, number of page views, page views of premium products, search keywords and engagement across multiple devices. This can be linked to aforementioned theory namely moment of truth and service failure and recovery strategies with the exception of opportunistic actions. Fourth, personalizing the interaction with the customer based on the defensive and opportunistic actions. Fifth, how the interaction is presented is also critical, this includes language, colors and imagery, timing of chat invitation and cognizance of customer’s device (Leggett, 2014, pp. 7-8). Service literature is particular concerned with the concept of customer scripting. Cook et al., (2002, pp. 165-166) discuss scripting in the context of service encounters. These encounters could be highly standardized or flexible. Customers are expected to interact with the service in a pre-conceived manner and congruence in scripts chosen by different customers distinguish between processes that can be standardized and those that need customization. Finally, training the chat agents is critical to running a successful process (Leggett, 2014, p. 9). Even when considering the scripting process, the employee is trained to adopt a specific behavior that is considered appropriate to the service encounter (Cook et al., 2002, p. 166). Real time chat as a result is credited with higher sales conversion, increased order value and higher revenues (Leggett, 2014, pp. 3-4).

2.6 Summary of Part Two

To summarize using a comprehensive constellation of SOM and real time chat concepts we will seek to understand the different factors that influence the design of service processes in an e-commerce setting. Therefore, it is important to understand how they operate as a whole. To understand this we use the service process model to determine how the different companies in our study can be classified as a business operation. Since the real time chat function is nested within a website which is the primary destination for the customer it is important to understand how the website is designed as a service facility using the e-servicescape and technology design concepts particularly the real time chat. Using capacity planning concepts we try and understand how e-commerce websites forecast traffic on their website and its resultant influence on how resources are allocated to serve the website visitors. We then consider the aspects of people, process and performance that inform how a process is designed. Subsequently, we try and see how processes are linked with other supporting functions within the organization to ensure
performance outcomes are achieved. We then distinguish between the intended service delivery system with the realized service delivery and how the organization renews the process for improvement. We also refer to real time chat literature and concepts where appropriate to help us clarify various aspects of the service design process. Based on the above we expect to find out how design and performance outcomes of the real time process link with the CSFs and competitive priorities and whether they differ based on the organization’s strategic position.

**2.7 Summary of Theoretical Frame Of Reference**

The critical aspect of our frame of reference is the link between strategy and operations that informs how the real time chat process should be optimally designed. Since the focus of our study is the real time chat, based on our empirical evidence and motivated by our abductive approach we discovered the market orientation and sales orientation theories. These two orientations though having broader application have in our opinion a pertinent fit with the real time chat process that in our knowledge is used as both a sales tool and a service tool. The Miles & Snow (1978) model is particularly chosen for its applicability in SME’s which is our intended target sample for the study. Given this foundation we used extant theory to develop CSFs for e-commerce that considers both the strategic and operational viewpoints. Given the unique nature of e-commerce that is its virtual as well as physical existence as an entity that has a technological aspect and an organizational aspect we derived our combined CSF model from strategic management, e-commerce, IS and operations management literature thereby ensuring our CSF model represents both the strategic and operational views we need to answer our research question. The service delivery systems literature is also discussed keeping in mind the strategic influences of CSFs. By examining the service process model it considers the entire e-commerce company as a function of a service process. Most notably using Kellogg & Nie (1995) the service process model is connected with the strategic typology of Miles & Snow (1978) creating another strong linkage between strategy and operations. Having created a foundational basis for the operational aspect. The rest of the theory is devoted to understanding specific aspect of service processes that contribute to process design reflecting particularly its possible application in real time chat. Figure 4 helps the reader in visually assimilating the consolidated theoretical frame of reference.
Figure 4. Visual depiction of theoretical frame of reference.
3. Research Methodology

This chapter elaborates the research methodology of the thesis. The chapter starts with the scientific method explaining and rationalizing the philosophical position of the research in relation to epistemology and ontology. Thereafter, we discuss the study’s research approach and strategy are elaborated after which a detailed explanation for the practical method namely data collection and analysis is given. To complete the chapter, the ethics as well as quality criteria of the study are deliberated.

3.1 Research Philosophy

“For, after all, how do we know that two and two make four? Or that the force of gravity works? Or that the past is unchangeable? If both the past and the external world exist only in the mind, and if the mind itself is controllable – what then?” (Orwell, 1949, p. 80).

3.1.1 Preconceptions

As researchers it is important to understand our cognitive and behavioral shortcomings that can influence the outcome of our thesis. Articulating preconceptions serves as a self-reflective mechanism that guides us through every step of this process. Our respective backgrounds and work experiences that we have alluded to in the first chapter served both as motivations and a reminder that our prior knowledge could aid or hinder our study. To nullify this, as researchers it was our endeavor to approach the thesis with a zero base perspective allowing us to look at each aspect anew and with an open mind.

As human beings we are all susceptible to certain cognitive biases that influence how we view the world around us and our decisions. We discuss a few of these biases that in our opinion are important considerations to take cognizance of, in order to ensure that our work is not embellished with superfluous content.

1. Bias blind spot - This bias suggests that individuals are more likely to spot biases in others than in themselves (Scopelliti et al., 2015, p.2468). This bias is conspicuous when we critique the thesis work of other students. We fully expect the bias of our fellow students in our own WIP seminar group to offset that of our own. Additionally, the wisdom and experience of our supervisor will allow us to recognize and prevent this bias from influencing our research and writing.

2. Confirmation bias – This refers to the tendency to attach disproportionate weightage to evidence or information that is predisposed to one’s existing beliefs or hypotheses (Nickerson, 1998, p.175). We expect this bias to surface during the identification of research gaps as well as during the analysis and conclusion of our results. To mitigate this bias we strive to ensure that we actively seek information and feedback that will challenge our extant beliefs and thinking when perusing various concepts and theories.

3. Recency bias - Individuals tend to display this bias when they react acutely to observations or experiences that has been acquired recently compared to older ones (Fudenberg & Levine, 2014, p.1). It is plausible that this bias can manifest itself during the literature review as well as during the analysis. To attenuate this
bias we will venture to constantly contrast the newly received information and knowledge in the light of the old information and knowledge that is at our disposal.

Through this critical self-reflection and recognition of our possible biases we are confident in our ability to alleviate the impact of these biases in blemishing our thesis work.

### 3.1.2 Paradigm

Research is undertaken within the confines of paradigms. Guba (1990, p.17), defines paradigm as “a basic set of beliefs that guides action.” This definition is broad in the sense that it can be applied both to mundane everyday activity and the pursuit of academic inquiry. Paradigms can be equated to human constructions and involve first principles or ultimates (Denzin & Lincoln, 2008, p.245; Guba & Lincoln, 1994, p.107) that are interpretive in nature especially when seen through the prism of research and necessarily include the individual’s perspective and comprehension of the world and opinions of how it must be studied (Denzin & Lincoln, 2008, p.31). Despite the broad applicability, we are concerned only with paradigms that inform and guide the actions of the researcher. These paradigms are normally expressed in terms of ontology, epistemology and methodology. These terms will be defined and discussed in the following paragraphs.

### 3.1.3 Ontology

Ontology concerns itself with the nature and form of reality as well as the nature of human beings (Denzin & Lincoln, 2008, p.245). It necessitates the need to underpin how reality can be viewed in order to be more conversant about it (Guba & Lincoln, 1994, p.107). Furthermore, this implies that the researcher needs to take cognizance of their perceptions of how things appear to be and function (Scotland, 2012, p.9). Frequently referred methodological literature tends to be over-simplistic and reductionist in its articulation of paradigms as dichotomous abstractions (Morgan & Smircich, 1980, p.491). We subscribe to this opinion and have excluded this binary view of paradigms propagated by textbook literature in the philosophy section.

The ontological spectrum can be viewed as a continuum that spans from objectivist approaches on one end to subjectivist approaches on the other (Morgan & Smircich, 1980, p.492; Long et al., 2000, p.190). The objectivist position at its extreme right (see table 4) is built on the assumption of reality as a concrete structure and is referred to as positivism. The tenet of positivism is rooted in realism with the assertion that reality and the world exists external to the mind and is governed through laws of nature (Rynes & Gephart, 2004, p.456). This leads all inquiry towards the prediction and control of natural phenomena (Guba & Lincoln, 2008, p.258; Guba, 1990, p.19). Additionally, this paradigm also argues for the exclusion of anything that does not crystallize into an activity or behavior (Morgan & Smircich, 1980, p.495). Consequently, the resultant generalizations are time and context-free (Guba, 1990, p.20). Given the highly objective and mechanistic nature of this position, we argue that our proposed study, when through the lens of positivism appears inadequate. This is largely due to the involvement of social actors in the context of our study, whose actions are an important consideration.
The subjectivist position at the extreme left of the spectrum is the projection of human imagination and referred to as constructivism (Guba & Lincoln, 1994, p.110). Constructivism is anchored in relativist traditions and emphasizes that reality exists in multiple mental constructions grounded in local, social, specific, co-constructed and experiential dimensions dependent on the individual(s) who hold them (Denzin & Lincoln, 2008, p.257; Guba, 1990, p.27). Human processes in essence veil reality and the phenomenon is synthesized in consciousness before its essence is fully comprehended (Morgan & Smircich, 1980, p.494). This implies that the aim of inquiry under constructivism is to understand the afore-stated abstractions (Denzin & Lincoln, 2008, p.257). The notion that reality is a transcendental manifestation and exists solely in the realm of human mind when considered from the standpoint of our study and research question appears incongruous.

Having established the extremes and our subsequent rejection of them, it can be surmised that as researchers we have placed ourselves somewhere within the continuum. We have established that the focus of our study is a real time chat process. This exists on three dimensions. Firstly, the object itself has a material and technological dimension that is observable independently. It can be defined and typified as a standalone object thereby indicating the possibility of a positivist approach (Meredith et al., 1989, p.306). On the other hand, it also has a human dimension since the real time chat in itself is not utilitarian without the involvement of the customer and the chat agent (e-commerce employee). The entire process also involves the deliberation, reflection and participation of the social actors namely the managers and employees who define, outline and shape the process. This requires studying the object within a context and include the people and the meanings they attach to it making the presence of an interpretivist perspective inevitable (Meredith et al., 1989, p.307). Finally, there is the consideration of our view as researchers which adds a layer of perspective and meanings to what we study. This triadic position us in the cusp of continuum with a predilection for subjectivist leanings in the paradigm. More specifically, as researchers we consider our reality as contextual and understand it as a synthesis of information exchange that we extract from the reality we perceive through our senses and intellect. This outlook is in conjunction with the view of reality as a contextual field of information (highlighted in table 4) comprising transient and probabilistic relationships which, in essence require the understanding of patterns that have a bearing on the whole (Morgan & Smircich, 1980, pp.495-496).

Table 4. The Subjectivist-Objectivist Spectrum.

<table>
<thead>
<tr>
<th>Reality as a projection of human imagination</th>
<th>Reality as a social construction</th>
<th>Reality as a symbolic discourse</th>
<th>Reality as a contextual field of information</th>
<th>Reality as a concrete process</th>
<th>Reality as a concrete structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjectivist Approach</strong></td>
<td></td>
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<tr>
<td><strong>Objectivist Approach</strong></td>
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</tbody>
</table>

3.1.4 Epistemology

Epistemology focuses on how the researcher or individual can understand and study the world or reality and their ensuing relationship with what can be known (Denzin & Lincoln, 2008, p.245; Guba & Lincoln, 1994, p.108). Meredith et al. (1989, pp.305-307), posited the paradigm framework modified for operations research to which we refer to
(see appendix 2). The first dimension is rationalist/existentialist which is concerned with the epistemological considerations of the research process from the researcher’s perspective. Rationalism adopts logic and structure as the means to evaluate truth. Existentialism on the other hand factors the individual’s ability and their interaction with the environment. Two perspectives exist in the rationalist end namely axiomatic that propounds theorem-proof based approach to research, and the logical positivist/empiricist which posits the separation of the studied phenomenon from its context. In the existential end we can see two generic perspectives namely interpretivist and critical theory which adopt a more informal structure. The interpretivist dimension accommodates context as well as people with a focus on meaning and understanding in lieu of behavior. The critical perspective bridges the disparity between how people act in practice and perceive themselves in the process.

As stated earlier there are two aspects to our study. First, is understanding the subjective opinions that the individuals in our study hold on the researched phenomenon. Second, we also seek to examine the object of our study and the individual who participates in it in an unbiased manner to gain more insight into the entire process. Understanding the subjective opinions of the individuals who participate in the phenomenon in our study points to the presence in the interpretive quadrant. In attempting to understand the object of study as it occurs indicates the inclination to view things in its natural settings. Consequently, this suggests that we are placed in the natural quadrant. However, in the natural quadrant we see a preponderance to capture both the perception of the individual who is participating as well as the object and the surroundings that include the individual. Therefore, we place ourselves in the cusp of the perception and direct observation axis.

3.2 Reflection on the Choice of Literature

The literature is the nucleus of any body of research. Therefore, it plays a pivotal role in charting the course that researcher will take. Given this consideration it is important that as researchers we approach the process of literature search and selection with meticulousness. One aspect we considered when starting the literature review was the broad area and discipline that we were interested in. As researchers both of us were clear that we wanted to conduct the study in the e-commerce industry. Therefore, this serves as a starting point of our research process. Prior to starting the literature search we agreed upon sources and databases that we considered legitimate for our study. We agreed to use the university library search tool and database as it is linked to most of the renowned scientific directories. In addition, we supplemented our search using databases such as Science Direct, EBSCO Host, Elsevier and Google Scholar to assimilate a broad range of sources. In order to ensure that we are exposed to a wide array of literature and articles we searched using multiple keywords that were all-encompassing. We have outlined some of the keywords used in table 5.

We also combined keywords from different areas and searched for articles to serve two purposes. First, to find studies that would cover our topic in a similar vein, and second, to find articles that would allow us to connect one area with another. We also read literature reviews on the various areas to allow us to identify renowned authors and their seminal works. In terms of sources of literature we considered peer-reviewed journals as much as possible. The only exception where we did not use a peer-reviewed journal was in the real time chat part where we had to refer to two studies done by Forrester Research (Leggett, 2014; Leggett & Schoeller, 2015), which is a renowned organization in IT
related study. This due to the lack of relevant real time chat theories in peer-reviewed journals. The two reports we refer to have been studied with a sizeable sample. The reports also described their methodology in terms of how the data was collected and due to this disclosure we felt it was acceptable to use. We have restricted the use of a non-peer reviewed source only in this chapter of the entire theoretical frame of reference. Barring real time chat all the other areas have been grounded in extant literature. We also referred to some textbooks that were used for definitions or over-arching concepts. However, this has been used sparingly.

We tried to ensure recency in our literature sources as far as possible. This was comparatively easier to do for the more current topics such as e-commerce, real time chat and to an extent service operations. However, this was not possible always, especially when concerning the topics of strategic management and operations management both acknowledged as mature fields. More than the year it was also important to use research that was relevant to our study. Thus, while there may have been a more recent article that covered a topic in the broad sense, it did not cover it in the context that we were studying. In combining the different perspectives and theories in the manner in which we have attempted to, we believe that we have been able to create a theoretical frame of reference that is appropriate for our study.

It was also our endeavor to ensure that we read through the original sources of studies cited when we were reading articles. We succeeded largely in doing so, except in certain circumstances where we could not access the original publication or article. Only in such extraneous circumstances did we use secondary referencing. In cases where we were unable to locate the main source but decided the concept was important to our study we chose to look for alternative sources of literature that could provide similar arguments.

*Table 5. Literature Search Keywords.*

<table>
<thead>
<tr>
<th>Key Area</th>
<th>Keywords</th>
<th>Search Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-commerce</td>
<td>E-commerce B2C e-commerce E-business E-services E-retail E-tail</td>
<td>University Library Database Science Direct EBSCOHost Elsevier Google Scholar</td>
</tr>
<tr>
<td>Real Time Chat</td>
<td>Live Chat Instant Messaging Web Chat Chat Internet Relay Chat</td>
<td>University Library Database Science Direct EBSCOHost Elsevier Google Scholar Google</td>
</tr>
</tbody>
</table>
3.3 Research Approach

In order for us to advance knowledge by conducting this thesis, choosing a suitable research approach was a crucial step in allowing us to follow a rational path to conscious scientific reasoning through the theories applied in this study. According to Bryman (2012, p.5), the literature that the researchers choose to study facilitates their understanding of the social world. Therefore, the way of approaching the theory affected the topics investigated in the research, as well as the interpretation of the findings. Thus, the adoption of a sound research approach acted as an important building block in the process of advancing knowledge.

As elaborated above, the first step in selecting the right approach for this thesis was to map out the conceptual landscape by viewing the literature concerning business strategy and the alignment of business and operations strategy. Furthermore, the body of knowledge regarding OM and SOM was explored, after which theories concerning service operations design were examined to be able to scrutinize the design of real time chat. Finally, the rather limited theory that is available on the particular subject of real time chat was outlined and studied. Moreover, each theoretical section was viewed in the light of what has been written about e-commerce and IS in their respective contexts.

During the process, we defined common themes and appropriate directions, as well as identified various research gaps as presented in section 1.3. Despite of OM being a very mature discipline in business research, and regardless of the strength of B2C e-commerce in today’s business environment, there is a limited academic research considering OM and SOM within this setting. To achieve the purpose of studying the subject of B2C e-commerce in a more complete context, we researched the phenomenon of real time chat through the lenses of top managers and operational level employees of e-commerce companies. This was further done by focusing not only on the operational attributes influencing the design of the process, but also seeing whether and to what extent business strategic aspects determine the design.

To investigate the novel area of the B2C e-commerce real time chat process in the aforementioned context required creativeness. Therefore, in line with Dubois and Gadde (2002; pp.555-556) and Spens and Kovács (2006, p.377), we initiated a creative process of theory matching. This enabled us to find corresponding linkages between the real time chat process and business strategy, operations strategy and service design process.
frameworks. It also allowed us to advance the knowledge that had been established prior to our study.

It is important to note that our objective was not to develop an entirely new theory for the process design of the B2C e-commerce companies’ real time chat. This would have called for a mainly inductive research approach, which according to Spens & Kovács (2006, p.377), would have required starting the research process with observations of specific instances and seeking to establish generalizations about the phenomenon under investigation. We aimed to advance the literature regarding strategy, OM and SOM in the area of e-commerce by examining previously unexplored relationships between these and the real time chat process design in a more comprehensive context. Furthermore, even though our research process started from theory, with the purpose of taking advantage of the pre-existing literature on strategy, OM and SOM, we did not want to conduct a theory testing process to see whether the established theory applied to specific instances. These characteristics would have been typical for deductive research (Spens & Kovács, 2006, p. 377376-377). Instead, the aim of our study required a logical and flexible research approach that enabled us to create a novel type of knowledge by combining the existing theory and the new features presented in the collected data. Therefore, we did not follow either the pattern of pure deduction or of pure induction, but focused on combining both approaches by choosing an abductive research approach.

Scientific research is as an ongoing act wherein discovery and justification are inseparable moments (Timmermans & Tavory, 2012, p.168). The approach of abduction enabled us as researchers to make new discoveries in a logical and ordered way and, thereafter, justify already stated facts by refining them in accordance with the discoveries. Due to abduction, the empirical data collection and theory advancing phases of a study can overlap during the research process (Dubois & Gadde, 2002, p.556; Spens & Kovács, 2006, p.378). Thus, it was possible for us to modify and strengthen our theoretical frame of reference in any part of the study, create an elaborate and concrete analysis from which new knowledge could be discovered with valid proposals and recommendations for further research to be drawn.

3.3.1 Research Purpose

Before going further to describe the research strategy of our thesis it is worthwhile to elaborate the purpose of this study, as these two matters are correlated with each other. Given the three central explanations offered to describe the connection of the strategy and purpose of a scientific research, namely exploratory, explanatory and descriptive research (Hesse-Biber & Leavy, 2010, p.10), our study is considered as a mixture of a descriptive and explanatory research. Whereas a descriptive research searches for providing a truthful description and profile of the studied subject (Ritchie & Lewis, 2003, p.28) an explanatory research examines the subject in depth by seeking to explain the occurrence of it (Gummeson, 1988, p.75-76). In this study we treated these two characteristics for a study as complementary.

Descriptive studies are arguably the least theoretical in the spectrum of study characteristics because they lack pre-existing theoretical and philosophical commitments. Another shortage of descriptive studies is that sometimes they are considered as resulting in mere descriptions (de Vaus, 2001, p.1) that fail in explaining why an event has occurred or why the factors facing it interact in the way they do (Blumberg et al., 2008, p.10).
Despite the arguments against descriptive studies, we considered it as a relevant attribute in our study. Given our purpose to study the design of the real time chat, we first had to understand the common features and the way of how the real time chat is used in the studied B2C e-commerce websites. Thus, we exploited descriptive research. However, in line with (Ritchie & Lewis, 2003, p.28), to avoid the aforementioned inadequacy of dull descriptions characteristic to descriptive research, it was vital to construct a good description that further evoked the explanation seeking questions of explanatory research. Thus, to gather rich information and data required for contributing to knowledge propagation in this particular study, we were necessitated to amplify the understanding of real time chat process design with the business and operational strategies determining it. Therefore, combining the descriptive research with explanatory was required. To combine these two was realizable since descriptive research can act as a piece of explanatory research in sense that it is linked to intelligence gathering and collecting facts (Saunders et al., 2009, pp.140-141).

Explanatory studies have been described as particularly useful in studying processes in companies as they are rooted in theory to develop explanations on the nature of certain relationships (Yin, 1984, pp.11-15; Gummesson, 1988, pp.75-76). In our case, the explanatory nature of this study went beyond description and attempted to reveal the motivational understanding of the business and operational strategies determining the studied subject of real time chat design process, which was discovered through description. An explanatory research studies associations and what exists (Ritchie & Lewis, 2003, p.27). Therefore, by implementing this study in an explanatory vein allowed us to understand the possible causal relationships between the design of the real time chat and the business and operational strategies determining it, and thus, when combined with description, served an appropriate role in this study.

**3.4 Research Strategy**

In order to systematically answer the research question of a study, and link the used methods to the outcome, deciding an appropriate research strategy is needed (Saunders et al., 2009, p. 680). Stated by Saunders et al. (2009, p. 146), in aiming to form an understanding of context, relationships and functions of certain processes a research strategy based on qualitative inquiries can be of special interest. In a similar vein we considered qualitative research inquiry as suitable for our study.

According to Corbin and Strauss (1998, p.11) there are many valid reasons for doing qualitative research, namely researchers own preferred orientation towards research types of either qualitative or quantitative inquiry, philosophical orientations, or the nature of the research problem and purpose being a few such instances. We base our arguments on the afore-elaborated research purpose. Since our intention was to describe the rather complex nature of the real time chat process design in B2C e-commerce context, and further explain the business and operations strategies determining it, we needed to follow a flexible strategy that served us with rich empirical data from which explanations could be drawn. As already mentioned, according to Ritchie and Lewis (2003, p.28), explanatory research is concerned with explanation seeking questions and the forces and influences that drive their occurrence. Due to its facility to flexibly examine subjects in depth, the volume and richness of its generated data, the distinctive approaches to analysis and interpretation, and the kind of outputs that derive from it, qualitative research provides a preferable tool to study what underlies decisions, attitudes, behaviors or other
phenomena (Ritchie & Lewis, 2003, p.3). It also enables connotations occurring in peoples’ minds or in their behavior to be recognized. These, in turn, may result in some explanatory, or even causal links. Since our study also included a descriptive element that called for understanding the context dependent subject of real time chat, to choose qualitative inquiries enabling researchers to study a phenomenon in its natural surroundings (Ritchie & Lewis, 2003, p.3) was valid. In summary, focusing on research strategies falling under the sphere of qualitative research were seen suitable to this study.

Considering the purpose of our study further enabled us to reason for the suitability of the particular qualitative research strategies used in this thesis, namely field research and phenomenology. Field research is considered as the act of collecting data in the domain, i.e. field, by employing qualitative methodology and methods (Ahrens & Chapman, 2004, p.821). The essential idea behind applying field research strategy in this study was to be able to understand and observe the real time chat service process in non-contrived settings, which is the natural environment in which events normally occur, and thus build a truthful view on how the service process functions in its daily operation. Field research is seen either as a broad approach to qualitative research or a method of gathering qualitative data (Trochim, 2006). In this study, we applied the latter explanation. However, as research strategy falls under the heading of research methodology, which is different from the actual method by which data are collected (de Vaus & de Vaus, 2001, p.9), we will not confuse these steps here, but provide a detailed explanation for the chosen qualitative field research method, namely observation, in the latter parts of this chapter.

Apart from aiming to describe the real time chat process design, we also sought to explain the business and operations strategies determining the design. Therefore, besides understanding the relevance of the material and technical elements for the organizations, we also needed to gain insights into the human experiences related to the subject of real time chat design. Given this, in line with Denzin & Lincoln (2011, p.3), we further considered the need to investigate the researched subject in its natural settings as vital, as we tried to make sense of its complex nature in terms of the meanings people and their understanding of the surrounding strategic and operational factors brought to it. Therefore, this phenomenon could not be meaningfully studied separately out of its social and organizational context in which it occurred. Neither could it be understood solely by observing the process without actually finding out what the experiences of the people being involved in the process are. Sanders (1982, p.354) calls this as the “essences” of the studied subject that cannot be revealed by ordinary observation. Thus, we needed to choose a strategy that allowed us to complement the implemented field research. We, therefore, chose to utilize phenomenology.

As it is characteristic of phenomenology to emphasize people's subjective experiences that reveal insight of the studied subject (Sanders, 1982, p.358), to take advantage of it in this study was comprehensible. Phenomenology can be considered both as a philosophical movement and a family of qualitative research methodology (Gill, 2014, p.1). In our study it represented the latter. Phenomenology refers to a qualitative research technique that seeks to make the implicit structure and meaning of human experience explicit (Gill, 2014, p.2). It also describes the studied phenomenon by revealing how several individuals have experienced it, which according to van Manen (1990, p.177), means to “grasp the very nature of the thing”. Given this background, it was apposite for us to complement the field study strategy with phenomenology.
3.5 Data Collection

After elaborating the scientific method of this thesis, the next step is to describe the practical methods that have been followed during the process of gathering the empirical material. This section starts by briefly highlighting the available time horizon influencing this study, after which the specific methods used to collect the empirical data is described and elaborated in a detailed manner.

3.5.1 Time Dimension

When conducting research it is essential to consider the time horizon during which the research process occurs. Stated by Saunders et al. (2009, p.155), in academic research the different perspectives facing studies in this context are called longitudinal and cross-sectional. Longitudinal studies often investigate subjects where the aim is to study change and development, which is why the research process occurs during a longer period of time. Due to the rather strict time constraints that faced this particular research, our study fell under the purview of cross-sectional research.

According to Rose et al. (2014, p.81), cross-sectional studies are those in which data is gathered once, during a period of days, weeks or months. They are normally simple in design with the goal of finding out the occurrence of a phenomenon, problem, attitude or issue by taking a cross-section of a population. According to Mann (2003, p.56), occurrence is comparable to the number of cases in the population at a given point in time, which allows obtaining an overall picture of the studied subject. Although many cross-sectional studies are done using questionnaires, it is also possible to run them qualitatively by conducting interviews with multiple participants. In our study the empirical data was gathered during a two week period by employing different research methods, which allowed us to build an understanding of the real chat process design by determining how it takes place in the respective organization where the interviews and observations were run. This matches with Ritchie & Lewis’s (2003, p.54) arguments of using cross-sectional studies to explore a macro-level change, where the focus is both on individuals and specifically on the context in which the individuals exist. Based on this, we found cross-sectionalism suitable for this study.

3.5.2 Qualitative Multi-Method Research

As stated above, the empirical data was gathered by utilizing three research methods. Stated by Meijer et al. (2002, p.146), a method often used in qualitative research is called triangulation. There are several ways of carrying out a triangulation research, in our study triangulation refers to the technique of combining several different methods of inquiry and data collection in a single study. The rationale of this technique is that each method reveals different aspects of empirical reality, and serves as a check for internal validity by providing cross-validity. In a similar vein, we followed Kopinak’s (1999, pp.171-172) definition of multi-method triangulation and gathered information referring to the same phenomenon of real time chat design through more than one method. This allowed us to gain detailed and multi-layered understanding of how events or behaviors arose as well as built reconstructed perspectives on their occurrence. To further exhibit a reasonable linkage to the research strategies of field research and phenomenology, ethnographic methods posited by Kawulich (2005) were considered. We focused our efforts on qualitative data collection methods of interviewing, observation, and document analysis.
Next, we offer a brief explanation for each method and argue for their suitability for this thesis. Thereafter, the actual execution for collecting the empirical data is described.

**Semi-Structured Interviews**

In this study we sought to understand the design of the real time chat and build a detailed subject coverage regarding it. Thus, in line with the previously discussed choice to follow phenomenology, we considered it critical to (1) obtain explanations about the subject of the study from each researched practitioners’ personal perspective, and (2) in the context within which the real time chat design occurs. Therefore, it was chosen to carry out a range of semi-structured in-depth interviews during which we as researchers are partially involved. As written by Ritchie and Lewis (2003, p.58), in-depth interviews are the most suitable way of collecting data when it is needed to (1) understand personal accounts or experiences perspectives in the context of the research, (2) where delicate or complex issues need to be explored at a detailed level, or (3) where it is important to relate different issues to individual personal circumstances. In line with the arguments of the authors, the method was considered as valid for our study.

In-depth interviews vary from informal conversations to more formal interviews, which may be unstructured, semi-structured or structured. According to Berg (2001, pp.69-70), when conducting unstructured interviews the researchers are required to have a large set of skills to be able to both carry out the interview and analyze the large amount of data obtained. Structured interviews, in turn, represent the opposite view and are described as the act of using a questionnaire format with closed questions about a carefully selected topic. Our study falls between these two and is, thus, called as semi-structured in-depth interview. According to Saunders et al. (2009, p.320), semi-structured in-depth interview is the most widely used interviewing format for qualitative research because of its non-standardized nature. The strength of this format is that it allows the order of the questions to be flexible and depend on the flow of the conversation. It also enables additional questions to be asked if required to explore the research question further. The openness and flexibility of the semi-structured in-depth interview encourages depth and vitality, and allows to discover new insights. This, in turn, enriches the collected data to be analyzed and raises the level of validity of the research Berg (2001, pp.69-70). The benefits provided in this interview setup encouraged us to take advantage of it.

**Observations**

As already discussed, this study was carried out by choosing a qualitative field research strategy, which is related to the method of observation that allowed us to investigate the real time chat design in its pure natural environment. Marshall and Rossman (1989, p.79), explain observation as the systematic description of events, behaviors, and artifacts occurring in the social setting chosen for study.

deMunck and Sobo (1998, p.43) provide several advantages of using observations. These include them enabling access to the "backstage culture" and making it possible to obtain a detailed picture of one's informants’ daily operations. Observations also provide an opportunity to view or participate in unscheduled events, which, in turn, raise the quality of data collection, and facilitate the development of new findings (Ritchie & Lewis, 2003, p.8). Despite these advantages, deMunck and Sobo (1998) also provide disadvantages of using participation as a method. These include that at times researchers may not understand what they observe correctly. In line with, deWalt and deWalt (2002, p.92), by taking advantage of observations, we sought to develop a comprehensive understanding of the real chat design that was as objective and accurate as possible given the limitations
of the method. Thus, we used the method as a way to help answering the descriptive part of our research questions, which further allowed us to advance theory. Furthermore, we also sought to increase the validity of our study by comparing the data gained through observations with the findings obtained from the conducted interviews.

**Document Analysis**

In addition to interviewing and observing, the third way of triangulating by method in our study was to analyze documents. Bowen (2009, p.27) describes document analysis as a systematic procedure for reviewing or evaluating documents containing both printed and electronic material that have been recorded without researcher’s intervention. Documents can have different purposes as part of a research undertaking and can be used as the sole focus for data collection and analysis, or they may be used as tools within another data collection method (Bowen, 2009, p.29). In our study they served as a supplementary research data to complement the afore-mentioned observations. By exploring chat logs, i.e. the archive of transcripts from the real time chat conversations between chat agents and customers, we sought to derive valuable additions to our already established knowledge base. The logs were also seen as beneficial to ensure that the observed chat conversations were correctly understood and that context was not misinterpreted from the observations.

**3.5.3 Execution of Data Collection**

We conducted nine semi-structured in-depth interviews in four B2C e-commerce companies. Each interview carried out in English. Due to geographical distance and financial constraints, seven of the interviews were run face-to-face, whereas two were conducted via Skype. As telephone interviews in general contain a challenge by not allowing researchers to fully discover any social cues during the interview (Opdenakker, 2006), the decision of interviewing two of the respondents via Skype raised the level of enrichment for us. However, on the contrary to pure telephone interviews, communicating through Skype allowed both the interviewees and us to have a view on the situation in which the respective party was situated. Thus, it was still possible to create satisfying interview ambience both-ways. Furthermore, we did not consider it as a truly value-adding aspect for the results to focus on, for instance, the body language of the respondents. Therefore, to interview two of the respondents via Skype was not seen as a short come in the study. Furthermore, because of a small size and organization structure of one of the companies, we were required to run two of the interviews with one and same person. To validate the respondent’s answers, we further conducted a short interview with another employee in the company.

The length of the conducted interviews varied between 10 and 70 minutes, which allowed the respondents enough time to respond to our inquires without rushing, and thus offer fruitful insights to the study. While every semi-structure interview requires a somewhat different structure and, thus, varying time frame (Berg, 2001, pp.69-70) it was seen crucial to follow certain similar principles and steps to obtain the aimed level of in-depth during the interviews. To enable us to state follow-up questions and probe for further information, while simultaneously ensuring that a dependable red thread was followed and that the discussion did not digress from the subject, interview guides were pre-established. In line with Saunders et al. (2009, p.320), these contained a list of themes and questions that were formulated by taking particular organizational contexts in relation to the research topic and theoretical frame of reference into account. Even though the set
of questions were decided beforehand, we edited the interview guides by adding some further questions and erasing unnecessary ones during the data generating process. This enabled us to focus on relevant aspects and gather richer data.

The research question of this study required us to understand both the real time chat process design and, also, amplify the understanding with the business and operations strategies determining it. Therefore, it was necessary to formulate two separate interview guides, one to reveal the strategic and operations strategic factors influencing the design of the real time chat process, and one determining the specific service delivery systems underlying it. The set of questions included in both of the interview guides were further stated to respondents having knowledge of the particular areas. The strategic-oriented questions were assigned to the respondents from the top managerial level whereas the questions facing the service delivery systems were asked from customer support executives having operational knowledge of the chat functions (refer specific discussion on the participants in section 3.5.4).

According to Ritchie and Lewis (2003, p.112) each interview should have the components of opening, body, and closing. Our interview guides (provided in appendices 3 and 4) were structured in a similar vein and, thus, represented the similar sequence for our interviews. Before stating any particular questions concerning the actual research subject, each interview began by us telling the purpose of the study and describing how and to what extent we intended to use the gathered data. We also highlighted the issues concerning the anonymity of the respondents and asked for the permission to record the interviews. Further it was clarified that we would send the transcribed interviews to the respondents in order to offer them the chance to correct the stated facts if needed. We also asked about the possibility to contact them again and ask follow-up questions. Afterwards the permission to start was requested.

The opening topics of an interview should introduce participants into the interview by being relatively unthreatening and straightforward to answer (Ritchie and Lewis, 2003, p.112). To encourage the participant to talk and to help them understand the discursive and conversational style of the interview situation, each interview started by generating general information of the participants and the companies. The nature of the questions allowed the respondents to descriptively speak about circumstances that were helpful for us to already know at an early stage of the interviews. This enabled us to place further responses in right context and to formulate follow-up questions later on.

After finishing the first part of the interviews, the second part concerned the actual body. Both of the interview guides were formulated to contain the theoretical topics of the study and listed a set of particular questions concerning these. To achieve fruitfulness in the empirical data, the questions in both guides were flexible and broad enabling the respondents to describe as much factors as possible. Thus, we also aimed to ask the respondents to provide examples of unsuccessful and successful events.

The first interview guide was based on part one of the theoretical frame of reference letting us to discover the overall business and operations strategic factors determining the design of real-time chat process. To gather the particular information, we decided to begin by using a scaling tool (provided in appendix 3). Here, the respondents were asked to scale different options so that it was possible for us to understand the specific strategic orientation and typology the companies represented. By using the tool we also aimed to
shift the respondents focus on the actual interview in order to provide us knowledge about the more comprehensive strategic issues facing their companies. Thereafter, questions covering the eight e-commerce service operations management CSFs were stated. At the end, we used another interviewing tool, namely ranking (see appendix 3), and asked the respondents to rank the already discussed eight CSFs in accordance to the importance they represented to each company. As this was asked towards the end, the aim of the ranking was to include a summarizing question, which seek an overall summary of the respondents’ attitudes and experiences.

Having covered the overall strategic issues facing the study, we wanted to further gain a brief and general view on the companies’ utilized real time chat from the strategic perspective. Thus, the end phase of the first interview guide included questions considering the background information explaining factors such as why the companies started using the chat and the main purpose of using it.

Concerning the second interview guide, the body of the interview contained ten sets of questions covering the service delivery systems. These questions were rather specific leaving only a marginal room for additional follow-up questions. At this stage we also used a blueprinting tool to understand the customer journey, and particular moment of truth parts where the customers typically interact with employees of the companies.

Towards the end, regardless of whether the first or second interview guide was followed, each participant was notified about the interview having come to an end. A short summary was conducted during which we briefly described the main issues discussed during the interviews and the respondents were asked if they had any additional points to add. We also discussed about the next course of actions to be taken, i.e. prepared the concerned participants to the observations by telling the aim of the activity was and agreed on how and which chat logs were to be sent to us, and thanked the respondents for their time.

After finishing both the strategic and customer support executives level interviews, the data collection continued with the observations. Based on the previously stated constraints of geographical distance, financial matters, as well as the size of the companies, only two observations were possible to conduct, meaning that the observations concerning the Western European and one Nordic company were omitted. This was, however, not considered as a major restriction for the study as the used chat software did not differ from each other significantly, something we obtained through observations in the two first companies. Furthermore, the customers of the Western European company were mainly Italian and French speaking, which is why neither of the researchers of this study could have understood the content of the chats. The company also has English speaking customers and we have instead used document analysis to compensate for our inability to conduct observations.

The identified key informants for the observations were the actual chat agents who utilize the real time chat functions on a daily basis (refer specific discussion on the participants in section 3.5.4). In the first company we observed three chat agents’ operations, whereas in the second the observations focused solely on one working chat agent. Normally, the duration of an observation will depend upon the setting activity and the likelihood that the studied object will be observed (Hancock & Mueller, 2010, p.365). Due to the limited number of the available chat agents to observe and the number of incoming customer contacts the length for each observation was approximately 30 minutes. During the period
the amount of observed chat sessions varied between two and five depending on how busy the day was.

In line with Kawulich’s (2005), the type of the conducted observations was focused, that is, they were supported by the already conducted interviews, thus, the respondents answers guided our decisions about what to observe. Enabled by the questions focusing on the service delivery systems, we obtained a comprehensive picture of how the real time chat was implemented and used in each company. Therefore, to validate the already gained knowledge and also focus on aspects that needed further highlighting, we focused particularly on aspects such as the key features of the chat software, the type of service request from the customers, what kind of failures in the shopping process caused the request and the duration for the agents to take care of each request. During the observations we actively wrote down notes to a spreadsheet, which allowed us to review and analyze the conducted observations afterwards (see appendix 5).

During the process of observations the participators were aware of the research activity, which lead us as researchers to take a participant as observer stance. Allowed by this, we were actively participating in the observation at the beginning as we asked the chat agents to explain the overall function and the most important features of the used real time chat. Thereafter, our role became more passive as we focused on observing the customer contacts and how the agents used the real time chat during these events.

Finally, document analyses were done by exploring five to 20 chat logs per company. The amount of received logs based on client confidentiality matters and the amount of customer contacts the companies normally handled. The obtained material was written in English, Swedish and Finnish. These were then translated to English in order for both of the researchers conducting this study to be able to explore and analyze them.

3.5.4 Participant Selection and Participants

In this study, the participant selection was based on purposive sampling (Ritchie & Lewis, 2003, p.79), where the sample units were chosen because they had particular key features or characteristics, which enabled detailed exploration and understanding of the purpose of our study.

While selecting the participants, the first principle was to ensure that all the key areas of relevance to the subject matter would be covered. Thus, we were required to search for B2C e-commerce companies, with the particular requirement of them utilizing the real time chat function in their operations. Based on this, the approach to the purposive sampling of this study can be described as homogeneous, which according to Suri (2011, p.68), is employed to highlight a detailed picture of a particular phenomenon by picking a small, homogenous sample and enable meaningful comparisons across studies.

To facilitate the finding of these comparisons, we further aimed to ensure that there was some degree of diversity within the chosen sample in order to explore possible convergences and/or divergences facing them. Therefore, apart from the B2C e-commerce sector, we did not focus on any particular product category, which resulted in having each of the four chosen companies selling different products. Neither did we choose to conduct the study in a particular country, but instead had companies from three different countries located in the Nordic region and Western Europe.
Apart from the aim of having homogeneity combined with a certain level of diversity in the interview population, a factor that influenced our participant selection was the difficulty faced in acquiring suitable e-commerce companies for the data collection. While searching for potential companies, despite the functions growing popularity, e-commerce companies utilizing real time chats seemed to consist mainly on service and B2B companies. Despite not being B2C e-commerce businesses, they further often had a multi-channel approach to selling. Together these features did not suit our purpose of studying the chat function in pure B2C e-commerce contexts. Furthermore, once companies that matched our criteria were found and a solicitation of their interest to participate in our study taken, many of them declined.

The process of acquiring the participants was done by using the internet as a search tool, phoning and e-mailing to several e-commerce communities, statistical offices and chat software providers, as well as by using our own network of contacts. In the end, it was through our own contacts and via internet that the chosen companies were found. In total, we contacted 35 companies of which four agreed on doing interviews of us, leaving us with a response rate of only 11%. This was, however considered sufficient as qualitative samples generally are small in size. Furthermore, according to Ritchie & Lewis (2003, p.79), keeping the sample size small allows the generation of rich information. We have adopted this approach in our study. During the data generating process we also noticed that there was a point where very little new findings were yielded from each additional unit.

In addition to the above-stated arguments, despite the fact that we only got into contact with four companies, each of them let us interview two persons from different organizational levels. This resulted in us having eight interviewees. Furthermore, because there were only three employees in one of the companies, and the CEO was responsible for both the strategic and operational activities, we were required to run two of the interviews with him. To validate his answers, we conducted a shorter interview with another employee of the company. Thus, as mentioned above, the total amount of conducted interviews was nine.

To not be able to interview more people in the companies contributing to this study was mainly due to time and capacity issues. Thus, the companies did not have resources to allow more employees to participate in the interviews. Neither did the size of their customer service department allow us to observe more than one to three chat agents. In general, the number of participants within qualitative studies varies between six and twelve (Rowley, 2012, p.253), and it is suggested that studies using more than one method require fewer participants. As our sample size fell between these numbers and since our qualitative research uses a multi-methodology the amount was considered sufficient.

Since the aim of our study to describe the real time chat process design in terms of exploring the business and operational strategies determining it, per company we sought to interview both a person having knowledge about the operational process of the chat function, i.e. a customer support executives, and a person being able to provide us insights of the strategic level aspects concerning the company, i.e. owners, CEOs and financial managers. Furthermore, based on their job function of operating by using the chat function on a daily basis, the actual chat agents were recognized as suitable and identified to be the key informants for the observations. Further, despite focusing on the chat agents’
level of professionalism or personal capabilities, we were interested in the used real time software itself and the process of how it was used. Therefore, to conduct any particular process for choosing the suitable chat agents was not seen as necessary. The description of the companies and respondents are listed in the tables 6 and 7 below. Companies are coded with C and assigned a number. Similarly, respondents are coded as R and assigned a number. It must be noted that companies one, two and three are based in the Nordic region while company four is based in Western Europe.

Table 6. Company Description.

<table>
<thead>
<tr>
<th>Company</th>
<th>Age</th>
<th>No. of Employees</th>
<th>Turnover</th>
<th>Product Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>7</td>
<td>20</td>
<td>€10 million</td>
<td>Entertainment products</td>
</tr>
<tr>
<td>C2</td>
<td>11</td>
<td>10</td>
<td>€1,5 million</td>
<td>Electronic Accessories</td>
</tr>
<tr>
<td>C3</td>
<td>10</td>
<td>3</td>
<td>€390 000</td>
<td>Special Hobby</td>
</tr>
<tr>
<td>C4</td>
<td>2</td>
<td>17</td>
<td>€5.5 millions</td>
<td>Specialty Sports and Outdoor Gear</td>
</tr>
</tbody>
</table>

Table 7. Respondent Profiles.

<table>
<thead>
<tr>
<th>Interview</th>
<th>Date</th>
<th>Duration</th>
<th>Respondent</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>March 4th 2016</td>
<td>51 minutes</td>
<td>C1R1</td>
<td>Owner &amp; CEO</td>
</tr>
<tr>
<td>2</td>
<td>March 4th 2016</td>
<td>66 minutes</td>
<td>C1R2</td>
<td>Customer Service</td>
</tr>
<tr>
<td>3</td>
<td>March 6th 2016</td>
<td>39 minutes</td>
<td>C2R1</td>
<td>Owner &amp; CEO</td>
</tr>
<tr>
<td>4</td>
<td>March 6th 2016</td>
<td>62 minutes</td>
<td>C2R2</td>
<td>Customer Service</td>
</tr>
<tr>
<td>5</td>
<td>March 7th 2016</td>
<td>37 minutes</td>
<td>C3R1</td>
<td>Owner &amp; CEO</td>
</tr>
<tr>
<td>6</td>
<td>March 7th 2016</td>
<td>68 minutes</td>
<td>C3R1</td>
<td>Owner &amp; CEO</td>
</tr>
<tr>
<td>7</td>
<td>March 7th 2016</td>
<td>10 minutes</td>
<td>C3R2</td>
<td>Financial Manager</td>
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<td>8</td>
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<td>52 minutes</td>
<td>C4R1</td>
<td>Financial Manager</td>
</tr>
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<td>9</td>
<td>March 15th 2016</td>
<td>65 minutes</td>
<td>C4R2</td>
<td>Customer Service</td>
</tr>
</tbody>
</table>
3.6 Data Analysis

The essential phase of the iterative process of our qualitative research was to identify and categorize the most relevant aspects from the gathered empirical data for analysis. The phase started with transcribing the audio-recorded interviews for analysis. Although there are different styles of transcription (e.g. McLellan et al., 2003) the level of detail of the text does not need to be exaggerated when transcribing audio data for discovering themes (Braun & Clarke, 2006, p.87). Thus, as a general practice, we did not reproduce all spoken words orthographically, but mainly edited for brevity. Therefore, clauses such as hesitations, false starts or cut-offs in speech were seen as irrelevant for understanding the overall meaning and, thus, removed. Furthermore, we advocated “cleaning up” the transcripts by making them more grammatical, and removed words that may have revealed specific information violating the anonymity of the study.

Generating categories from the transcribed data is a common feature of qualitative methods and used as an analytical method (Saunders et al., 2009, p.492). Instead of identifying particular themes or categories to recognize relationships, in line with Saunders et al. (2009, p.493), we utilized the major themes of our study’s pre-established theoretical frame of reference to unitize the data and connect it with related topics.

Starting from the first part of the theoretical frame of reference, to analyze the findings we took advantage of the scaling and ranking tools that were employed during the interviews. First, together with the main transcripts the scaling tool enabled us to categorize the pertinent information regarding the strategic orientations and typologies. Second, combining the transcripts with the rankings allowed us to perceive the main perspectives on operations strategy as well as observe the role of the service operations strategy CSFs. To particularize further, during the interviews the ranking system, a list containing eight CSFs, was presented to the respondents. The respondents got to evaluate each factor based on the importance the CSFs represented for their businesses. When later analyzed in combination with the transcripts, it was noticed that the companies considered the CSFs ranked from six to eight as not particularly relevant to their businesses. Thus, when further connecting to Bullen & Rockart’s (1981) advice to keep the amount of CSFs limited between three and eight factors, we determined the first five factors being the main CSFs for the firms and concentrated on these in the analysis.

Considering the second part of the theoretical frame of reference, the analysis was based on the interview transcripts, observation notes, and chat logs. The role of the two last mentioned sources of information is emphasized in sections 5.3.3 and 5.3.4, where people, performance and evaluation as well as realized service delivery are discussed and analyzed. Together the chat logs, which were first translated to English and thereafter categorized according to failure types and service opportunities, and the observation notes enabled us to enrich the analysis of the moment of truth parts and service failures. Also, the blueprinting tool was further used to analyze the realized service delivery with its customer journey and particular moment of truth-parts.

It is possible to use the study’s theoretical frame of reference to further form a structure of how the empirical findings and analysis are presented (Saunders et al., 2009, p.488). Thus, to provide meaningful and reasonable presentation of the empirical findings we decided to provide a comprehensive view on the e-commerce companies that participated in this thesis. In line with the theoretical frame of reference, the most relevant business
and operations strategic issues as well as factors concerning the real time chat function was presented by using illustrative quotations of the respondents.

Further on, the discussion and analysis chapter was written in relation to sequence of the theoretical frame of reference and contained the most significant findings that were analyzed and discussed corresponding to the above-stated aspects. Here, tables were used to (1) clearly illustrate how each of the studied companies ranked the CSFs, (2) identify the companies’ service processes, (3) highlight the above mentioned service failures and opportunities, and (4) indicate which CSFs determine the key dimensions of the strategic design choices. The detailed structure of the chapter will be presented later on.

3.7 Validity

Validity as a quality criteria is one of the important factors to consider in qualitative research. Oxford (n.d.) dictionary defines validity as “The quality of being logically or factually sound; soundness or cogency”. At the outset the first part of the definition appears to have a more positivistic leaning. Indeed, according to Johnson (1997, p.282), some qualitative researchers hold polarizing views that regard deriving quality criteria from quantitative research as incompatible with qualitative research, while other researchers see it as pertinent. We agree that validity is an important consideration in any research and more so in qualitative research. But we side with the argument that validity employed in qualitative research must be developed specifically for it. In a study conducted by Bryman et al. (2008, p.266), three-fourths of researchers surveyed agreed that validity in qualitative research was important. Johnson (1997, p.284-291), recommended a variety of strategies to mitigate any quality issues that may arise from the qualitative research process. He categorized validity into five different aspects namely descriptive validity, interpretive validity, theoretical validity, internal validity and external validity. Here, we focus on the most germane aspects that in our opinion is pertinent to our methodology and discuss them.

3.7.1 Descriptive Validity

Johnson (1997, pp.284-285) refers to descriptive validity as the accuracy of what is being reported by the researcher. The key consideration is whether the events, objects, people and settings described occurred in the manner depicted as well as whether they took place at all. One of the challenges posed to researchers trying to maintain descriptive validity is investigator bias. Investigator bias is the present when the observation process is embellished with the researchers’ pre-dispositions. Since we did an observation study as one of the methods employed, we had to be careful in this process. Investigator Triangulation is recommended as a useful strategy to mitigate observer bias in the process. Investigator triangulation is when more than one person is involved in observing the proceedings. This type of corroboration ensures less skepticism from external researchers. Since we were two researchers we were both present at the observation and later on confirmed our independent observations to ensure there was no bias.

3.7.2 Interpretive Validity

While descriptive validity advocates accuracy, Johnson (1997, p.286), considers interpretive validity concerns how the researcher explicates their observations by accounting for the viewpoint of the person interviewed. This requires the researcher to go
beyond what is said to understand and append semantic context. While researchers are encouraged to get participants’ feedback in order to validate their interpretations given the time constraints in our thesis writing process we did not have the luxury of time to do this. Another manner in which this challenge is addressed is through the use of Low Inference Descriptors. Low inference descriptors as the name suggests is the use of participant quotes without modification, thereby removing any prejudice the researcher may have in the process. As researchers we have made available the verbatim quotes as part of our empirical discussion and put forward our perspective derived from the reading and analysis of the data to allow the reader to interpret the text as they see fit. Further disambiguation is provided by sharing the empirical data company wise instead of theory wise.

3.7.3 Theoretical Validity

Validity of the information and evidence collected is another important consideration in qualitative research and this necessitates the presence of more than one source of theory to confirm the veracity of the findings. Johnson (1997, pp.286-287), refers to this as Theory Triangulation which, implies the use of more than one theory to explain and interpret the data. When findings in the study are expounded by theory it augments the credibility of the data. In our case our theoretical frame of reference is developed by integrating IS, Strategy, E-commerce and Service Operations theory. The use of multiple theories helped crystallize the information gathered. Johnson (1997, p.284), also talks about the need for Peer Review and in the research process especially with respect to the interpretation of results. Peer review as the name suggests is the solicitation of unbiased feedback from peers or other researchers who are not directly connected with the research. This is a practice that we have adopted right from the beginning of the thesis writing process by talking about different choices and methods with both our peers as well as PhD candidates within the business school.

3.7.4 Internal Validity

Internal validity is connected with the explanation of causal relationships that exist in the phenomena studied by the researcher (Johnson, 1997, p.287). While largely associated with quantitative research, internal validity is considered apposite for qualitative research. All the prior strategies discussed in this section namely investigator triangulation, low inference descriptors, theory triangulation and peer review are applicable in diminishing internal validity. Additionally, Johnson (1997, pp.288-289), proposes that researchers adopt data triangulation and methods triangulation. Data triangulation as the name suggests is the use of more than one data source to authenticate the information and evidence collected. It is important to clarify here that multiple data sources does not imply multiple methods, but using multiple sources using the same method. Since in our sample we studied more than one company and interviewed more than one person as well as observed the process, we meet the requirements of data triangulation. Methods triangulation is the use of more than one method to collect the data for the study. We adhered to this practice by adopting a multi-method study that used interviews, observation, a simple scale oriented tool and real time chat logs to ensure that we did not rely on one method.
3.7.5 External Validity

Cook and Campbell (1979, cited in Johnson 1997, p.289) define external validity as the instance when the objective is to generalize the findings of the study to broaden its scope and applicability to other people, settings and times. Due to the infrequent occurrence of random sampling in qualitative research, generalizability is considered a challenge. However, the exception in generalization is when the people, places and context are similar to the original study. Generalizing based on similarity is called *naturalistic generalization* (Stake 1990, cited in Johnson 1997, p.290). We are cautious in being too liberal with our position that our studied sample is similar. *Replication logic* is another way to address the challenge of external validity. This approach posits that the more number of instances the study is done in similar settings to the original study but with different people and places thereby increasing the legitimacy of the findings (Johnson, 1997, p.291). We concur with this argument and definitely propose that our study be replicated in order to confirm the findings in our study.

3.7.6 Dependability

Dependability is the qualitative equivalent of reliability that is commonly used in quantitative research (Bryman & Bell, 2011, p.41). This measure is taken to ensure researchers have considered the extent to which their study is repeatable. One way to ensure this is through transparent and meticulous chronicling of the research process and keeping records of different items namely interview transcripts, selection of research participants, fieldwork notes and data analysis decisions to name a few. This approach is referred to as auditing (Bryman & Bell, 2011, p.398). In the context of our thesis we have followed this process to the best of our abilities. We have all our manuscripts preserved in digital form that can be scrutinized. We have maintained the interview transcripts as well as the original audio files including our observation notes. In terms of the participant selection we have outlined the process of how we chose the participants and have expressed our difficulty in gathering the right respondents relevant to our study due to the unique requirements of this study. We also tried to limit the geographic area of our sample of our study to ensure we could conduct personal face to face interview which we managed to do in three out of the four cases. We have based on our data and sample tried to be as objective in evaluating our thesis and personally believe that given the limitations and challenges already expressed, satisfied the requirement.

3.7.7 Confirmability

Confirmability is taking cognizance of the fact that qualitative research cannot be purely objective (Bryman & Bell, 2011, p.398). At the same time it is argued that it is important to demonstrate that no personal researcher bias was involved during the research process. Given the nature of the phenomenon that we are studying namely real time chat, of which very little is known, we argue that the opportunity for personal bias in this research is minimal. We can however not entirely rule out bias as we are not researchers with extensive research backgrounds. Also our personal knowledge on the topic means that we may have a deeper understanding of the topic and that may have influenced how the analysis was done. We however accept that as stated before that biases are inherent to every sentient being and are confident that we have sought to stay unbiased to the best of our knowledge.

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3.7.8. Authenticity

Guba and Lincoln (cited in Bryman & Bell, 2011, p.398) suggest fairness as an important consideration in qualitative research. This entails that research is conducted by ensuring the viewpoints of the participants is not tainted or blemished. By separating the empirical section company wise and presenting the results in a narrative manner we argue that we have to the best of our abilities attained this. Ontological authenticity demands that research aids participants and other members understand the social context of the study (Bryman & Bell, 2011, p. 399). In our thesis we have clearly positioned and argued for our ontological stand and this has determined and shaped the rest of the research process. Based on the results and findings we argue that our study will serve to meet this objective. Educative authenticity requires the research to assist members in gaining a broader understanding of the social phenomenon beyond their own perspective (Bryman & Bell, 2011, p.399). By studying four companies with different characteristics and backgrounds we posit that our study achieves this objective by providing varied perspectives on the phenomenon. Catalytic authenticity demands that the research inspire change (Bryman & Bell, 2011, p.399). Given the practical implications of our study we argue that our research serves as a tool to allow e-commerce organizations to actively change and improve the real time chat processes to achieve company objectives. Tactical authenticity suggests that research provides actionable steps to engage in the aforementioned change (Bryman & Bell, 2011, p.399). By conducting a detailed analysis that is aligned to our theoretical framework and by separating it into components as well as providing a proposed model depicting the key linkages of the various processes we provide e-commerce firms with tactical ability.

3.8 Ethical Considerations

In our thesis as is the case with any qualitative research, the presence of people who are an intrinsic part of the study must be given due emphasis. The particular issue of ethics in business research revolve around how the research participants are behaved towards as well as the ensuing yet brief relationship with them becomes an important consideration (Bryman & Bell, 2015, p.129). Adequate time must be allotted to the process especially where face-to-face contact with the respondents is required (Saunders et al., 2012, p.218). Saunders et al., (2012, pp.222-223) underline the need to gain access to the concerned organization and research subjects typifies the first step. A precise communication on the purpose of research, the type of access that is required and the time of the participants required are important when gaining access. An introductory letter that places on record all the information is considered a good practice even if the initial and subsequent communication take place over the phone. It is also important to allay any concerns over confidentiality of the data and anonymity of the organization and individual participants.

We started the process of searching and contacting companies early in our research process as the minimum criteria for our target companies were that they operate in an e-commerce setting and use real time chat. We used a combination of email only as well as telephone and email communication to reach out to our participants. All target companies and individuals contacted were clearly made aware of our research topic, the time required to participate as well as the option to remain anonymous and the confidential use of data and information. We kept the communication formal since our communication was targeted towards CEO’s and senior decision makers in the company. Saunders et al. (2012, p.224), recommends using appropriate language depending on the audience.
Bryman and Bell, (2015, p.135) advocate the need to ensure no harm is done to the participants and non-participants. Some instances of harm are bodily harm, psychological harm in terms of undermining the confidence and self-esteem of the participant and career prospects and future employment opportunities. To mitigate physical harm we conducted the research in the company premises of the respondent at a time that they recommended and were comfortable with. The fourth interview was conducted over skype as per the convenience of the respondents. Our research was more focused on the organizational aspects of the company therefore we anticipated the opportunity for psychological harm by undermining the respondent to be minimal to none. In terms of the observation process, we conducted them subsequent to our interviews with the respondent. We also observed the same respondent where possible as a certain level of comfort and credibility was already established. Participants were also given the option of stopping the interview at any point if they did not feel comfortable.

Confidentiality and anonymity are important cornerstones of qualitative research in the context of ensuring no harm befalls the participants (Bryman & Bell, 2015, p.136). Withholding any identifying information of the research participant or organization is therefore of paramount importance. As researchers we conducted the research in complete anonymity by withholding the name, gender and any other personally identifiable information of participant. With respect to the company anonymity was maintained by excluding name, location, detailed description of product category. In adopting this approach we believe we have protected the anonymity of the participants and the organizations to the best of our abilities.

Informed consent of the participant is pertinent to the business research process (Bryman & Bell, 2015, p.139). This involves proffering adequate amount of information about the research being conducted and making the participant fully aware of all the ethical aspects and subsequently taking their explicit consent to be involved (Saunders, 2012, p.231). All participants prior to starting the interviews will be clearly communicated on the research question, the confidentiality and anonymity and the use of data while requesting their permission to begin the interview. Bryman & Bell (2015, p.144) also underscore the need for researchers not to misrepresent the research in the pretext of studying something else. Since our research was largely industry specific and process specific there was no prevalence of deception to the best of our knowledge.

Data management is another important consideration in research ethics. This was particularly salient in the context of our study due to the presence of chat logs between the participating organizations and their customers. Bryman & Bell (2015, p.147) propose three main issues to consider when dealing with research data. First, to have a clear structure of how the data will be used and managed operationally. Clearly identify and determine who the data owners and controllers are. Finally, how the data will be protected. The chat logs were first coded to exclude any identifying information of the participant in the chat as well as remove any reference to specific products that may allow anyone to track down the specific company that was involved in the study. All the chat logs were stored in a cloud service with 2-factor authentication with only the two researchers’ granted access. The data was maintained only for the duration of the research process after which it was deleted.
4. Empirical Findings

In this chapter the study’s empirical findings will be presented in a narrative format. These results are arranged in accordance to the contents of the theoretical frame of reference. However, as explained in section 3.6, we aim to provide a meaningful and reasonable presentation of the findings. Therefore, instead of following the particular sequence in the frame of reference, we describe the results generated from this study’s four target firms company-wise and simultaneously present the most relevant strategic business and operations issues as well as factors that concern the real time chat function. Each section starts with depicting the strategically relevant aspects facing the companies. Thereafter, the real time chat specific findings are scrutinized.

4.1 C1 - From Customer to Costumer

The story of C1 began in 2009 by the CEO wanting to give his unemployed mother a job as a birthday present, “I did not have a birthday gift for her so I made a gift card saying that she would get a job after been unemployed for seven years”, explains C1R1. When he handed the gift, he was not quite sure of what the job would consist of. At first, the idea was to sell children's clothing over the internet but he then decided to go for something he actually was familiar with- party costumes, “At that time, being 25 years old, me and my friends both arranged and often went to theme parties and discovered that the offer of party stuff was very scant in general. Therefore, I decided to start [the company name]”. Today, seven years later, the company employs 20 people, has a turnover of approximately 10 million euros, and offers Scandinavia’s widest range of entertainment products.

The company is currently operating in its country of origin, but is about to widen its business horizon starting from 2016 by releasing a new, internationalized website under a new company name. This website is designed to service both the whole Northern Scandinavia and the rest of the Europe. Serving mostly a target market of 30-35 years old females, according to the CEO, the biggest competition comes from UK and China, from where it is possible to buy the product range at cheaper price. To respond to the competition, C1R1 explains the following, “...we think that if we can work with one brand, instead of one brand in each country, it will be much easier for not only customers, but for our internal operations such as customer service, and when we are buying packing materials and so on. So [the new company name] will take over. This will take some time because our company has a strong brand in [the mother country] we cannot just change it in one day. But hopefully soon!” Further he tells, “…and now we are producing our own products in China too so we will release them under the [new company name] brand”.

Owned and ran by the CEO and his partner, the success of the operations is explained by the owners high appetite for risks and the ability of them being short and effective in planning and executing. “We are really informal when deciding on things. If we decide to do something it is done really quickly. We do not need to sit down and discuss everything in small details. So we try to move fast since everything in the internet moves so fast. If we are not doing that... someone will be faster than us”, highlights C1R1. Furthermore, the owners have a strong IT background resulting in highly appreciating the role of technology when running the operations. Not only is it considered as an important aspect from the competition’s point of view, but it is also seen as a factor valued by
customers. Therefore, to implement technologies that are particularly developed by the company itself is weighed up. C1R1 explains the usage of a search engine system offered by Google as a typical example of this, “We try to do as much as we can ourselves...like, there are a lot of great search engines for e-commerce. The customers type in a product name in the search field, here, we need to show up as the best result for them. You can buy these systems from external parties but what we have done is that we put a lot of time and effort to build own search engine. We tried an external search engine first and took everything we liked in that and integrated them to our own system instead”.

The goal for the company is to continue growing enabled by the operations in the new market areas by simultaneously offering the key customers superior value with fast deliveries and professional customer service- aspects of which the company already is well known. Instead of filling the website with new products, the next step is to focus on the content, which is, visualizing in terms of high quality product images, comprehensive product descriptions as well as video content. The company seeks developing their new, mobile friendly website, which released two months ago and did not perform as successfully as hoped. However, as C1R1 summarizes “our future seems bright, but intensive work must be done!”.

Utilizing the real time chat was started about three years ago due to the CEOs positive experience of the function, “Actually I was renewing my on mobile contract. I went to the operator’s page and tried to call them. I waited in the line for a long time and then I found their live chat and it was great! Then I thought it was something that we needed to have on our webpage too”, tells C1R1.

Currently, the company uses LiveChat Inc software for their real time chat function. One of the reasons they considered using this software was according to C1R1 “they have a native client for the Windows, Mac, iOS. So, we don’t need to log in to any website, everyone can just start the chat on their computer.” C1R2 however focuses on the features that makes their job easier and serve customers faster by noting, “...lets me [see] what parts of the website they are looking at...and it works faster for me to help them (the customer) because of that.” The respondent feels customers prefer chat because of its responsiveness. They observed “lot of people like it now because there is another way to contact us right away. And get fast answers” One way the customer support is able to respond fast is through strong integration between their different departments and systems. For instance, the customer support team can check stock availability without picking up the phone and asking a colleague. C1R2 said of this “We can get that information pretty fast like in a few minutes. We can go to the purchases list and see what time there are expected to get to us.”

But there are instances when fast responses cannot be provided and when this occurs they prefer to use another feature in the chat. C1R2 narrates a typical conversation with the customer in such cases, “Well, I will check this out, and I will create a ticket and I will come back to you.” They also noted the benefit to customer adopting this feature, “And then they don’t have to wait like an hour for me to check it...it’s just a few minutes of their time.”

But it is not always the customer support team reaching out to other teams and departments for information, sometimes the customer team might have information or feedback to other teams as well. The web editor is a case in point, especially when product
pictures do not match the actual product. C1R2 informs the editor as follows, “This costume changed color little. It is more forest green than light green. Can you change it and make sure that the customers see it?” Further, during the observation conducted in C1, it was discovered that the customer support team also interacts with the marketing team that posts product review videos. It was observed that when the marketing team does not share information such as links to the product or price, the number of enquiries to the customer service team increases. Therefore, by providing important feedback such as this they ensure that their time is focused on helping customers who have important queries regarding the product and service.

C1R2 also tries to keep the customer central to the company’s customer service function. The CEO has given the team a lot of freedom with a simple advises as C1R2 recounts, “...make the customer happy, and just make sure that they get what they want.” Some ways in which C1R2 maintains a customer focus is by thinking like a customer. This is particular true in the case of the website as C1R2 says, “We use it [the website] as customers too. ...we also get to place a lot of opinions [to the web development team] like, ‘No! This is how the customers use it’.” Talking about the website and the appearance the respondent is very unambiguous about how the experience should be for a customer, “You should always find the product you are looking for, the theme you are looking for, very easy, you shouldn't have to think about it. .....it should look professional...and it should look fun.” She adds, “[We] try to make it a lot like a physical shop though, with a lot of pictures from angles and products so you can look at it in the way that you would in a store like try it on almost.”

Customers tend to spend lot of time on the website. In the words of C1R2, “...if you compare all the customers I think it [is] one hour.” But the time required to serve them varies based on their familiarity with shopping online. As C2R2 narrates a customer interaction “ ‘I want this product. I have this address. Could you send it to me?’ Then it takes like 5 minutes.” The respondent further adds “And we have other customers who takes like an hour. Because we have to explain how it works...how the process works.” Customers can interact with the company in a number of ways. According to them, “...phone and the live chat is open when we are here. It is open 9 [am]-4 [pm] Monday to Friday. The email is open 24/7.” This flexibility in dealing with the customer is prevalent more ways than time and communication channels alone. As C1R2 explains, “We get a lot of questions on bigger orders from companies like ‘You guys have 2 of this hat, we need 50. Can you fix it?’ ...we talk to purchases and see what we can do.”

While C1R2 maintains that they “...think about the service.” the company also has a high technology focus. Trying to anticipate demand is one such area where they use technology. As the respondent informs us, “We have sort of a systems who reads off the last year. ‘Why did we have this much last year? Well there is sort of a holiday which gets bigger in Sweden.’...and so on.” This type of information allows the customer support team to be adequately staffed to handle increase in customer enquiries. C1R2 recounts, “…the guys working at ...purchases, they... tell us a lot of the time, ‘We have 200 [product name] coming in for [Holiday name], be ready.’ “We have two girls who works extra with us...if there is a little bigger holiday coming up they are working all week.” The seasonal spikes also increase the number of people working in the back office as the respondent says, “like in the warehouse, picking up stuff and everything, there are about 15-25 and during [Holiday Name] there is like 50.” Technology also helps with efficiency in the example given by the respondent, “we have sort of a system that if the
customer places two orders within a few hours our system catches that... then we put them in together. Then we just have to pay for one delivery method” At the same time there is also emphasis on process efficiency. The respondent observes, “And just to make sure that there is not an issues or wrong picking, there is another person. It cannot be the same, who packs it.” The number of people involved in each order as they observe it, “We are up to five.”

C1R2 estimates close to 100-200 customers contact the customer support team on any given day. Out of which approximately 20-30 of them communicate on chat. In the view of the respondent this is because “there is a lot of younger people using the chat. And they rather do that than call or email.” The customer support team responds to phone calls, chats and email in that order. In terms of response time to chat requests NSC1R2 guesses, “Sometimes its 10-15 minutes. But usually it is like 30 seconds.” However, there are times when the customers do not get responded to within this duration and the respondent observes, “…if they get ignored or they have to wait like an hour then they are not happy.” But also adds, “They are understandable if you explain it to them.” The respondent also considers four chats as the optimum number to handle.

When asked about the customer journey the respondent says, “Most of our customers Google if they search for something. And usually when it comes to [product category] we are on top”. Once on the site the customers tend to contact the customer service team for specific queries, such as in the words of C1R2, "Will this fit me? I am sort of 1 foot 6." or “…products that you are able to order if they are on their way from the manufacturer. And there's a lot of questions about these...” Payment related issues also seem to feature regularly, as observed by the respondent “We have this one of the ways to pay is Swish. ...when they launched it we had a lot of customers, calling us ‘It doesn't work!’”. Sometimes queries can be after the customer has received a damaged product. In such cases the respondent responds by saying, “Well send me a picture and I will send you a gift card and I will treat you to the next order or something like that.” In other cases the C1R2 also offers other alternatives as alluded by them, "Well do you want a new package, we will send it right away. Or do you want your money back?".

In order to provide personalized touch the respondent points out that “We freestyle a lot.” However, to address some queries quickly they have a documented list of steps to follow for commonly recurring problems. These incident specific knowledge is captured and shared in an online tool called Trello. While the customer support team does tend to recommend products to customers on chat the respondent admits, “I think that is something that we might have to get better at.” But when asked about proactive chat C1R2 emphatically replied, “I don't think that you should push on the customer. ...I think they ask the question if they want to.”

4.2 C2 - The Geek Freaks

Company C2 was established in 2005 and started as one man led, B2B-focused importer for electronic devices. In 2007, the strategic direction of the business, however, changed as the owner and CEO got the opportunity to manage an e-retail company. C1R1 explains, “we got an opportunity to take care of [the name of the firm], which had like really successful idea but it was not quite there yet. We decided to give it a try. Consumer business was like more something we wanted to do”. Inspired by that, the two businesses were combined having a focus on the e-commerce sector. Currently, five different B2C
web shops are run under the name of the mother company, three of the businesses sell electronic accessories, the fourth one focuses on clothing and the fifth on beauty and hair products.

Including the CEO and a partner owner, the company currently employs 10 permanent workers with the exception of special events such as employing interns leading the organization to grow temporarily by a few employees. Having an engineering background the CEO admits being extremely technology and IT oriented and willing to invest on keeping the website up to date in terms of technology. Thus, the company has employed a newly graduated coder from a university of technology, bringing up to date knowledge for the operations. Furthermore, C1R1 explains, “I think it [having technology up to date] is really important. It is cost efficient also. Therefore, we, for example, integrate different solutions within the business to be able to show the customer very up to date information about stock quantities and delivery times etc. This encourages them to buy more”. He continues, “Well we try to save in everything we can. I have run this company with the same loan for eight years now... we do not use any marketing agencies to strategize for us etc. We try to put that money into the price of the web shops instead.

Because of its unique business structure that combines different web shops under a one company, the competition facing the operations is not considered as highly threatening. “We do not have exactly the same kind of companies competing with us anymore. It popped up one competitor within the electronic sector and they tried to push the prices down. Eventually they found out that they should make some profit out of it too, so they quit”, says C1R1. The company's performance is seen as steady, having a turnover of approximately 1.5 million euros in 2015 and the ability to deliver around 4000 shipments on a monthly basis. Taking these aspects into a consideration, the CEO feels safe continuing the operations on their current path and keep utilizing its flexible website platform enabling the company to rapidly develop a new web shop whenever considered necessary. C1R1 highlights, “We have like one model or web platform that we can easily copy to other product areas and businesses... It takes like two weeks for our coder to make a new web shop. Of course we need to plan in advance, and we certainly do not open a new shop in every two weeks. But we could do that if we wanted. We are really flexible on that”.

C2R1, the company founder, installed the chat function on the website sometime in 2008 of his personal interest towards the function, however explaining the following about their early experiences of using the service, “…but I think the internet was not ready for it yet. We got like 90% of the questions that only wasted our time.” Nowadays, the chat appears to be have a financial implication on the company. C2R1 observes, “We get like sales every day because of the chat.” As C2 is a company that is a proponent of open source technologies and the chat software Live Helper Chat that they are using is no exception. “We just looked for the best open source system that there was available.” says C2R1.

The customer service team in C2 usually has only one person taking care of the incoming queries on chat, email and phone. C2R2 says, “Of course, there can be random fluctuations or moments when there are a lot of requests and then that can really increase the time or the response time for the individuals. We are still not a huge company, so... we just try and survive the situation.” In part the company is also helped by having a rather steady demand of orders of which only a fraction of the customers get in touch. In
the words of the respondent, "I would say 1/6th of the orders would involve some sort of contact."

Given the main product category that the company represents, customer queries can be ambiguous. To quote an example C2R2 gave, "People like giving the serial number of some obscure [product] and then like 'Get me a [part/accessory] for this'. Which would result in Googling and cross referencing from different places." But not all queries received are technical and can be answered quickly as the respondent exemplifies, "Some are really easily answered like, 'How long are you open?' and 'What's your address?'."

On an average they think that the time taken to respond to customer queries is about five minutes.

NSC2R2 also considers the company to have a very product oriented focus by saying, "Focus is low prices, availability of obscure stuff that other people don't have and don't have listed and customer service." The respondent also considers price as an important aspect to communicate on the website, "A lot of our customers go on our website... like having special things that are around discounts would be interesting or valuable for them". In relation to the website, they also considered the following aspects important, "Should be visually appealing and communicate instantly what the company is offering or the most critical things...”.

Despite the small size of the company C2R2 considers it flexible when it comes to responding to customer demands. "Or doing something specific that we don't have listed but we could get. If getting a product comes down to if one of our suppliers has that available. We do have a pretty vast collection when you combine like all the suppliers."

The respondent considers this flexibility extended to the way they are allowed to operate by adding, "My end...aim is to please the customer as much as possible. So, if I can do something like that, even if it takes extra manual efforts, I would usually do it."

According to the respondent the phone call volume drops when the chat is active. C2R2 estimates "4 enquiries per hour on an average" on chat. There are times when the respondent is not in front of his computer while assisting with other tasks. The respondent in such instances recounts, "I might come back and see that there are multiple requests for chat, requests from customers and they might be even like half an hour old. At which point it is not fun for the customer naturally." While adding, "If I am at the computer the response time should be 5 minutes."

However the respondent does indicate that the customer usually leaves the site if they do not receive a response within ten minutes.

In terms of the customer journey C2R1 had very specific data on how the customers come to the website, "Well 30% comes from Google, 40% from paid links but not adverts, 16% comes from adverts. What people do next... 6% goes next to search, 3% go to the chart after one page." C2R2 adds to this information by pointing out, "And through shopping cart they would then put their payment information and shipping information and let’s say like something goes wrong... that case they might contact me through chat and hopefully I will be able to help them." Barring payment related issues NSC2R2 also mentions, "Looking for a product or what is compatible with their thing is by far the most popular one. Also, requests on like 'How long would it take to get this'? People don't always trust the information that is on the website. 'Where is my order?' if they have already ordered something."
C2R2 is empowered enough to take decisions on their own as explained in this instance, “Like if it's not about a lot of money I will usually take the liberty of solving the issue even if it would mean like losing a couple of Euros.” In addition to satisfying the customer issues they also consider the following when evaluating their job, “I guess I like the speed that I do tasks. I do have a love for efficiency, so if anything I can optimize gives me pleasure.”

Despite the efficiency there are instances where things do not go according to plan and this results in various issues that the respondent has to deal with. “A common thing would be a customer orders multiple units of the product. And just puts one and doesn't see that it was 2 or 3 or however many. And of course there is also like 'I never got my package.' If it they get delivered the wrong product in that case we usually we ask them to return it to us”. In terms of handling such issues C2R2 recounts, “If they do want their money back, there is a like a system in [the used web-platform], through which a request or return can be done, they should also do it for exchanges.”

Furthermore, the respondent explains that, “There is less social pressure on interacting with someone through chat. I think that is one of the big things. It lowers the threshold.” As for people who still prefer phone C2R2 says, “I am sure there are people who for some reason or the other I don't know are old and skeptical of technology and don't type fast or don't like typing and want to talk to an actual person.”

As for their opinion on proactive chat the respondent had this to say, “I for one in my situation where I am the only person doing it usually am happy that it [the chat] doesn't have that. Because it would result in a heavily increased work load for me I would imagine.” C2R2 feels efficiencies in other aspects of the business process can reduce the enquiries coming to them. “Starting from the top the descriptions of the products. If they are concise, or clear enough or detailed enough that will eliminate some enquiries I am sure.”

4.3 C3 - “Jimmy Hoffa is Buried on Page 3 of Google”

Ten years ago the owner and CEO of NSC3 got tired of his hectic life as an IT consultant and decided to turn his hobby and passion to a business by utilizing his already established network consisting of a range of Chinese manufacturers. Today, by selling special hobby goods within B2C sector, the company serves a loyal set of serious hobbyists and tries simultaneously finding new market gaps to make profit. Thus, in addition of having highly valuable items, the company has recently started with medium priced product lines to satisfy also the so-called amateur customers, as explained by C3R1 “...And we mostly have only expensive items. Currently, we are focusing more on the “mid-level” products, which are like “good-but- cheap” so by doing this we can get people buying more”. Further, the CEO laughs, “It is like selling to drug- addicts. People need to test the first product, perhaps for free, and then they start buying like crazy and keep coming back”.

The company’s turnover in 2015 was about 390 000 euros and the number of shipped orders varied from 10 to 30 deliveries depending on the season. Being a season dependent category of products the peak period of sales in the company’s country of origin takes place in the summer. Thus, to generate sales, the company operates worldwide. C3R1 describes, “We ship globally. So, in the winter- time almost half our sales come from abroad. We try to grow and go more towards the global markets. Because there the
market is so much bigger. I think that our biggest market is actually US and our biggest competition comes from the Central Europe”. At the moment, the future plan is, however, to invest to the Scandinavian market where the CEO and owners of NSC3 wishes to achieve a stronger position for the business. The competition has become tougher, which according to NSC3R1 influences the operations of C3 in the following way, “We sadly have become so popular in Scandinavia that all the new businesses that have started in the same market just have been following us. We have been a bit stupid because we did not do any protection. Like, we should do more branding, establish our own brand, or set contracts with manufacturers etc.” Further, C3R1 however explains the perks of being a first mover, “Like, those who copy us. They have to keep low prices unless they offer free shipping. Of course, we have better relations with the manufacturers and with the shipping companies, so the purchasing and shipping costs become less. So it gives us the opportunity to be one or two steps ahead of the competition in that sense”.

Running a small-scale business with only three employees is challenging, not only when considering the afore-described competition, but also when it comes to running the internal operations and creating reliability in the customer’s eyes. To still maintain flexibility within the operations, the company trusts increasingly on technology. As C3R1 highlights, “This [the role of technology] becomes more and more important as the warehouse is growing. Like, now we have already more than 5000 products/items in our warehouse. So, then you can’t handle it in your head anymore”. Also the role of the website itself it acknowledged, “This goes more into the web shop itself. Like we’ve been developing that all the time. This is where my IT background comes in. So, here we have developed different kinds of ways of how to approach customers. Like, online chat and how to develop the website according to Google's influence. And like that...We try to get all the feedback from the customers, like how they want the service and of course how the market is, like how Google works and so on. So... because we are doing all the website developing ourselves so we are quite flexible on that”.

On the other hand, having a small company with skilled employees is also considered as an advantage. Summarized by C3R1, “It is basically me who is deciding on things. The fact that we are only three influences this. Of course, I discuss with the others too. But I would say I have the most knowledge about the market, the product itself, and also the IT. Apart from running the overall operations, I am the one who is doing the customer service here. My wife takes care of the finance and then we have a guy being responsible of the warehouse and shipping. We all complement each other making the operations run smoothly”. Considering the stated, and also the fact that the employees’ are serious hobbyists themselves, the small but professional company seems to be appreciated by their target customers and, thus, able to continue their journey towards step by step conquering more market place.

The company uses LiveZilla chat, which they have been utilizing approximately six years ago. “But then we used an open source product. We still use it but now we use a one that sell the license and so on. I knew that big insurance companies used it. And I found that it was quite...gives more of the human touch to the website. You never have a real contact with the persons itself. But now you have... and also gives a good personal touch in it, because it has a picture of you and so on”, says C3R1.

Being a company with three employees the focus is on automation. The respondent observes, “We are more technology focused. Website quite automated these days. But for
web shop and for inventory management that we have tried to automate it as far as possible. Because this areas are developing so fast so it's troublesome already for us to keep up with all the new advances in technology. Also these days you have to totally renovate or renew your website every three years.”

Time is also an important consideration as C3R1 observes, “We don't really have time to make request for every product, to the manufacturers. Sometimes we combine these questions if we get some. I'd say 99% of the questions we can answer it immediately but also just for 1% we need to get the information from the manufacturer.

This sort of aggregation and simplification extends to the product offerings as well. According to the respondent, “We don't make much customization actually. We usually make this kind of readymade packages. Our customization, we have the one package which has everything.” This also extends to the e-commerce platform that they use. “The basic framework for OS Commerce, it does not allow any order editing or that kind of stuff”, adds C3R1.

This approach is in part aided by the largely non fluctuating demand for the product. The respondent observes, “There is a basic set of products that sell throughout the year. But then there are seasonal products. Let's say the seasonal product are half of the sales. And then of course these seasonal products they keep changing all the time as well.” Considering the product range, C3R1 says, “We are more focused on this kind of high end products where the customers need more support. They are so complicated products. More let’s say almost 100% of the customers will contact you at some point.”

In terms of customers served the respondent had this to say, “We have maybe about 10 000 registered customers. And we like we say we on average we handle 30 orders a day. So it's about 30 customers a day. So it's 10 customers per person.” The website gets about 600 visitors a day according to C3R1. This according to them comes down to the location of the website in the search results. “In web shop the most important location is your result in google or wherever. Like they say that Jimmy Hoffa is buried on page 3 of google.” says the respondent. Designing the webpage for different devices is also an important consideration for C3R1, “Actually I was surprised how many orders we get through the mobile phones and tablets these days. Now days you need to have a website that you know works on all the platforms.”

This also means that C3 has to organize its site well for all types of devices. The respondent observes, “We try to keep our website as organized as possible. So that they [customers] don't really need to use search so much. So we try to first of all just categorize everything by the main product.” C3R1 is also cognizant of the type of shoppers that come to the website saying, "Either they are building something of their own...Or they have some model that they want to convert to something else.”

Despite keeping the website as simple as possible the respondent still gets a lot of product oriented queries. “That is the most questions coming from is that 'Which products are suitable with each other?'” Other instances when the company receives a lot of chat requests are in the words of C3R1 are, “They are using their mobile phone they can't use some payment module.” or “Customer returns we get really little. Damaged products like approximately about say just a few pieces a year.” Stock related issues are some of the other areas where the company faces challenges. “The most common service failure is
that don’t communicate with the customer who has made a purchase about a product that we don't have in stock. 70% of the products can be shipped immediately. But that 30% even that becomes quite a lot big number if that's like 10 orders a day and the average time to get the new stock is 4 weeks."

The company then has to adopt good strategies to keep the customer happy according to C3R1. “We try to upgrade the product that is missing to better. So that we can ship it immediately. And also in some cases or we give the customer some discount or we can give them either discount coupons or give them or just tell them you can have some refund on the next order.” Some of this business logic is programmed into the website itself. As the respondent informs us, “We try to keep the customers buying on the web shop and then offer some sort of loyalty discounts on the web shop itself. So that if they purchase a lot then they can get automatically discounts on the web shop.”

Among the 30 customer service requests they get every day, the most of them are through email and the phone. The reason for this C3R1 explains, “Just get maybe 10% through chat. Some customers tend to contact us mostly by the chat or especially mostly by phone. So some people just don't want to use the email or any other electronic form rather than just give us a call. But still the email is the most common way to contact us. Chat request are something when you need immediate help, like you are having a problem with the payment or you are just making the purchase but you are not sure and you want to just make sure that these are compatible with this products.”

C3R1 also uses revenue as the main measure of performance along with the use of chat ratings. However, the respondent wants better metrics by suggesting that, “There could be a way to measure that if you go through the chat and see how many of those have become a purchase.”

4.4 C4 - Gearing Down

Operating under its large telecommunication parent as a spinoff corporation, C4 started its business of extreme sports online video platform in 2012 by thereafter launching a specialty sports and outdoor gear online store in 2014. As explained by C4R1, to follow the vision of the company to inspire and equip customers with the knowledge and gear to live their outdoor lifestyle, the web shop is appointed to be the core business of the company having the video content side underpinning the sales. Ran by a CEO, operations manager and financial manager, who together answers to the parent corporation's board, the company is bound to operate by following pre-planned strategy directions. According to C4R1, the company’s strategic planning has not always been as structured, particularly not in the beginning. Right after the firm’s rapid start up development phase it was recognized that the operations did not yield the expected results, which forced the top management to implement a reorganization strategy. As a result, instead of focusing on a broad range of sports categories, the business is today build around one particular core sport. C4R1 explains the change of strategic directions as follows, “We had our previous CEO following his passion for outdoor lifestyle finding the company... Then he decided to launch the e-commerce shop. The process was not well planned and we had a rough start. Afterwards the strategy needed changes. First of all, we had a lot of different categories...then we realized that actually this did not work. So, we finally took a step back, and are therefore trying to focus on something that we are good at”. Further, the respondent highlights also the role of customers contributing to the change by the
following way “Because of the problem that we had, as I previously told... made also the customers to have problems in a way. So, we finally started to hear what they have to say. Even though they weren’t actually speaking in words, they were telling that in numbers. We analyzed that [the specific core sport] part was the closest category from which we could easily make money out of. So, now we are listening to the customers finally”.

Having approximately 10% of the sales generated from the US, the company operates mainly at the European markets and is therefore, together with its warehouse, located strategically to Western Europe. This enables the company to be close to the main competitors and correspond to the intensively competitive market conditions, for instance, by promising the customers a free, three-day delivery, which according to the respondents not all of their competitors can do.

C4R1 explains that having a turnover of around 5.5 million euros in 2015, and an incoming order rate of on average 80 orders per day, the company is “not that small but at the same time not that big”. According to C4R1 the number of employees of the company is 15, excluding the CEO and operations manager. The employees consist mainly from athletes and outdoor enthusiast who each has a background in the core sport, and are thus experts when it comes to product specific knowledge. This, in turn enables the company to choose the top and most popular products to sell and to provide high quality customer service. Despite this competitive asset, C4R1 explains the size of the company being of advantage as it enables flexibility in operations leading to personalized customer service: “What our customer like in general is, for example...that if a customer had a bad experience for whatever reason, like UPS lost the package, we can always compensate and stuff. So, it is not just to make them [customers] happy, but to make them understand that there are people behind the company and that we are actually trying to help as it was like a real shop”.. He continues explaining: “That is the idea of us. And it works until you have like 2000 orders per day, when you obviously need to create an automatic system for everything, let’s say for email and not being able to use the chat”.

Considered from the technical point of view, the company has one IT person running the e-commerce site, and receives additional help from the mother corporation’s IT department if needed. The company recognizes the website being fundamentally one of the most important parts of the operations. Linked to this C4R1, however, adds: “…and with that we probably also have the most problems with. Like our customers are telling us, everything with the company is cool but your website sucks”. Not only did these shortages face solely the content of the website, i.e. provided product information and images, but also the actual buying process itself. According to the respondent C4R1 it was recognized as too long and complicated: “the process from when you see the products to where you actually can pay for it, it is too long, it has too many steps... filters not always work, it is not as fast as other websites from our competitors”.

According to the respondents, most of the times the problem of inefficient website was linked to the fact that the company does not have the technical means to develop the site, and because it was managed by using more human intervention, i.e.: “…doing everything manually” (Interview C4R1, 2016). However, these problems do not allow the company to be competitive, which is why the technology part is currently under development.

Despite this, there are also other kinds of difficulties facing the operations. As told by C4R1 “The other side of the problem is the warehouse management and logistics. I mean,
when shipping orders we need to have the products ready, warehouse organized in a proper way etc. Now we are making the warehouse better. The third one is the stock. When I am talking about the stock I mean having the right stock, so having the website saying we have three [specific product] in stock we actually need to have the [specific products] in stock. At the moment these are not our strongest areas of business” (Interview C4R1, 2016). However, the shortages resulting from these are recognized and actions towards renewing them taken. In the near future, the sales are forecasted to increase due to a recently acquired partner company that will in the future take care of the warehousing and logistics for the company.

The company put the real time function in service while launching the web shop. C4R1 tells that the company was among the earliest in the category to start using real time chat. The company uses LiveChat Inc and initially started using it as a sales tool, “At the beginning we wanted to provide a service where customers could actually ask things from the real experts having knowledge of the products. Not only was it a support function for, let’s say common errors in the ordering process, if you package was lost and so on, but the main idea was to be there to suggest customers which products to buy and like to sell them. Like the main idea was ‘we are here, and we can tell you what would be the perfect product for you’”, explains C4R1. The company has, however, increasingly switched the usage to a customer service function as the customer base has increased. C4R1 explains why, “We realized pretty easy that it was impossible to go on like this because we had too many customers and they started asking not only questions like ‘what should I buy’ but also ‘where is my order?’.” C4R2 likens the chat to a physical shop, “it's good because the live chat process in e-commerce can be the equal of the customer assistant in a real shop and when you create a good mood in the customer it is the same thing that happen in a real shop.”

C4R2 draws from his marketing experience when it comes to working in the customer service function. “I think that our site got super clean logo, and that is easy to remember, that is really important. And I think that maybe it's most important thing for make people happy to shop in your website is to give all the search right in the home page. I think the most important time is the first 5 minutes. When people are searching for their product and you need to be there in this 5 minutes. Because if they didn't find what they searched they can go away. Normally it is about 20 minutes. But when they buy something.”

Despite the allusions of customer service, the company considers itself to be a product focused company. C4R2 explains, “First we have the new products and give a good explanation and the entire description of the products and maybe we don't take we don't care, we don't give so much importance to give a full service to the customer maybe to respect a 3 day of delivery because we say we are three day of delivery but sometime, in many cases we go out of three day because for some delay in this things.”

This is in part attributed to the lack of technology focus and more focus on people instead. C4R2 says, “When you run an e-shop you need technology that can solve problems. We want to use it but we do not have... we never put those things on function. So, when technology fails, it is people who have to go and try to solve the problem manually.” The lack of emphasis on technology means departments and systems are not integrated leading to poor customer ratings as was discovered in the chat logs. In one such chat log, the customer wanted to know when a particular product that was supposed to be in stock would be available. The chat agent’s response was “Sorry, I don’t know.” The customer
rated the chat poorly commenting, “It’d be great to know why. He did not know the answer to my question.”

C4R1 states that the company receives approximately 150 customer requests a day, of which nearly 80 are chat. C4R2 considers the volume of customers handled as medium, while adding that close to 60% of the employees interact with customers and other stakeholders. The customer service is available between 9 am and 9 pm. C4R2 says that this is largely due to customers contacting from different time zones around the world. “Because in fact normally we got a peak from the US during the morning because we are, with the, because it’s the evening. And also here it’s in the late morning, and around 8 o’clock is the other peak. For Europe it’s late morning and dinner time. It’s a down peak for sure from 6 o’clock till 7:30.”

Knowing the peak times and periods allows the company to plan its resources. C4R2 says, “That in the peak time put 2 people or more people in chat and try to give the also a back help to who is in chat. Maybe open a direct channel with the warehouse that is important.” When there are more chat requests than available people the respondent says, “If you can't handle the amount of customers, we ask help from other colleague. Or try to solve it.”

The company only has email and chat as the communication channels available to customers. C4R1 explains why phone was taken away by saying, “We soon realized that we would need to have at least two people per day to take care of it.” C4R2 offers an alternative explanation, “Because I think because it is easier when you communicate with a chat, or email, everything is written.”

The company does try to be flexible to the customer needs according to C4R2. “We are really flexible. If we can try to solve and satisfy the customer in a good way. A real example is this morning a customer order a snowboard in one size and he write on chat ‘oh now I decided this size is not good for me and I want another size.’ And all in one hour we changed his orders without problem.”

The team is given complete freedom in how it handles customer queries which, C4R2 thinks can create problems. “It is totally free. And this can be a problem. Because we don’t have a formula. So you sometimes you find someone that got his way of managing the customer. Some other time you got other person that other different way the customer. It's not good.”

In terms of the customer journey the respondent observes that contact with the customer service takes place in two distinct scenarios, “In the first part when they have to choose what they want to buy. And in the final part if they got some problem like maybe the credit card is not working, or they don’t understand how to use a coupon that they have.”

When other mistakes happen usually the individual has the freedom to deal with the customer as the situation demands says C4R2, “If we made a mistake we sent a wrong product to a customer, I can say to him, ‘I make you a return and I offer you a free gift and a little discount for your next purchase.’ Or ‘I can suggest you these are the products’ or just say ‘Okay send me back and we send you the other.’ Without trying to apologize. Maybe, we use a lot of coupons. You can spend 50 euros on our website. It's a good way, you try to take another time the customer in your website and try to you hope the next
"time will be super good or better.” One way the respondent thinks mistakes can be reduced is through better communication between teams. “You have to be fast, because the customer want to be, an answer as soon as possible. And we have to be clear and precise. Those are the most important things. Also because if you are communicating with your colleague and the communication is not precise about something, this can create mistake and it’s just a little problem can become bigger and bigger.”
5. Analysis and Discussion

In this chapter we discuss the empirical findings through the prism of our chosen theoretical frame of reference and analyze each component individually. As explained in section 3.6, we start by presenting a detailed structure of the chapter, which facilitates easy comprehension for our readers.

Figure 5. Analysis Schema.

Figure 5 illustrates the structure that will be followed throughout the chapter. The chapter is divided into three parts and structured on the research question, which is: *What are the Business and Operations Strategies that determine the design of real time chat process in a B2C e-commerce company?* Part one answers the business and operations strategy aspect of the question and includes two phases. First, we conduct a unit of analysis on the strategy orientation and typology with operations strategy perspective and discussing the key findings regarding the strategic orientations and typologies. Second, we examine the most salient CSFs that emerge from the empirical findings and validate them against the extant theory and grouped them based on the typologies. In part two the real time chat design aspect of the question is answered and we look at the service delivery systems in its entirety and consider the individual impact of the discussed elements on the design process. Finally, part three combines the previous two parts in two phases. It integrates the e-commerce service operations strategy CSFs with the dimensions of the service delivery systems as well as presents encompassing service delivery system process of real time chat.

5.1. Strategy and Operations Strategy Typologies

Phase one of the discussion and analysis begins with the orientation, typology and operations strategy perspective and discussing the key findings regarding the strategic orientations and typologies.
5.1.1 Strategy Orientations

In reflection to the strategic orientations discussed in section 2.1.1, it was noticed based on the scaling and interviews that companies C1, C3 and C4 were classified as market oriented, whereas C2 was mainly sales driven. Interestingly, each of the three firms following market orientation had a mixed approach and emphasized the relevance of not only customers, but also competitors. However, the companies seemed to be driven by competitor actions only to a certain level, as they did not stress, for instance, the importance of watching costs and pricing closely, or matching the marketing initiatives of competitors, which according to Chang et al. (2003, p.665) are important factors to consider for competition driven companies. The main reasons for taking these factors into account seemed to stem from the industry characteristics of e-commerce, which according to Brynjolfsson & Smith (2000) was characterized of being highly competitive sector and, thus, forcing e-retailers to be competitor-sensitive.

Focusing solely on competitor actions was not considered as sufficient enough to achieve or sustain the desired market position. Therefore, during the interviews with the three already mentioned companies it was repeatedly stated that understanding the target buyers was crucial to be able to create value for them, which, in turn, created long-term sustainability within the business. This connects to a suggestion of Noble et al. (2002, p.26), who argued that customer-oriented firms have a similar frame of mind. Value creation for the customer occurred in range of different ways, the most notable of them being the offered product range and quality, technical means and IT, internal business performance, pricing and customer service as a function. These were also considered as being a vital part of the emphasized e-commerce service operations strategy CSFs discussed in section 2.3.2.

In addition, a specific emphasis was noted concerning the used information technology. Similar to Chang et al. (2003, p.665) and Higgins (2003, p.35), not only was the market driven companies devoted to employ the technology to acquire market intelligence by gathering information and feedback through different statistical and rating tools, such as Google Analytics, but they also find it important to offer diverse technology enabled channels, such as email and real time chat, to establish relationships with customers. It was interesting to note that through these IT enabled services, the companies did not only get into personal contact with the customers, but were also gathering the afore-mentioned customer and competitor knowledge regarding, for instance, product offerings or pricing, as well as information about various functional features that, for example, did not operate correctly on the website.

Company C2 proved to be mainly selling oriented. By having 30% of the webpages coming from paid ads the company identified itself as having high marketing competency. They also were seen as capable to fluctuate the pricing of the sold products to drive sales. To drive sales by both advertising and dynamic pricing are typical actions taken by selling oriented companies (Noble et al. 2002, p.26). Contrary to selling oriented companies’ actions, the company did not encourage employees to have daily contact with the customers and actively use techniques to increase sales. Neither did the company show any particular signs of customer or competitor focus, which would result in driving the firm in a market oriented way (Chang et al. 2003, p.665). Therefore, the obtained general impression of the firm’s way of running the business was for them to stimulate short-term sales, which, linked to Noble et al., (2002, p.26), demonstrates short focused,
profit-oriented way of running operations resulting in in low customer loyalty and repeat business.

Despite having utilized cart abandonment software previously, but subsequently let it go, even though the company C2 had high technology competency there were no other particular evidence of it using different IT enabled tools to specifically drive sales. Cross-selling mentioned by Higgins (2003, p.35) was not utilized, even though the used IT enabled services of phone, email and real time chat would have offered an opportunity for it. Where the company, however, outshined in comparison to the other firms in our study was it website platform, which enabled rapid deployment of customizable and secure web storefront that also combined a services infrastructure. Due to this, buyers were, for instance, able to finalize the buying process rapidly and sales personnel, i.e. customer service agents, could perform tasks relevant to their role in terms of providing efficient support for buying customers, which is in line with Hunter & Perreault Jr.’s (2006, p.97) used features of selling oriented companies.

5.1.2 Strategy Typologies

Referring to the Miles and Snow (1978) model of strategic typologies, it showed in the rankings and interviews that each of the three typologies that were anticipated in this study were represented by the companies of our study. Where companies C1 and C2 were identified as prospectors, which are innovative firms constantly seeking out new markets and new opportunities (Kearns, 2005, p.1024; Levenburg et al., 2005, p.55), company C3 fell into the category of analyzers who follow market leaders and adopt a hybrid approach (Kearns, 2005, p. 1024). By aiming to maintain its market position in an already established niche market (Levenburg et al., 2005, p.55), C4 was, in turn, considered to be a defender. Each of the companies showed clear categorization in their particular type of typology. Company C4 had the purest classification of being a defender as it resulted in having six features demonstrating the particular typology. Companies C1 and C2 included in total of four characteristics implying their typology of a prospector, and C3 ended in having a breakdown of the results showing three typical prospector characteristics, three defender and one clear analyzer, resulting in the typology of an analyzer. For clarity, see table 8, which summarizes the empirical findings generated from the scaling and strategic interviews.

Characterized as typical for defenders according to Levenburg et al. (2005, p.55), in similar vein the data collected from C4 showed indications of the company consolidating its position in the already established outdoor market segment. By following the rather formal planning framework formulated by both the board of directors together with the operational heads, the company showed to focus on the largely niche category of outdoor products. Just as Kearns (2005, p.1024) argues, this choice was made primarily due to the reason to continue and even strengthen the patronage of their customers, which, in turn, was further seen to be interlinked with the above discussed market orientation.

Surprisingly, even though the firm aimed to achieve quality leadership (Kearns, 2005, p.1024), as well as demonstrated customer orientation by being willing to understand its target buyers in order to be able continuously create superior value for them (Chang et al. 2003, p.665), both of the respondents representing C1 highlighted their low technology competency. Even though IT and IS was used both to acquire market intelligence and create relationship with the customers, especially the website was considered as
inefficient, mainly because it was managed using more human intervention. This was contrary to Sabherwal & Chan’s (2001, pp.15-16) arguments of defenders being firms that use IS for efficiency, which, in turn provides the means for achieving quality in operations resulting in value creation on both customer and company-wise. However, according to C4R1 it was considered as possible to improve the website and new steps towards the improvement process were, in fact, already taken.

Table 8. Strategic Typologies: I= informal, F= formal, H= high, L= low, E= established, N= new.

<table>
<thead>
<tr>
<th></th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Prospector</td>
<td>Prospector</td>
<td>Prospector</td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>(I)</td>
<td>(I)</td>
<td>(I)</td>
<td>(F)</td>
</tr>
<tr>
<td>Cost Focus</td>
<td>Analyzer</td>
<td>Defender</td>
<td>Analyzer</td>
<td>Analyzer</td>
</tr>
<tr>
<td></td>
<td>(M)</td>
<td>(H)</td>
<td>(M)</td>
<td>(M)</td>
</tr>
<tr>
<td>Quality Focus</td>
<td>Analyzer</td>
<td>Analyzer</td>
<td>Defender</td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>(M)</td>
<td>(M)</td>
<td>(H)</td>
<td>(H)</td>
</tr>
<tr>
<td>Market Focus</td>
<td>Defender</td>
<td>Prospector</td>
<td>Defender</td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>(E)</td>
<td>(N)</td>
<td>(E)</td>
<td>(E)</td>
</tr>
<tr>
<td>Appetite for Risk</td>
<td>Prospector</td>
<td>Analyzer</td>
<td>Prospector</td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>(H)</td>
<td>(M)</td>
<td>(H)</td>
<td>(L)</td>
</tr>
<tr>
<td>Technology Competency</td>
<td>Prospector</td>
<td>Prospector</td>
<td>Prospector</td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>(H)</td>
<td>(H)</td>
<td>(H)</td>
<td>(L)</td>
</tr>
<tr>
<td>Marketing Competency</td>
<td>Prospector</td>
<td>Prospector</td>
<td>Defender</td>
<td>Defender</td>
</tr>
<tr>
<td></td>
<td>(H)</td>
<td>(H)</td>
<td>(L)</td>
<td>(L)</td>
</tr>
<tr>
<td>Strategic Position</td>
<td>Prospector</td>
<td>Prospector</td>
<td>Analyzer</td>
<td>Defender</td>
</tr>
</tbody>
</table>

Similar to Kearns’s (2005, p.1024) and Levenburg’s et al., (2005, p.55) identifications for prospectors of being characterized as having high appetite for risk and seek to grow by developing new products and markets were represented by companies C1 and C2. Risk taking was preferred as one of the substantial influencers of achieving success in C1, which appeared, for instance, in the willingness to without hindrance test new technological features on the website or selling new product categories. The same pattern appeared in C2 whose representative C2R1 explained the firm’s ability to launch a new website for a new product category within two weeks if it so wished. In both companies, the capability for doing this stemmed from the operations internal resources and capabilities of having the qualified employees with rich knowledge base to develop the technology by themselves rather than buying it from external parties. These findings mirror Sabherwal & Chan’s (2001, pp.15-16) arguments of prospectors emphasizing flexibility in how technology and IS solutions are employed to improve the firm’s operations.
Uniformly to both Chang et al.’s (2003, p.665) explanations concerning competitor focus and Kearns (2005, p.1024) statements of strategic typologies, as an analyzer, C3 seemed to adopt a hybrid approach that combined the strengths of prospectors and defenders. Cost focus appeared as medium resulting from the aim of trying to satisfy the customers by selling the expensive products as cheap as possible and satisfying the suppliers’ price limits while still making profits for the company. By limiting the operations costs, in terms of choosing open source software, cutting employee salaries and warehouse related costs, the company proved to be able to invest in service quality instead. Examples of these were the ability to offer free and fast delivery. As in companies C1 and C2, technology focus was seen to be high in order to run the business efficiently. Interestingly, respondent C3R1 even highlighted that customers did not see technology as equally important aspect as the company did, which implied a rather inter-functional (Chang et al., 2003, p.665) way of running operations. A factor that, in turn, did not apply with Kearns’ (2005, p.1024) theoretical explanations of analyzers was how the company approached the strategy formulation. While the author explains strategy planning being formal in mature markets and informal in more volatile markets, C3 implements informal planning even though they operate in an un-fluctuating sector. This, however, might result from the company operating in rather small scale and having a CEO who really knows the company’s markets, thus, does not recognize the need to plan in formal way to achieve goals in long run.

5.1.3 Perspectives of Operations Strategy

To consider the four approaches surrounding the process of how the companies formulated and realized their operations strategy, based on the interviews and rankings, it was first of all seen that no matter whether informal or formal way of strategizing the operations, the decisions were mainly taken by the owners or the board of the companies. Thereafter, the decisions were progressively passed down to the other functional levels of the organizations. This is directly linked to Slack et al.’s (2010. pp.65-66) description of top-down driven operations strategies.

Regarding the bottom-up approach on operations strategy formulation (Slack et al, 2010, pp.66-67), all companies, expect C2, formulated the strategy based on the actions and decisions taken with operations to a certain degree. Even though the CEO of C2 found employee input as an important addition, it was seen that the operations were led mainly based on the visions of the company’s head. On the contrary, C4 was seen as keen on listening the middle level managers being responsible for the daily operations within the company. Further, these managers were actively reporting the top management about actual conditions and made suggestions on how to improve them. These suggestions were further taken to the board by the top management. Interestingly, it was seen that here the suggestions stemming directly from the employees were not highly appreciated. This was explained by the employees being overly eager in providing suggestions without having deep knowledge of the market and the business objectives. Therefore, the role of the operations manager was crucial. On the contrary, in C1 and C3 the employee input was welcomed and seen as something that created strategic value to the operations. Due to its small size, in company C3 the employee proposals concerned the operations as a whole, whereas in C1 the most important suggestions arose mainly from the front office employees working closely in cooperation with the customers. Based on this, it was notable that the strategy did not solely come to form as a single step provided by the
manager but, in accordance with Slack et al. (2010, pp.66-67), rather emerged over time from the actions of managers and employees lower down the organization.

Similarly to the above-elaborated strategic orientations, each of the four companies’ operations strategies were market-led to some extent. Being sales oriented, company C2 represented the least degree of market oriented operations strategy formulation. However, the company showed slight signs of being driven by competitor actions. It was recognized that to gain profit the company was active in changing their offered product category, which can be connected to Brown & Blackmon’s (2005, p.795) explanation of market-led companies identifying external opportunities by focusing on differing markets. Furthermore, it was particularly noted that the company did not get input from customers in terms of adding value to planning on the operational or strategic level. The three other companies were considered as being highly market-led as they were, in line with Brown & Blackmon (2005, p.795), focusing fully on either existing markets or market niches and then aligning the firm with these opportunities. As an example, C4 and C3 had chosen to operate in a unique market segment, which is why, for instance, the need to keep the level of offered customer service above the normal was crucial. Without having experts helping customers with product specific inquiries the functional operation would not have led to a competitive advantage.

Furthermore, the above-mentioned expertise of the customer service agents were also linked to operations-led strategy formation, which according to Brown & Blackmon (2005, p.796) takes the resources that build capabilities within the operations into account, and by emphasizing their role gain sustainable competitive advantage in its chosen markets. In companies C1 and C2 these resources of men appeared in form of the employees’ knowledge of technology, which allowed the companies to flexibly utilize new forms of technology making the operations run efficiently. Apart from these two-highlighted M’s of Holstein’s (n.d.), i.e. men and machines, also money had an obvious influence on how the operations were run. The most contradictory signs regarding the influence of monetary resources were shown by companies C2 and C4. Where C2 aimed cutting operations costs by, for instance, saving in employee salaries by offering part time positions for students, in C4 the focus on operations costs was low. This occurred due to C4 running its business in an expensive country but simultaneously benefitting from its rather centralized location, which enabled it to maximize its profits when viewed logistically, for instance.

5.2 E-commerce Service Operations Strategy CSFs

This section, referred to as phase two will build on the orientation, strategy and operations strategy perspectives discussed in the previous section in order to identify the main service operations strategy CSFs (CSFs from now on).

Focusing on the prioritized e-commerce service operations strategy CSFs revealed that the study’s four companies counted each of the eight factors outlined for this study as a possible CSF. In other words, all of them were ranked to be included in the five most important factors, and thus, based on our ranking criteria described data analysis section could be counted as a CSF. Of these, quality, change management/re-engineering business processes, customer acceptance/focus, service provision and flexibility were the most frequently ranked factors. Management support and know-how/training, and lastly costs followed these. Similarly to Rockart (1979, p.85), the chosen CSFs of each company
were considered as necessary aspects for the firms’ performance and could not be neglected.

Viewing the CSFs from an overall perspective, no consistent patterns emerged that allowed us to identify exact reasons for why some convergences were found. An interesting example of this was presented by a very clear allocation concerning few of the named CSFs. This discovery revealed a company-wise allocation, and illustrated a breakdown of “C1/C4 versus C2/C3”. As shown in appendix 6 marked to the table with pink and blue colors, C1 and C4 ranked change management/re-engineering business processes and management support as the most important CSFs, whereas C2 and C3 considered them as the least important. On the contrary, C2 and C3 categorized know-how/training to be of relevance for their operations. Simultaneously, the factor was seen as the most irrelevant factor for C1 and C4. Also, service provision and costs was ranked in accordance to the above written. Market led companies regardless of their prospector or defender typology appear to consider change management/re-engineering business processes and management support as relevant. Know-how/training and costs focus were, however, not seen as important factors. Peculiarly, similar preferences were also present in companies that were somewhat opposite to each other since they represented market-led analyzers and selling oriented prospectors. Both of these companies ranked change management/re-engineering business processes and management support as least relevant factors, and were, in turn, coherent in choosing service provision as something to be upheld.

The inability to explain the afore-mentioned findings strengthens Bullen and Rockart’s (1981, pp.14-17) explanation of CSFs being tailored to specifically match the individual firms situation depending on the industry in which they operate, their competitive strategy and their industry position they follow and other environmental factors over which they have little control. It is also connected to Greasley’s (2007, p.15) order qualifiers and winners as well as Barnes’s (2008, p.25) and Slack et al.’s (2010, p.54) trade-offs of competitive priorities. Given the unique scenarios each company is faced with, coupled with their context specific characteristics and resource scarcity, results in each factor being assigned a different priority. Due to the inability to create any clear set of explanation for divergences or convergences, the rest of this section is presented by focusing on each of the study’s companies separately.

Before going further, it is however crucial to highlight the specific nature of the CSFs of quality at this point to maintain clarity. It became apparent that the companies had much different view on what quality represented for their operations. The underlying assumption of how to deliver quality in theory did correspond to Phusavat and Kanchana’s (2008) and Ibrahim’s (2010) arguments of quality delivering referring to the firm’s ability to fulfill customer expectation by performing better than what was expected, and simultaneously exceeding the level of competitors performance. However, how to realize that in practice significantly differed between the companies, which further matched to Takala et al.’s (2006, p.338) explanation of the CSFs nature being multi-focused and multidimensional. It was noticed that in practice it could be categorized into four dimensions and, thus, required the companies to concentrate on internal performance quality (i.e. employee’s efficiency and level of cooperation and integration), technology quality (i.e. website effectiveness & design, IT enabled service tools, payment methods), service quality (i.e. customer service function, promised and fulfilled terms and conditions) and product quality (i.e. product durability and complexity). Based on this,
similarly to Takala et al. (2006), Ferdows and de Meyer (1990) and Voss (2003), this finding emphasizes the nature of quality representing foundation for the other CSFs contributing to firms’ performance. Thus, we are not going to consider quality as a single CSF or focus on the particular rankings it receives, but include it to each analyzed factor as an underlying influencer. As previously explained, having clarified the role of quality, we next move on elaborating the chosen set of CSFs of each company. As a summary, table 9 listing the prioritized CSFs is presented at the end of this section.

5.2.1 C1 - CSFs for a Market Oriented Prospector

In line with Trkman (2010, p.130), Chen & Popovich (2003, p.685) and Yu (2007, p. 87), in company SC1 it was considered as important to include support and active involvement of management whenever implementing any strategy or business process change or adoption of new systems and technology. As described earlier, typical characteristics for C1 as a market oriented prospector was its eagerness to take risks when it came to implementing new technological solutions to its operations in order to grow in the market. Since these decisions were largely made by following the top-down approach (Freund, 1989, p.23; Ansoff, 1991, p.457), the management consequently made sure that the employees were not left alone with the new implementation but the management followed up the execution actively and offered its support when needed. With this the company also made sure, that re-engineering business processes was made premeditatedly, that is, any organizational level changes that took place as a consequence of implementing a new IT solution remained under control. In line with Chew et al., (1991) this signed from the company’s aim to implement changes from a business perspective and not from an IT perspective that many times would lead to failures because the technologies does not fit to the business processes (Umble et al., 2003, p.245). Together, these CSFs relate both to the technology quality and internal performance quality that refers to the firm’s ability that through internally efficient actions produces quality for customers and possibly simultaneously outperform competitors.

The following three relevant CSFs for C1 were flexibility, service provision and customer acceptance/focus, which were enabled by the firm’s characteristics of being a market oriented prospector and, thus, having flexible organization that aimed to differentiate its offerings from the competitors. As also Phusavat and Kanchana (2008) and Ibrahim (2010) explain, flexibility occurred mainly by having enough reserve capacity (e.g. part-time employees) to be able to cope with unexpected circumstances. Also the ability and, more importantly, willingness to customize the customer offerings were seen as typical for SC1. By using IT enabled service tools such as the real time chat, it was possible to rapidly offer service to the customers’ specific inquiries and, thus, promise timely delivery by, for instance, providing free express delivery for orders. This is directly linked to service provision that indicates of the firm’s capability to fulfill in a dependable and speedy manner, and in some cases exceed, what has been agreed on with customers in terms of quantity and quality (Phusavat & Kanchana, 2008; Ibrahim, 2010). As C1 seems to understand the importance of customers in process delivery and are therefore capable of fulfilling customers’ expectations, in addition to afore-described technology and service quality, together these two CSFs summarize the firm’s aim to focus on service quality, and thereby achieve the CSF of customer acceptance/focus.

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5.2.2 C2 - CSFs for Selling Oriented Prospector

Company C2 ranked *know-how/training* being the most valuable CSF for their company. As a selling oriented prospector, the company intensively utilized technology to improve its operations and was seen driven by IT. Therefore, appropriate IT skills were highly valued and required from the employees. Contrary to Wu et al. (2014, p.8) and Bingi et al. (1999, p.13) who argue for the importance of training the workforce to be able to make optimum use of the employed technology, to internally train the employees was not typical for the company. On the other hand, it showed that the employees took own initiative and learned specific technical skills on their spare time, which was highly appreciated by the management. When it came to skills such as customer service or having technical knowledge of the sold products, it was highlighted that the employees would learn them on the job.

*Flexibility* was ranked as the second important CSF for the company, which is typical for prospectors (Kearns, 2005, p.1024). Organizational flexibility occurred in aspects, such as empowerment where employees were given some degree of freedom and responsibility for individual decision-making regarding their specific organizational tasks. As customizing product and service offerings, was not something that was valued, in accordance to Phusavat and Kanchana (2008) and Ibrahim (2010), the company instead aimed at offering diverse product lines. To be adaptable in the used technology, for instance, building a new website based on the sold products indicated flexibility and, again, demonstrated typical selling oriented prospector behavior (Noble et al., 2002, p.26; Kearns, 2005, p.1024).

Interestingly, the company saw *cost focus* to be relevant for the operations. Linked to theory, focusing on costs is representative of market oriented defenders as they take a conservative view of new product development, seeking to maintain the same, limited product line with an emphasis on high volume and low cost (Chang et al. 2003, p.665 & Kearns, 2005, p.1024). Selling oriented defenders, in turn, do not regularly seek cutting costs given their focus on product and technology innovation (Kearns, 2005, p.1024; Levenburg et al., 2005, p.55). To speculate, this could probably be explained by the company’s current innovative platform, which allowed the company to save, for instance, in new technology investments.

The above described demonstrates strongly the firm’s focus on both *technology* and *internal performance quality*. This is however not seen as originating from the aim to satisfy customers, but rather to make the internal performance as efficient as possible. Therefore, it was rather surprising to notice that the company ranked both *service provision* and *customer acceptance/focus* as two of the top five CSFs. As typical for companies operating in the e-commerce sector, the interviews with company SC2 revealed that service provision took place by following typical customer satisfying dimensions, namely trying to deliver what was promised by providing speedy delivery and selling products with satisfying quality and price. Also customer service seemed to hold satisfying level of professionalism. Connected to the quality dimensions, this revealed the company’s focus on both *service* and *product quality*.
5.2.3 C3- CSFs for a Market Oriented Analyzer

Customer acceptance/focus was recognized as the first priority CSFs for company SC3. Typical to a market oriented analyzer of C3 being a rather small actor in a unique market segment with a limited product line did recognize the need to closely listen to the customer and understand what they really want. Linked to service and product quality, this was mainly seen to consider product offerings, but also factors, such as, through which IT service channel the customers mostly wanted to receive service were relevant. In line with Phusavat and Kanchana (2008) and Ibrahim (2010), overall, it was remarkably seen, that in order to survive in the marketplace the company did consider customer knowledge and its utilization for fulfilling customer expectation was crucial.

To be able to deliver exceptional customer service, know-how/training was considered as the second CSF within the company. In accordance to Wu et al. (2014, p.81) and Summer, (1999, p.299) the recognized know-how concerned both a particular area of the business, i.e. product expertise, and technology. As already mentioned, the company offers a limited range of highly valuable products. Therefore, it was expected that the persons working for the company had knowledge about the product range. Particularly facing the customer service, the company seemed to be able to deliver high quality service and provide expert support when it came to product specific inquiries. This was mainly due to the front-line employee’s serious hobbyist background within the sold product category. Apart from the delivered service quality, the company also emphasized technology quality. The CEO was highly skilled in this area due to the person’s IT- consultancy background, which allowed the company to efficiently utilize new technology. Conversely to the customer-centric approach, the technology orientation was mainly seen to occur due to the aim of achieving operational efficiency. As elaborated in section 2.1.2 it was particularly noted that customers of the C3 did find the role of technology as important as the company did.

Interestingly, the company ranked costs to be one of the most important CSFs to follow. As previously discussed, cost focus of the company was seen as medium. Taking operation costs as an example, the company tried to cut variable costs by working as efficiently as possible by employing the IT solutions that they developed internally. Simultaneously, fixed costs of salaries and occupying a facility was kept low. However, by limiting these costs, the company was able to invest in its service quality. This is directly linked to Phusavat and Kanchana (2008) and Ibrahim (2010), who explained cost focus to imply the ability of an e-commerce company to produce its offerings at a low cost by proactively managing the quality of the operations, and explains further about the company having high level of internal performance quality as well.

The next CSF of achieving service provision by being dependable and speedy in fulfilling what has been agreed on with customers in terms of quantity and quality (Phusavat and Kanchana (2008); Ibrahim (2010) is related with the above written. Not only did the company succeed in achieving internal performance quality, but also this further enabled them to deliver service quality in terms of providing speedy customer support and deliveries, for instance. Further emphasizing the CSF of flexibility, by having flexible organization structure due to its small size, the company was able to make fast decisions, thus, also improving customer service. However, contrary to Phusavat and Kanchana’s (2008) and Ibrahim’s (2010) statements about flexible firms being willing to customize their offering, SC3 discouraged customization requests.
5.2.4 C4 - CSFs for A Market Oriented Defender

Similar to the market oriented prospector also the market oriented defender C4 ranked management support and change management/re-engineering business processes as the two most important CSFs for its operations. Whereas the decisions were taken at the top level, it was seen as crucial to have the operations manager to operate as a liaison between employees and top management who were not frequently present in the daily operations as the headquarters was located in a different country from the office and warehouse. To emphasize the supportive role of the operations manager running the daily operations was important for the business. Linked to Trkman (2010, p.130) and Eid et al., (2002, p.112), as the company recently went through an organizational change, it was further seen as vital to manage the change by having support and active involvement from the operations manager. By this it was enabled that the internal performance quality was kept on the aimed level by avoiding a failure in implementing the change in accordance with the policies of the company.

Customer acceptance/focus was considered an important CSF. It was highlighted that the operations became more customer-centric due to the organizational change. To understand what the customers valued did influence the choice of the product line and its quality, and it was seen as one of the main building blocks to consider. Despite the product quality, customer centricity also affected the service quality and technological quality of the company. Connected to theory, market oriented defenders concentrate on their narrow and relatively stable product-market domain (Kearns, 2005, p.1024), which is also what the company was doing by currently operating in a specialized niche market with their product line consisting of specialty sports and outdoor gear.

As having the right products to sell was crucial, the company perceived not only the role of purchasers choosing the product line, but also customer service agents who received customer inquiries about the products being central. Therefore, it mainly hired pure experts taking care of these areas, which, in turn, directly affected the offered service quality positively. For instance, each of the purchasers and customer service agents had a professional background in the specialty sports and outdoor gear industry, which is why they were able to choose the most relevant products to sell as well as offer high quality support when it came to product specific inquiries. Furthermore, to focus on customers and accepting their input also helped the company with its technology utilization. As mentioned, the company had rather low level of technology focus as it was mainly maintained manually. This often resulted in errors in the web page functionality. Thus, the role of customers to inform whenever a failure occurred was highly valued. Connected to theory, also Liang & Huang (1998, p.32) speak for the importance of gaining customer feedback in matters determining customers’ acceptance of the perceived usefulness or ease to use of a firm’s web page.

To fulfill the target customers’ expectations by performing better than what was expected, and simultaneously exceeding the level of competitors’ performance, the company underlined the importance of aiming to have flexible operations. Matching what Phusavat and Kanchana (2008) and Ibrahim (2010) stress as valid for e-commerce firms, also C4 aimed for being capable to cope with unexpected circumstances by carefully forecasting the demand and planning the product range and amount of warehouse staff in accordance. Furthermore, it also aimed to customize the customer inquiries to a high degree. This naturally led the company to the deliver the CSF of service provision, which the company
aimed to fulfill by promising, again, free and short delivery time together with superior quality products and customer service.

Table 9. Summary of Prioritized CSFs.

<table>
<thead>
<tr>
<th>Ranking</th>
<th>C1 Market Oriented Prospector</th>
<th>C2 Selling Oriented Prospector</th>
<th>C3 Market Oriented Analyzer</th>
<th>C4 Market Oriented Defender</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Management support</td>
<td>Know-how/Training</td>
<td>Customer acceptance/Focus</td>
<td>Management support</td>
</tr>
<tr>
<td>2</td>
<td>Change management / Re-engineering business processes</td>
<td>Flexibility</td>
<td>Know-how/Training</td>
<td>Change management / Re-engineering business processes</td>
</tr>
<tr>
<td>3</td>
<td>Flexibility</td>
<td>Costs</td>
<td>Costs</td>
<td>Customer acceptance/focus</td>
</tr>
<tr>
<td>4</td>
<td>Service Provision</td>
<td>Customer acceptance/Focus</td>
<td>Service Provision</td>
<td>Flexibility</td>
</tr>
<tr>
<td>5</td>
<td>Customer acceptance/Focus</td>
<td>Service Provision</td>
<td>Flexibility</td>
<td>Service provision</td>
</tr>
</tbody>
</table>

5.3 Service Delivery Systems

In this section we deal with the granular analysis of the entire service aspect of the e-commerce companies in our study. We start with the service process model because it comprehensively addresses the firm’s entire business. Once we classify our companies in different areas we focus on how the facility is designed before considering other operational elements such as capacity planning, technology and equipment. These aspects inform us as to how a service can be planned and designed. Subsequently, we look at the human and intrinsic elements of the service that determine its performance. Before evaluating the service failures and recoveries. Unlike the theoretical frame of reference where we discussed real time chat theories separately, in this chapter the relevant concepts will be integrated where appropriate.

5.3.1 Service Process Model

Based on the responses to the service process typologies proposed by Schmenner (1986; 2004), Silvestro (1992;1999) and Sung-Eui (2005) (also see figure 3) we have tabulated them in Table 10. Table 11 takes a simple score based on Table 10 and helps classify the individual company. The highlighted box represents where the company is deemed to be based on the responses. C2 and C3 are firmly in the mass services dimension, while C1 has a few elements from service shops and professional services.

C4 on the other hand has an almost equal distribution of elements between mass services and service shops thereby indicating they are a service shop. All aspects that were less than one-third of the element were considered low, one-third to two-thirds as medium and more than two thirds as high. In terms of throughput time only the time on the website was considered and where the respondent was not sure we verified the information in
Alexa an online tool that calculates the time a customer spends on the website. In other instances we have largely gone with the subjective view of the respondents. We believe that the classification has been done as accurately as possible.

Table 10. Service Process Classification.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Delivery</td>
<td>Offline</td>
<td>Offline</td>
<td>Offline</td>
<td>Offline</td>
</tr>
<tr>
<td>Tangible Product</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Substitution into Online</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Throughput Time</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Degree of Labour</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Customization</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Volume</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Product/Process</td>
<td>Process</td>
<td>Product</td>
<td>Product</td>
<td>Product</td>
</tr>
<tr>
<td>People/Technology</td>
<td>Mixed</td>
<td>Technology</td>
<td>Technology</td>
<td>People</td>
</tr>
<tr>
<td>Customer Contact</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Front/Back Office</td>
<td>Back Office</td>
<td>Mixed</td>
<td>Mixed</td>
<td>Mixed</td>
</tr>
</tbody>
</table>

Table 11. Classification Based on Score.

<table>
<thead>
<tr>
<th>Classification</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>C4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Services</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Service Shops</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Mass Services</td>
<td>6</td>
<td>9</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

As stated by Kellogg & Nie (1995, p.330) companies in the mass services dimension are more focused towards costs and efficiency due to the large volume of customers and those in the professional services dimension are differentiation oriented. Based on our results B2C e-commerce companies are more likely to fall in the mass services dimension with a few falling in the cusp of service shops and mass services as is the case with C4. Since none of the product oriented e-commerce firms have unique products for each individual customer nor do they communicate with 100 percent of their customers it is safe to presume that companies in this category cannot be considered professional services. When combining the strategic typology of the companies with the service classification we notice that there is a discrepancy with the extant literature. Kellogg & Nie (1995, p.330) suggest that prospectors can only be in the professional services dimension. No company in our study has a strong professional service orientation despite being prospectors. We also observed that no company exists perfectly in one dimension. C1 and C4 for example have some elements of professional services and service shops in their
service process. Using the illustration of C4 based on their orientation are market oriented
defenders. Defenders as we know are more cost focused but market oriented companies
are seeking to provide value and therefore need to also consider differentiation aspects.
This would require making a trade-off between the two dimensions. For example, C4
could possibly shift their orientation from people to technology to accrue a cost benefit
while changing from a product to a process focus in order create more value for the
customer thereby synergizing their strategic orientation with the process design and
delivery. This shift for instance could impact the real time chat process in a number of
ways. It could affect the type of enquiries that come into the chat channel which in turn
could affect the duration of the customer contact time. Schmenner (2004, p.340) alludes
to moving along the diagonal to improve productivity and laterally for profit. Kellogg &
Nie (1995, p.330) consider this in terms of costs and differentiation. Combining both
perspectives companies can align processes based on their strategic objectives by
managing costs or improving customization. Likewise, companies based on their
objectives can reduce elements from one aspect of the dimension and add it to a dimension
in which they intend to increase their focus.

5.3.2 Design of Facility

e-Servicescape
Our respondents were all unanimous in the importance of e-servicescape in the design of
the facility. Respondents in C1, C2 and C4 spoke about having a clean and simple to
navigate website as well as clear communication of the website’s offerings. This aligns
with the design aspects put forth by Jeon & Jeong (2009, pp.4-5). C2R1 in particular
talked about how a number of visitors exit directly after reaching the home page. Only
six percent of the visitors search for a product once they land while on the homepage
while three percent proceed to the cart after viewing one page. Geissler, (2001, p.497)
argues for the need for good website design to convert visitors to customers. Jeong &
Jong (2009, pp.4-5) add that good design also ensures that a customer stays longer on the
website. The drop in the visitors points to a possible inefficiency in the design aspect of
the e-servicescape referred to above. C3R1 was the only one who also spoke about the
importance of also showing up on the first two results pages of search engines in order to
important elements in the search and slogan aspect of e-servicescape. Having the right
keywords and metatags serve as signs to help customers seeking specific products and
services in the right destination (Jeon & Jeong, 2009, p.5). C2R2 also spoke of assistance
which was a reference to the chat agents who interact with the customer. C3R1
highlighted product and packaging information, while C2R2 pointed to having pricing
information clearly communicated. This connects with the elements of interaction,
website and information adequacy in the functional aspect of the e-servicescape (Jeon &
Jeong, 2009, p.5). Different respondents also touched upon aspects such as logos, product
videos, product pictures and visual appeal. These confirm the presence of the ambient
aspect of the e-servicescape.

In our assessment we consider the design, search and functional aspects as more important
than the ambient aspect. The search aspect directs visitors to the website, the design and
functional aspect influences whether they stay long and convert into a customer. From a
process design and improvement perspective it is important that e-commerce pay
attention to these aspects to ensure that as many visitors as possible convert to buying
customers. When considering real time chat in the context of this process the ability to
interact with a customer support person compensates for any deficiency in either the design, functional or search aspect of the e-servicescape. Consequently, deficiencies in the e-servicescape determine the type of volume of chat requests received.

**Technology & Equipment**

C1 & C4 has a dedicated customer support team to handle the chat even though people from other departments are called in to help when required. This aligns with Slack et al. (2010, pp.221-223), indicating that a specialized or highly skilled staff points to the technology in question being less automated as it must be operated by personnel to be effective. In C2’s case they seem to be using an open source system. C2R1 also highlighted the ease with which they were able to implement the service on their website. C1R1 spoke of the convenience of setting up the service with minor tweaks like color schemes and language. He particularly referred to how much time it would have taken his team to develop a chat service from scratch and pointed to the quality of the different software available in the market. This confirms Slack et al’s (2010, pp.221-223), position that technology with higher costs are generally associated with general purpose technology. Other features such as creating tickets, canned responses, contact forms and email facility while being offline as pointed out by the respondents indicate the ability of the software to meet a wide range of demands. While real time chat appears to be specialized in what it offers, due to the ease of operations and implementation the theory suggests that it is a more general purpose software. Leggett (2014, pp.5-9) also talks about the need to personalize the real time chat system in terms of colors and language something that was confirmed by our respondents. The respondents in general and C4R2 in particular speak about how real time chat is akin to having a personal assistant in a physical shop. This feature of real time chat mitigates concerns raised by Xue et al. (2007, p.536) about performance challenges raised by self-service technologies.

**Capacity Planning**

All the companies in our study seem to have a fairly good ability to forecast demand and are aware of the various spikes and dips in demand. C2’s business appears to be the most stable in terms of demand, with relatively constant site traffic throughout the year. C1 on the other hand while having good ability to forecast demand seems to have spikes around popular festivals and parts of the season compared to other times in the year. C3 too has a relatively predictable and fixed demand while C4 has more seasonal demand as well. C4 is also aware of the demand fluctuation within a day based on their customer location and time zone. C1 has a good understanding of the weekly pattern. Aligning with Betts et al., (2000) who considers it important to also understand the peaks and drops in demand in different contexts. C4R2 also spoke about how chat requests increase after a promotional campaign. Betts (2000, p.186) confirms the need for knowing specific events that trigger demand spikes. All respondents were also cognizant of the waiting times. C1 and C2 were aware of the reneging time. But none of the respondents were aware of the arrival rate. Slack et al., (2010, p.322) emphasize the need of knowing these aspects in order to plan capacity. Each of the companies had different ways in which it planned for capacity, C1 for example hires extra part time staff. C2 and C4 on the other hand have dedicated resource for customer support and in the event of a demand spike seek help from other department members if they are available or work overtime when necessary. Contrarily, C3R1 is solely responsible for customer support and when occupied with other activities does not attend to chat requests. These various approaches align with the strategies proposed by Slack et al., (2010, pp.313-314) namely hiring part time staff as seen in C1, idle time and over time with respect to C2 and C1 and level capacity planning.
as is the case with C3. One of our observations in these approaches is the impact on quality. Hiring qualified and competent staff with the right skills as opposed to taking the help of a colleague has varied impact on quality of the function with the former offering more quality than the latter. C4R1 had remarked in the interview as to the deterioration in the chat quality since its introduction. On the other hand using internal resources reduces cost implications. This leads us to surmise that when planning for capacity not only must the demand side be considered but also the cost and quality implications.

5.3.3 People, Performance & Evaluation

Empowerment
C1R2, C2R2 and C4R2 all agree that they were given a lot of freedom to function and is in conjunction with Silvestro et al.’s (1992, p.67) the concept of empowerment. C1R2 in particular shared how the CEO had given her a very simple mandate which was to ensure that customers are happy. This confirms what Wilder et al (2014, p.9) highlight on the importance of communicating the role of the employee in the service process. C2R2 also talks about how the freedom to give suggestions to improve processes is considered seriously due to the informal environment in the company. This is confirmed in Wilder et al., (2014, pp.9-10) position that a favorable climate in the company is critical to how employee performance and empowerment. However, C4R2 while acknowledging that there is a lot of freedom given to individuals says it creates issues of standardization and consistency in the service delivery. This could be explained in terms of the absence in communicating expectations by the management as an integral aspect of empowerment (Wilder, 2014, p.9). The contrast in this communications can be perceived between C1 and C4. In the context of chat, empowerment allows the customer support person to take decisions concurrently with the customer interaction and this has implications on quality by taking actions that help the customer and speed through prompt response of the service (Takala et al., 2006, p.339).

Moment of Truth
Adapting Leggett’s (2014, p.5) suggestion that customer journeys be mapped to understand different points where real time chat can be used we asked our respondents to describe their respective customer journeys. Our respondents were largely consistent in describing the journey with varying degrees of detail. They outlined the process as follows. Customers typically land on the home page from where they search for their product using the search function or navigate using the menu. Once they find the product they check availability and shipping times before adding the item(s) to their cart. They then provide their shipping and payment details and then confirm the purchase. Using Bitner’s (2008, p.72) service blueprinting process the customer journey can be likened to customer actions. This allows us to understand ‘what’ the customer does during the process. We also asked respondents to tell us instances in the process where the customer interacts with them. C1R2 and C2R2 mentioned customers contacting them for product information such as size, availability and shipping time. C3R1 included product assistance in terms of upgrading an existing product with new parts or modifying the product. C2R2 and C4R2 both mentioned payment assistance. C4R2 also indicated that some customers seek assistance in the use of coupons etc. According to Bitner et al. (2008, p.72) a moment of truth is when the customer interacts with an employee of the company and the above instances exemplify this. We combined the responses to create an aggregated service blueprinting process for the e-commerce companies in our study.
The invisible actions of the employee and the support processes were filled up based on other responses, observation and the chat logs.

The customer journey can be divided into two distinct phases. Phase I involves product search and selection. The moment of truth interactions in real time chat here revolve around product enquiries that are predominantly non-technical in nature. We refer back to Jeon & Jeong’s (2009, pp.5) functional aspect of the e-servicescape that is concerned with information adequacy and retaining the customer on the website. It can be surmised that moment of truth interactions happen due to a deficiency in the information adequacy component of the website and is therefore a useful consideration when designing the chat process in order to control the number routine enquiries that come. That is not to say that these enquiries can be completely eliminated, but rather reduced so that customer service agents could focus on more value adding aspects such as product recommendations and cross selling and upselling. Leggett (2014, p.6) considers product assistance related queries to be of more value to both the customer and company when compared to product availability which is of more value to the customer but less for the company. Phase II is concerned with transactions and payment. These queries unlike Phase I can be technical in nature and often require the customer support person to interact with a member of the technical team. C1R2 however did mention that some recurring payment issues were due to mistakes made by the customer and by recording these errors and being trained by the technical team with the corresponding solution they were able to reduce dependency. This indirectly connects with Leggett (2014, p.9) who underlines the importance of training customer service agents in order to ensure success in service process.

A third phase that emerged in the course of the interviews and chat logs involved post purchase moment of truths. These largely revolve around issues with delivery and other aspects. These will be discussed under service failures and recoveries segment as they are closely linked with that. The moment of truth when combined with other aspects of process design allows managers to not only improve processes that directly affect the number of interactions that take place in the real time chat process but also determine the kind of interactions that take place.

Performance Outcomes
Respondents cited customer rating and feedback inside the real time chat window as the main measure of performance with C2R2 specifically mentioning customer satisfaction. C1R2 also mentioned keeping a track of the total number of interactions on a daily basis. Roth & Menor, 2003 (p.152) talk about performance measurement in terms of service quality. The chat rating which is provided by the customer aligns with the aforementioned notion of service quality. C2R2 in addition to the above factors included speed and efficiency. These aspects indicate an affinity for the performance objectives of quality and speed, where quality is governed by ensuring efficiency aspect of providing the assistance through chat with few errors and prompt response to customer requests corresponding with the speed (Takala et al., 2006, p.339). C3R1 also includes revenue as a means to gauge performance. This coincides with Roth & Menor’s, (2003, p.152) position that business performance is critical. C4R2 mentioned tracking whether a customer interaction resulted in a sales as an important measure. C3R1 also indicated that sales tracking can be done from the system. Neither of the above respondents could however assert that chat results in sales either due to no active tracking or capability to do so. Leggett (2014, pp.3-4) suggests real time chat can be attributed with higher sales. But this seems inconclusive in our study due to the absence of any definite proof.
In the context of designing the real time chat process it is important for managers to know how it can and should be measured. This then allows the customer service teams to function and deliver the process in a manner that meets these objectives.

Integration

When considering integration through the lens of the presented theory, we focused on external as well as internal integration specific to real time chat function. Taking the external perspective. Respondents indicated they had little or no communication with the real time chat software vendor. C1R1 accidentally discovered the useful feature of canned responses in the real time chat software. C3R1 acknowledged that they only use 20% of the possible features in the real time software. Stock et al., (1998, p.46) indicate the need to nurture relationships with suppliers and vendors. This seems to be absent with the companies in our study. For instance better relationship and external integration by way of communication with the vendor could have allowed C1R2 to know about the important features in the software earlier. This could have benefited the company in terms of better service delivery and performance within the real time chat function. Managers should consider integrating with external vendors to derive maximum benefit to the real time chat function.

The companies in our study also had very little internal integration between the real time chat software and other technologies. However, when it came to the customer service team at C1, it was noted that they used a lot of technologies that complement their function. They communicate with other teams using a messaging application called slack. The application also allows the team to tag or lock requests. This allows the customer service team to track a specific request as it moves from one process or department to the other. They also have access to a system that allows them to check stock and order status for products. Thereby allowing them to respond to the customer almost immediately and improving the quality of service. C3 for instance uses a software that allows them to see what products customers have added to their cart. For customers who have a high order value but have remained inactive for a while will be contacted by the company over a real time chat session. C2R1 on the other hand discontinued a similar software from their website. They cited the need to be careful with the timing especially when it contact should be initiated with a customer. Leggett (2014, pp.6-7) emphasizes the need to target high value customers using complementing tools and technologies as well as knowing when to intervene. Additionally, the customer support teams in C1 co-ordinate with different departments most notably purchase, warehouse, marketing and the web editor. For example the marketing team posts a lot of videos on YouTube and if they forget to mention important product details in the video description it leads to more enquiries to the customer service team. Therefore, by communicating critical feedback to the department the teams can operate more efficiently. Menor et al., (2001, p.286) indicate the importance of different functions in service operations to be closely integrated for more efficiency and success. Again here when designing the real time chat process the manager can evaluate how internal and external integration can be leveraged to achieve process objectives as well as strategic objectives of the company. For instance an e-commerce firm that wants to improve its performance objectives in terms of costs and speed should have strong integration between purchase, supply chain and the warehouse. The ability to retrieve important information from the system without having to communicate with the different teams manually saves cost by way of increased
productivity and increases the speed of response to customers which also has a derived benefit of improved quality in the service.

In terms of knowledge and learning C2, C3 and C4 do not have a formal way of documenting and capturing knowledge. Most of the teams and employees tend to verbally and informally communicate with each other. C1R2 however indicated that they use a tool called Trello where they document and record all the commonly recurring issues and how they could be handled. C4R2 however emphasized on the need to communicate quickly, precisely and clearly between teams to ensure that service quality is not affected. As mistakes increases the process workload. C2R2 also spoke about the informal work environment which encouraged them to give suggestions on improving processes. This aligns with So & Bolloju’s (2005, p.39) suggestion that a positive culture aids sharing of knowledge. Roth & Menor (2003, p.153) proposes strong alignment of operational and business performance. The above instances as gathered in our study indicate how operational aspects are integrated between departments from a functional technological and knowledge standpoint. However, we see knowledge and learning as an area that the firms in our study could improve upon.

5.3.4 Realized Service Delivery

Roth & Menor (2003, p.153) indicate the benefits of having a service delivery system that provides competitive capabilities. C1R2 said that the ability to respond quickly to customer queries gives the company an edge over the competition. C4R2 concurred with this saying that real time chat re-creates the atmosphere of a real store where a customer walking in can get help with their purchase. C2R2 believes that having real time chat reduced the inhibitions of customers to ask questions that they may otherwise hesitate to ask in other circumstances. C3R1 suggests that competitive advantage can be achieved when the company initiates the chat with its website visitors. C4R2 spoke about reducing mistakes in various parts of the process. They referred to both operational issues like poor warehouse and stock management as well as technical issues on the website that increase the number of customer service questions. He also spoke about standardizing how customer agents dealt with customers as there is a lot of variation at the moment leading to a confusing experience for customers. These point to a need service quality as well. These aspects tie in well with Menor et al. (2001, p.289) notion of service quality proposed in our theoretical frame of reference. The need for standardization matches Cook et al’s, (2002, pp.165-166) discussion on the need to script service encounters.

<table>
<thead>
<tr>
<th>Service Failures</th>
<th>Chat log transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow / Unavailable Service</td>
<td>&quot;Hey, I haven’t received my order even though I ordered it already XX (Order number)&quot;</td>
</tr>
<tr>
<td>Special Request</td>
<td>&quot;The order I have placed (Order No.) is A GIFT FOR A FRIEND: please do not enclose billing note in the parcel when you'll shipping it&quot;</td>
</tr>
<tr>
<td>Website system failure</td>
<td>&quot;I just buy few product and try to check out then I cannot see 5% discount info?&quot;</td>
</tr>
<tr>
<td>Packaging Error</td>
<td>&quot;The product X I ordered is missing, I ordered it with 48h express but just the product Y were delivered&quot;</td>
</tr>
<tr>
<td>Size Variation</td>
<td>&quot;I need to return these boots as they just don’t suit my feet.&quot;</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Out of Stock</td>
<td>&quot;I have placed an order for product X now see that the green I’ve ordered are not in stock. When are they likely to come into the store?&quot;</td>
</tr>
<tr>
<td>Service Opportunities</td>
<td></td>
</tr>
<tr>
<td>Product Availability</td>
<td>Hey! Me and my class will dress up as X and Y for our final show on 2/6 and are interested in your suits, however, saw that there are only 5 pcs left. Will you get more?</td>
</tr>
<tr>
<td>Product Assistance</td>
<td>&quot;Hi, I am trying to choose between the product X 2016 or the product Y 2016 and I am having a hard time deciding&quot;</td>
</tr>
<tr>
<td>Warehouse Pickup</td>
<td>&quot;Hey, Does your warehouse still locate at XX? Can I pick up my order?&quot;</td>
</tr>
<tr>
<td>Payment</td>
<td>&quot;Hi, why does the system says that I have a wrong phone number when I try to pay my order?&quot;</td>
</tr>
<tr>
<td>Price Match</td>
<td>Hi Retailer X have this product for £90.00 would you be able to price match it?</td>
</tr>
</tbody>
</table>

**Renewal, Service Failures & Recoveries**

Table 12 shows the service failures and opportunities that we compiled from both our interviews as well as chat logs. Combining Forbes et al., (2005) service failure typology with Leggett’s (2014) concept of opportunistic and defensive actions we can categorize service failures as defensive actions where the customer service person is reacting to a mistake committed by the company and tries to satisfy an unhappy customer. Opportunistic actions can be comparable to service opportunities where the customer is speaking specific information or assistance to complete their journey. As mentioned earlier the customer journey has the product search and selection phase and the transaction and check out phase. In addition to this, based on the chat logs we were also able to classify a third phase which is the post-sale phase where this refers to any moment of truth that takes place after the customer has completed a transaction. What is interesting to note is that all failures largely take place in the post-sale phase. It was also the frequently recurring issue in the chat logs. Service opportunities on the other hand appear in the either the product search and selection phase or the payment and check out phase. As suggested earlier by Leggett (2014, pp.5-9) payment, product assistance and product availability are the events that hold the greatest value to the company and the customer. Therefore, any company looking to improve either the quality of its service or even sales must focus on these three areas by proactively initiating chat with customers. Consequently, the company must at the same time attempt to reduce the number of failure oriented interactions that take place. In order to do this, changes and improvements must be undertaken in the service process elements of the company discussed earlier. So for example C4 could increase its technology focus.

In terms of recoveries the strategies adopted by the companies to appease the aggrieved customers were similar and matched with the recovery strategies suggested by Forbes et al. (2005). We were unable to find all the recoveries mentioned in the literature but this was more on account of the limited chat transcripts that we had at our disposal. While recoveries do help appease customers, it is our observation that it costs the company time,
money and effort to carry out. So as mentioned above, any company must strive to reduce the number of failures by improving its efficiency in other processes, so that the customer service resources can focus on adding value to the aforementioned service opportunity areas.

5.4 Combined Analysis

The final part of our analysis focuses on scrutinizing the strategic and operations strategic factors determining the design of the service delivery system in our study. This is done in two phases. First, we integrate the e-commerce service operations strategy CSFs, which were discussed in the first part of the analysis, with the key strategic design choices described in the second part of the analysis. To conclude we present an overall service design perspective of real time chat combining the orientation, typologies and the most salient service operations strategy CSFs in the context of the service delivery systems.

5.4.1 Salient CSFs

As mentioned above, this phase consolidates the e-commerce service operations strategy CSFs with the strategic design choices. More particularly, we combine the dimensions of design of facility and people, performance and co-ordination with the CSFs that based on our analysis occurred the most frequently in these settings. As can be seen in table 13, the CSF of (1) service provision and (2) customer acceptance/focus were integrated with five of the dimensions indicating them to be pivotal determinants of the strategic design choices. (3) Flexibility was the second most reoccurring CSF and determined four of the dimensions of the strategic design choices. (4) Costs appeared in two of the dimensions followed by (5) management support, and (6) know-how/training both determined one of the dimensions. As the CSF change management/re-engineering business processes and the strategic design choices dimension performance outcomes seemed impertinent they were excluded from the analysis. Moreover, as argued above, quality was seen as a foundation for the other CSFs contributing to firms’ performance. Therefore, we are not going to treat it as a separate CSF in this part either, but rather calling it a “quality input” lends relevance in terms of the four quality elements; internal performance quality, technology quality, service quality and product quality at the end of each section.
Table 13. Overlap between E-commerce Service Operations CSFs & Strategic Design Choices.

<table>
<thead>
<tr>
<th>CSF- Service provision</th>
<th>e-Servicescape</th>
<th>Technology &amp; Equipment</th>
<th>Capacity planning</th>
<th>Empowerment</th>
<th>Moment of truth</th>
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CSF- Service provision

E-servicescape: The e-servicescape dimension (Jeon & Jeon, 2009) finds salience in the service provision CSF that posits fulfillment of the service promise (Phusavat & Kanchana; Ibrahim, 2010). Jeon & Jeong’s (2009, pp.4-5) classification points to both the design aspects and the functional dimensions. Search aids and slogans are analogous to signage and directions we see inside a store. When considered in the context of a website, these are visual cues that aid and direct the customer to finding the product that they seek and saves time and effort by having fast responsive websites. Taking a more granular perspective on chat, the visual cues of the chat window within the website serves as a reminder to the customer that help is at hand to assist them in their journey through the website in case they face any difficulty. Functional design and more specifically interaction with the company’s employees represent this aspect. This fits in with the chat function and can be considered an integral element.

Technology & Equipment: Service provision directed the dimension of technology and equipment in terms of the specific features the real time chat software contained. In line with Phusavat and Kanchana (2008) and Ibrahim (2010), the chat function’s features enable the companies’ speedy and dependable service delivery. For instance, in the case of product specific customer inquiries, being able to know which page of the web shop the customers were viewing enabled the chat agents to provide speedy service, as they knew exactly to which product the customer inquiry. Also, the feature of seeing what the customers were typing before they actually sent the inquiry allowed for the customer agents to prepare relevant responses in advance, which again demonstrated speedy service. As posited by Takala et al., (2006, p.339) dependability, in turn, arouse from features such as ticket creating or message archiving, which, in case necessary, enabled the customer agents to return viewing particular inquiries in case, and, thus resolve any misunderstanding or miscommunication.

Capacity Planning: Capacity planning is impacted by the presence of the service provision CSF. The need to provide services that are fast, efficient and reliable has been well grounded in literature (Phusavat & Kanchana, 2008; Ibrahim, 2010). In the context
of the chat function it is important to have the requisite amount of customer support agents to meet the customer support requests that come at any given point in time. Slack et al’s, (2010, pp.313-314) proposed capacity planning measures are pertinent. Companies that have service provision CSF among their priorities are likely to adopt chase demand approach to capacity management while companies that do not have service provision as a key priority are likely to adopt level capacity measures. It follows that companies that have the optimum capacity in terms of customer support agents are better placed to meet the service provision CSF.

Moment of Truth: The CSF of Service Provision is characterized by having fast, reliable and quality in the service offerings (Phusavat & Kanchana, 2008; Ibrahim, 2010). Combining real time chat with the moment of truth perspective as proposed by Bitner et al. (2008) we observe that a strong understanding of the customer journey is critical in the service provision process. When the customer support agents are aware of the various parts of the journey where the customer is likely to face issues as well as the best means of resolution, this results in high level of service provision.

Integration: Phusavat & Kanchana (2008) and Ibrahim (2010) emphasize the need to provide service with reliability and speed. Menor et al. (2001, p. 286), posit the need for integration to be efficient. When service provision is linked with the integration dimension an important connection emerges. More specifically, when we consider service provision and integration from a chat perspective, it is important to note that in order for customer agents to successfully assist customer queries and issues, the need for integration with other departments and systems is important. Having the ability to for instance, check stock and inventory status as well as being able to communicate quickly and efficiently with other teams can be viewed as an important aspect in ensuring quality in service provision.

Quality Input: The connection between service provision and the design of real-time chat process within the company is derived mostly from the aim to achieve service quality in the process. This, in turn, was facilitated by taking advantage of the technology quality of the real time chat, which enabled fast and efficient way of serving the customers. Thus, according to our analysis, the quality dimensions representing the foundation for the CSF service provision in the context of service delivery system of chat were technology quality and service quality.

CSF - Customer acceptance/Focus
E-servicescape: Customer acceptance and focus CSF informs the e-servicescape dimension in important ways. Considering Liang & Huang’s (1998, p.30) input that choosing the right online channels as a key customer acceptance and focus consideration support the inclusion of real time chat in an e-servicescape context. Mayer et al., (1995, p.712) also touch upon web effectiveness that can be linked to e-servicescape. The existence of the chat function in itself on the website or the e-servicescape is said to be in response to its increasing popularity further substantiates it. Jeon & Jeong’s, (2009, p.5) position about interaction with the website personnel fits strongly with the customer acceptance CSF with respect to chat.

Technology & Equipment: Connected to the dimension of technology and equipment, the CSF of customer acceptance/focus was a relevant determinant for the real time chat function. The companies of our study seemed to be aware of that by offering customer-
friendly web pages, they were more likely to fulfill customer expectations leading to successful business transactions. However, Huete & Roth’s (1998, p.48) caution that using self-service technologies reduce selling opportunities due to lack of control over customer actions is mitigated by real time chat. This mitigation is in line with Xue et al.’s (2007, p. 536), assertion of including a human assistance in self-service technologies. Phusavat and Kanchana (2008), Ibrahim (2010), and Roth (1998, p.48) points to be of importance, fulfilling customer expectations, which leads to their satisfaction, an aspect that real time chat addresses.

**Capacity Planning:** Using external sources of stimuli and customer knowledge to serve customers better is a function of the customer acceptance and focus CSF (Phusavat & Kanchana, 2008; Ibrahim, 2010). This applies to the facet of capacity planning as well. The ability to forecast customer demand by way of website traffic allows websites to ensure that they are well equipped with the requisite number of chat agents to handle queries in a timely and speedy manner. Betts et al.’s (2000, p.185), position of understanding peaks and drops in demand especially in technology enabled scenarios seems particularly relevant here.

**Empowerment:** Knowledge as a means to serve customers better is central to customer acceptance/focus CSF (Phusavat & Kanchana, 2008; Ibrahim, 2010). The knowledge of the customer service agent in understanding and appreciating different scenarios and the actions required to mitigate them were seen in our interviews. In order for customer service agents to serve customers better it is important that they are given the freedom to use this knowledge where deviation is required. This aligns with Silvestro et al.’s (1992, p.67) concept of empowerment and is integral to customer acceptance and focus.

**Integration:** Gathering customer knowledge to improve customer service is the bastion of customer acceptance/focus CSF (Phusavat & Kanchana, 2008; Ibrahim, 2010). Combining this perspective with integration in the context of real time chat the use of other software such as cart abandonment or user analytics and CRM could allow the customer service agent to provide better personalized service. This aligns with Leggett’s (2014, pp.5-9) suggestion of integration. Knowledge of processes like delivery and routine technical issues allow customer service agents to understand customer pain points and provide speedy resolution. This aligns with Stock et al.’s (1998, p.46) idea of internal integration.

**Quality Input:** Similar to service provision, so too the CSF customer acceptance/focus determines the company’s design of real-time chat process stemmed from the intent to deliver service quality. Again, this was enabled by choosing to provide chat as one of the primary interaction tools indicating technology quality. Not only did the chat with its features enable internal performance quality of the operations, but also led to service quality by pleasing key customers who seemed to prefer using the function as much, if not even more, as the other IT enabled service tools. Therefore, we argue that the rationale for why customer acceptance and focus was a vital CSF for the design of real-time chat process was the aim to take advantage of the technology quality to realize internal performance quality and service quality.

**CSF 3- Flexibility**

**Technology & Equipment:** The CSF of flexibility entails the capability to function and provide services even in extraneous scenarios (Phusavat & Kanchana, 2008; Ibrahim,
Having technology and equipment that is flexible aids this CSF. The ability of the real time chat software to act as a contact form or email form when customer agents are offline is a case in point. The presence of canned responses that aid automation as well as manual typing imply a high degree of flexibility in the use of real time chat.

**Capacity Planning:** Flexibility as a CSF provides organizations with the ability to respond to unexpected circumstances (Phusavat & Kanchana, 2008; Ibrahim, 2010). In the context of the chat function, having the required personnel to respond and assist customers on the website is an important consideration. However, in the interest of not having an idle workforce that does not add value, the ability to expand and shrink the customer support team in response to unexpected spikes and dips in demand serves as an important feature in designing the service process suggested by Betts et al. (2000, p. 185). Moreover, when capacity was carefully planned and was in balance with the amount of customer inquiries, it enabled offering customization, thus, exceeding customer expectations.

**Empowerment:** Empowerment constitutes an important consideration when viewed from a Flexibility CSF. Phusavat and Kanchana (2008) and Ibrahim (2010) in particular allude to the importance of being flexible in modifying offerings. When linking it to Wilder’s (2014) notion of empowering the customer support agents provides them with the ability to be flexible in how they deal with individual customers.

**Moment of Truth:** Phusavat and Kanchana (2008) emphasize the need for flexibility in offerings and services as an important consideration. Reflecting through the Bitner (2008) service blueprinting technique it is apparent that mapping out the customer journey and moments of truth allow the company to identify scenarios that need standardization and those that can be more flexible. Cook et al.’s, (2002, pp.165-166) concept of scripting also holds prominence in determining the level of flexibility the customer service agent can exercise in the interaction.

**Quality Input:** Flexibility was directly combined to *internal performance quality* in the context of service process design of the real time chat. By organizing and managing the operations enablers, such as the chat agents using the function, in a flexible manner operational efficiency was assured leading further to providing superior *service quality* to customers. Based on this, it is possible to state that having flexibility determining the service process design of chat originates from the aim of reaching internal performance quality and thus service excellence.

**CSF - Costs**

**Technology & Equipment:** Explained by Phusavat and Kanchana (2008) and Ibrahim (2010), controlling costs indicates the firms aim to produce offerings at a low cost by proactively managing the quality of the operations. This was also what most of the companies of our study aimed for, by simultaneously, in accordance with Roth & Menor (2003), acknowledging technology and equipment as integral to the service process. Therefore, to have costs as a determinant for the service process design was seen in the decisions concerning which chat software to acquire. Due to negative influence on cost-efficiency, none were willing to build a chat function by themselves. As a result, two of the companies used cheap or cost free open source systems whereas two utilized fairly cheap, ready to use softwares. This aligns with Slack et al.’s, (2010, pp.222) the decision criteria for technology selection.
**Capacity Planning:** Keeping costs low is a CSF that allows the firm to be competitive in the market. Costs in the context of chat fall within the purview of the front office. Phusavat & Kanchana, (2008) consider this as an important consideration in managing and controlling costs. One way to manage costs is to ensure that there is no idle capacity in terms of manpower in order to ensure a productive and efficient workforce as idle capacity leads to higher costs that do not add value. Therefore, having a capacity planning mechanism that ensures only the right amount of customer support personnel are available at any given point in time ensures costs are commensurate with the level of expected service. This combines well with Slack et al,’s, (2010, p.322) posited concepts of arrival rate, waiting time and reneging rate.

**Quality Input:** In the context of designing the real-time chat process, CSF costs was seen to be mainly linked to the quality factor of *internal performance quality*, which in turn, was enabled by operating cost efficiently. Therefore, we suggest that the reason for why costs were so closely related to the process design of chat was due to the companies’ goal to perform cost efficiently by choosing the cheap chat software that and having the required amount of chat agents employing the function. This further resulted in delivering *service quality* for customers. Thus, cost CSF determining the process design of chat, can be derived from the firm’s objective to perform efficiently, thus save in costs by still delivering service quality.

**CSF - Management Support**

**Empowerment:** Management support is an important CSF element when carrying out a business process in e-commerce settings (Trkman, 2010, p.130). When considered from the viewpoint of the chat function this translates to supporting and empowering the customer support staff in taking ownership of their decisions and process. By empowering the customer support agents to handle customer grievances and enquiries without having to escalate or refer to a senior is considered important (Wilder, 2014).

**Quality Input:** Having the CSF of management support determining the chat process design stems from the firm’s aim of reaching as efficient internal performance quality as possible, which further enables the delivery of service quality in terms of handling matters such as customer complaints with sure and professional guidance.

**CSF- Know-how/ Training:**

**Integration:** When reflecting the service provision dimension through the lens of the service delivery process especially with respect to chat two dimensions of the e-servicescape gain salience. Roth & Menor (2003, p.153) also underscore the need for knowledge as a critical aspect of integration which has consequences on business performance. It is of particular importance when considering companies that sell complex products. Here the product knowledge has to be nurtured among employees and the role of training is critical. Bolloju’s (2005, p.39) observation that a positive climate is required to foster learning among employees is integral to this perspective.

**Quality Input:** Know-how/ Training is the determinant for the real time chat process design when considering the process in terms of product quality. The more complex products are sold, the more knowledge the chat agents must have about them in order to provide service quality for the customers.
5.4.2 The Meta View

We now present the unified level of analysis that combines the orientation, typology, CSFs and the service delivery systems to provide a Meta view of the different aspects to be considered when designing the real time chat service. While we have discussed all the CSFs in conjunction with the different service delivery system elements above. Here we will focus on the overarching aspects of orientation, typology, CSF and service delivery systems. For instance some of the CSFs discussed above cannot be operationalized namely management support. Instead only the operationally actionable namely service provision, customer acceptance and focus and flexibility are considered that also happen to be the three most recurring factors based on our empirical analysis.

Market Oriented Prospector

Market oriented prospectors consist are typified by technology, costs, customer service and relatively low quality (Kearns, 2005; Noble, 2002). In terms of the service provision CSF suggests that quantity and quality in the offerings as the main directive. In order to maximize market orientation, a prospector can use chat reactively but in areas of high value to both customer and company. This value mapping with real time chat was suggested by Leggett (2014, p.5-9). The service model suggests that companies that are high on technology competency or focus are placed in the mass services dimension (Silvestro, 1999). Consequently, this also addresses the service provision CSF of quality as stated above since mass services is also placed in the high volume axis. For faster and service it is also important to keep the service process efficient with minimal errors. This can be achieved by having a strong back office orientation to ensure the products are sourced and delivered optimally. Therefore, a market oriented prospector must aim to have as many elements that align with the mass service dimension for maximum benefit.

In terms of the design of the facility the firm must take steps to make the website (e-servicescape) receive maximum traffic either through organic search, advertising campaigns aiding the objective of high quantity. The e-servicescape focus also impacts the customer focus dimension that emphasizes web effectiveness. Here the emphasis is on the functional and ambient aspects of the website that will retain the website visitor and convert them into a customer. Having a good layout and relevant information will help the visitor to make a purchase decision faster (Jeon & Jeong, 2009). Technology can be used tactically to create workflows that automate routine processes as well as nudge customers along their journey or into interacting with customer service agents. This allows the market oriented prospector to be proactive without interrupting the customer journey. If the quantity focus is high then there is also a need to ensure there are sufficient number of customer service personnel to be available for chat. This affects capacity planning. A chase demand approach that adjusts based on the level of website traffic must be considered. The actual number of people required will be based on the arrival rate, waiting time and reneging time (Slack et al., 2010). In terms of integration the companies must be as tightly integrated both externally and internally. Strong internal integration means faster service especially in the real time chat in terms of responding to customer queries. This could imply the use of ERP systems that allow to retrieve information or improved communication channels between customer service and departments like warehouse and delivery. In terms of the moment of truth, having a strong mass service orientation allows the company to reduce the service failures associated with the post transaction phase. Similarly the web effectiveness aspect required by the customer focus CSF, minimizes website failures. Therefore, this creates the opportunity for the customer service team to focus on value adding elements in the customer service process namely
responding to service opportunities such as product assistance, product availability and payment (Leggett, 2014). In terms of flexibility the market oriented prospector will have to make a trade-off. Since flexibility is associated with the service shop and professional services dimension. Therefore the company will have to decide which elements in the service process model it can move out of the mass service dimension to the other dimensions namely the contact time, customization and discretion that is linked empowerment. Another aspect is to do away with scripting. Here too, the company will have to be cognizant of the trade-off it makes when considering these shifts.

**Selling Oriented Prospector**
The selling oriented prospector has a short term profits, relatively low quality and strong technology orientation (Kearns, 2005; Noble, 2002). As is the with the market oriented prospector, here too companies should focus on having a strong placement in the mass services dimension. Quantity in the service provision CSF will gain more salience than quality and therefore determine various aspects of the service delivery system. In order to maximize the selling orientation, the company must seek to use the real time chat as a selling tool. Consequently for the customer service personnel to engage in sales oriented interactions the objective of the company would be to focus on the product search and selection in the moment of truth phase (Bitner, 2008; Leggett, 2014). In order to do this the company must reduce the number of interactions that take place in the post transaction phase. The e-servicescape is once again geared towards facilitating the customer’s journey to a purchase as quickly as possible. The search aspect increases the website traffic, the functional aspect makes it convenient for the visitor to search for products and also has a strong interaction features namely the real time chat function (Jeon & Jeong, 2009). Capacity planning will be chase demand (Slack et al., 2010). However, due to the low quality focus the company can fill in excess capacity internally by engaging employees in other processes when idle and only opting for external part time staff when no other option is present. In terms of integration the company should integrate with tools and technologies that help increase sales. For example, this could be cart abandonment and recovery tools, analytics tools to identify and prioritize high intention purchase visitors that can be targeted by the customer service personnel who can convince or cross sell other products to increase sales. Functional integration could be strong with the sourcing team that ensures products are available. In terms of flexibility the selling oriented prospector should limit itself to the range of products that are available on the website. Scripting could be considered to standardize the sales process on chat (Cook et al., 2002).

**Market Oriented Defender**
Companies of this type are characterized by technology, pricing, customer service, business performance and high cost focus (Kearns, 2005; Noble, 2002). Defenders due to their low technology focus implying high people focus, imply an inclination towards the professional services or service shop dimension. Market oriented defenders have a propensity to use real time chat reactively. However due to the people focus implying a tradeoff in technology failure related interactions are likely to be high as was evidenced in our study. Therefore, it is advisable for companies of this type to improve processes through technology and allow customer service agents to focus on value adding activities in the customer interactions. Contrarily, the high cost focus points to the mass services. Additionally, the market orientation requires strong technological capability thereby implying a predilection towards mass services. However since customer loyalty is also a factor it is important to ensure high customer contact that exists in the professional
services category. Due to the presence of a high cost focus in market oriented defenders we argue that they should work within the mass services dimension for best results. The service provision CSF of both quantity and quality is attainable due to the nicheness in the product offerings of companies this type and informs how the service delivery systems can be designed. The search aspect of the e-servicescape in the context of customer acceptance is of particular importance since it is important to attract the right kind of visitor traffic to the website owing to the niche products on offer. An inefficiency in this aspect could lead to visitors not converting to customers. The design and functional aspects would then take prominence to ensure that the visitor stays long on the website and converts into a customer (Geissler, 2001). Capacity planning will entail level demand owing to the cost focus. Should the company require more customer service resources it is likely to opt for internal sources. From an integration standpoint the focus is largely on non-technological integration that improves inter departmental relationships. The absence of technological competency is likely to increase opportunities for various service failures both in the website as well as in the post transaction process. It is therefore important for the company to have strong recovery strategies (Forbes et al., 2005). The real time chat process therefore would focus largely on third phase in the moment of truth namely post transaction process. The use of scripting could be useful in ensuring that customers interacting with the chat function experience a uniform quality (Cook et al., 2002). Since the market oriented defenders operate in niche product categories, in order to achieve the flexibility CSF the focus must be on offering a range of services that complement the products or the post transaction phase. This could mean accepting special requests from customers in terms of shipping, packaging and other personalization. Therefore, customer service personnel in customer chat must be flexible and open to receiving such requests and attending to them. The real time chat feature of tickets particularly seems useful here in the process context.

Market Oriented Analyzer
Since the analyzers of any orientation tend to adopt strategies of both defenders and prospectors it is difficult to present a clear process outline to how analyzers design their real time chat process. However, given the above explanation of how prospectors and defenders with marketing and selling oriented characteristics could approach the process design of real time chat. Analyzers could combine the various approaches based on what they consider salient and plan and develop service delivery systems apropos to their objectives.
6. Conclusions

In the last chapter of this thesis the conclusions are described on the basis of how we succeed in answering to our research question as well as what findings we made during the empirical research. We will pictorially articulate our study by showing a model of key linkages between the various aspects of our study. Furthermore, we will present the theoretical and managerial contributions, and discuss limitations and possible future directions for research in related fields.

6.1 Addressing the Research Question and Fulfilling the Aim of the Study

The purpose of this thesis is to study e-commerce companies’ service delivery system in the context of real time chat. Particularly, the aim is to reveal the business and operational strategies determining the studied subject of real time chat process design. This is relevant taken the rising popularity of e-commerce, the emerging nature of services, and the advancing technologies, which together shape the company’s business strategies and operational processes. Considering e-commerce companies in general, and real time chat utilizing e-commerce companies in particular, they offer a unique organizational context to conduct a study at. Furthermore, it is recognized that due to their rather small size these companies face difficulties in balancing resources when trying to obtain business and operations strategic objectives. Also, the implementation and usage of real time chat is affected by the very same reason. These are considered as additional relevant reasons for studying this subject. Based on a review and the developed frame of reference from the existing literature we performed an empirical study in real time chat using e-commerce firms and, thus, aimed to answer the following research question:

What are the Business and Operational Strategies that determine the design of real-time chat process in a B2C e-commerce company?

Derived from the empirical data of our findings that involved discussions with both the senior management and operations personnel, the key findings of our study are:

- **Market & selling orientation** determines whether a B2C e-commerce firm uses chat proactively or reactively. A Market oriented approach recommends real time chat as a reactive or support tool, while a selling oriented approach recommends real time chat as a proactive sales tool.

- **The strategic typologies** informs the company in terms of what areas of the service process to focus on in order to add value to the real time chat function. Prospectors for example should look at increasing service opportunities focus even if they adopt a reactive approach and defenders should focus on customer service while reducing service failure incidents. Analyzers can benefit from adopting a flexible or hybrid method that suits their strategy.

- **Operations strategy perspectives** provide direction in how real time chat is implemented in a B2C e-commerce firm. The top-down perspective dictates whether real time chat service is implemented or not. The market-led perspective informs if the real time chat will be used proactively or reactively. Finally, the operations led perspective influences how the process is designed from a resource
allocation viewpoint. The overall view is determined by factors such as company size, product category, complexity and industry.

- **E-commerce service operations strategy CSFs** are derived from the above three discussed aspects. While, the studied companies had different CSFs and priorities with no discernable pattern, three factors were seen recurring. These are service provision, customer acceptance/focus and flexibility. These three CSFs also determine how the real time chat should be designed and areas of the process that require improvement. Quality is considered as a default requirement in B2C e-commerce companies and is integral in every aspect of the service delivery process.

- **Service delivery systems** based on the strategic and operational CSF inputs, help streamline the process and help identify aspects of the process that need improvement or modification in order to achieve the end of objective of real time chat namely reactive or proactive approach. Within this the e-servicescape and the service process model are particularly salient in affecting the type of chats requests that are initiated. By mapping out the entire customer journey in terms of failures and opportunities B2C e-commerce firms can identify aspects in the process that are causing failures and areas that can be improved to increase opportunities.

### 6.2 Theoretical Contributions

In terms of theoretical contributions this study has added to extant theory in the following ways:

- Combining the market and selling orientation with the Miles and Snow (1978) model in an e-commerce context. Our study has contributed to the existing body of literature in this area by providing an e-commerce specific context.

- The study has confirmed the veracity of the chosen CSFs from extant theory, while highlighting the predominance of three factors namely service provision, customer acceptance/focus and flexibility in determining real time chat.

- Based on the empirical analysis the study pointed out the inherent inadequacy in Kellogg & Nie’s (1995) service process model and improved upon it using the models of Schmenner (1986;2004), Silvestro (1992;1999) and Sung-Eui (2005) to explain service process models that are apropos to e-commerce.

- The study employs the service process model as a means to link the strategic and CSFs aspects in influencing the process design.

- Combining the service failures with the moment of truth adds another layer of perspective in improving the process design in the service delivery system.

- This study contributes to the limited theory that exists for real time chat. By using the Forrester (Leggett, 2014; Leggett & Schoeller, 2015) research papers as a starting point this thesis has been able to add specific operational and strategic oriented theory in a real time chat context.
As a contribution to theory we propose a model that depicts the linkages and flow in top-down manner. Figure 6 captures the key linkages between the different aspects of our study. Each level of the model is denoted by a different color to distinguish it from its preceding and succeeding levels. At the top of the honeycomb is C or the company. The company has the option of either being selling oriented (S) or market oriented (M). Going one level down the company can either be a prospector (P), analyzer (A) or defender (D). This is followed by the three most recurring CSFs namely service provision (Se), customer acceptance/focus (CA) and flexibility (F). In the penultimate level the strategic design choices (SD) with specific emphasis on service process, e-servicscape and moment of truth combined with the realized service delivery (SP) with emphasis on failure, recovery and renewal help determine the design of the real time chat (Ch).

6.3 Managerial Implications

The findings in our study are of value to small sized e-commerce companies operating in Nordic countries and possibly niche product categories. Two distinct types of B2C e-commerce companies can utilize our study. First, B2C e-commerce companies that are already using real time chat but need to understand and evaluate if its usage is aligned to their strategy. As was evidenced in our study most of the companies in our sample were not using real time chat optimally with respect to their strategic and operational orientation. Second, B2C e-commerce companies that are considering the implementation of real time chat can use the study as a feasibility tool to understand whether a reactive or a proactive chat process would suit their strategy. It gives managers an overview of the different processes and aspects that will affect its design, thereby aiding in planning and decision making prior to implementation. Market oriented firms can use real time chat reactively and design their service process models around this objective while selling oriented firms can use real time chat proactively and also design the processes to meet this end. These would be especially useful in helping managers decide whether their chat process should be reactive or proactive in the context of their strategic orientation, the type of resources that would be needed and how the capacity can be planned and managed. Figure 6 above is a Meta view of the process/evaluation sequence.

The process can be complemented with the scaling, ranking and service blueprinting tool to ensure that the company is able to design the optimum chat process that suits their
requirements. The service process model also helps them understand where they sit in the dimension and how they can improve functions and processes for greater efficiency. This is particularly useful for e-commerce companies that are faced with resource constraints and need to be adroit in how they deploy such resources. A good example would be a company faced with financial constraints and an inability to invest in marketing campaigns. Therefore, instead of using marketing to increase site traffic and consequently sales they would be required to be more efficient in converting organic site traffic into higher sales.

6.4 Limitations of the Study and Further Research

The study was conducted in two out of the five Nordic countries as well as one country in Western Europe. Even though all the companies in the study engage in e-commerce, they had varying degrees of size, product, markets and customer segments. It is possible that each country has its own laws on conducting business and these are likely to have an impact on how each company functions within this environment. Furthermore, the sample is not representative of all e-commerce companies in the same country or region. Therefore, undertaking more country specific and context specific studies on firms with similar characteristics as mentioned above would yield more generalizable results.

Our study was constrained by time and location. Companies in our study were located in other regions and cities that required travel. Size of the company also affected the time availability of the respondents. We had to accommodate their schedules while trying to ensure we met the quality and ethical criteria of the study. More time would have allowed us to gather richer data in certain aspects of our study such as the strategy and CSF ranking. Additionally, with the luxury of time we could have possibly also reached out to more companies and strengthened our findings. Thus, future longitudinal studies could be conducted to understand how strategy and operations of e-commerce companies function during periods of high and low demand. Our study was also limiting in the aspect in linking real time chat with higher sales or revenues since none of our respondents indicated any specific means to measure this. Based on this limitation, future research could be done using quantitative or mixed methods to link real time chat activity with sales by considering both the company oriented and the customer perspective.

Our choice of method was qualitative multi-method that comprised semi-structured interviews, observation and use of chat logs as a means to gather data. The questions were developed from extant theory while the respondents had their own practical and subjective views on the studied areas. Respondents were also interviewed in English which was not their native language. Therefore, the scope to be more articulate in expressing their thoughts and ideas would have been greater if the interviews were conducted in their native language. Also despite our intentions to collect more data by including a larger participant set we were unable to do so due to the difficulty in getting consenting participants. Moreover, it is also possible that our respondents were biased in their perspectives due to their individual backgrounds and motivations. A study that has a more homogenous company and participant sample could in part improve upon the findings of our study. Additionally, as researchers we had our own perspectives on the subject partly shaped by the assimilation of theoretical knowledge. This is likely to have influenced the direction of the interviews. The observations, which were done in the natural settings was scheduled at a time when the respondents were relatively free. This
could have also influenced how the data was gathered. Longitudinal studies that include multiple observations would in part alleviate this. Possibly quantitative studies with a larger sample can address the other aspects of limitation in our method.

The study resulted in establishing that three CSFs are prevalent in any context. Future research could therefore focus on the remaining CSFs that are not as prevalent to understand their influence in designing service processes. Our study also collected data from the perspective of the owner/decision maker as well as an operational resource in customer service. Since different processes are closely related to each other, future studies can consider gathering perspectives from different departments within the operations of an e-commerce firm to develop stronger theory especially in terms of classifying them in service typology. Also using other theories like unified services theory to understand how processes are designed could also help develop a well-rounded understanding of process design in e-commerce settings.
Reference List


Appendices

Appendix 1. Service Blueprinting Template.

**FIGURE 1.** Service Blueprint Components

<table>
<thead>
<tr>
<th>Physical Evidence</th>
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</thead>
<tbody>
<tr>
<td>Customer Actions</td>
</tr>
<tr>
<td>Onstage/Visible Contact Employee Actions</td>
</tr>
<tr>
<td>Backstage/Invisible Contact Employee Actions</td>
</tr>
<tr>
<td>Support Processes</td>
</tr>
</tbody>
</table>

Line of Interaction

Line of Visibility

Line of Internal Interaction
Appendix 2. Research Framework.
Source: Meredith et al. (1989, p.306)

**Strategic Perspective:**

**Part 1: General information**

- Description of the study
- Anonymity
- The use of data
- Sending the transcripts
- Follow-up questions
- Permission to start

2. How long have you worked in your position?

3. How many years of experience do you have in electronic commerce?

4. Tell us a little bit about your company’s background.
   - How did the idea of starting your company start about?
   - What are the markets that you serve?
   - What are your company’s future plans?
   - How do you compare to your competition?
   - Overall financial performance

**Part 2: Strategy**

Please choose an option by placing an X on the line for each question.

**Strategy Typology**

**Planning**

<table>
<thead>
<tr>
<th>Formal</th>
<th>Informal</th>
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<tbody>
<tr>
<td></td>
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</table>

**Cost Focus**

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
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<td></td>
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</tbody>
</table>

**Quality Focus**

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Perspectives on Operations Strategy

1. How do you plan and implement business strategies in your company?

2. How much do you involve the various functional heads in strategy and implementation?

3. To what extent do your employees and middle level managers provide input and feedback on strategy and operations based on market, customer and ground level experience? Why is this important?

4. How often do you interact with the employees on strategic issues?

5. How important is customer feedback/input in determining your strategy formulation? Why? Can you give examples?
6. What in your opinion are the most important qualities in terms of skills and abilities that your employees have that contribute to your company’s success?

7. To what extent do you consider the skills of your employees and the organizational resources (5 m’s of management) when formulating your strategy? Can you provide some example of this?

E-commerce Service Operations Management CSFs

Change Management

1. How flexible is the company in responding to changes in the market and competitive environment. Can you give us examples of successful and unsuccessful instances?

Management Support

2. What is your role in the company when it comes to implementing a strategy or technology (like real time chat)?

Know-How

8. How do you ensure that the offered service holds the aimed degree of professionalism? (Change management, Continuous learning, Skills and Skills development)

9. How do you ensure that your employees / teams have the required knowledge and skills to be competent in their roles?

Customer acceptance/ Focus

10. Please explain the role customers play in determining the products, services and features you have on your site. If this is important how do you collect information and feedback from them?
11. Could you explain how you try and create trust among the prospective and existing customers who visit your site?

Quality

12. What do you consider as important factors / elements you think are necessary to create quality in your service offerings?
13. How do you ensure/ maintain quality in your service offerings?

Costs

14. To what extent do you invest in your operations in order to ensure/ maintain quality in your service offerings? (staff, training, technology...)

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15. Does this result in high costs?

If yes: How do you cope with these costs?

If no: How do you run your service operations economically / enable them to hold the level of costs that is sufficient for your company and customers?

Service Provision

16. How do you ensure that your service offerings hold the timely delivery and the aimed quality?

17. How important is it to keep your website up to date in terms of technology? What are the main factors that you consider when you decide to go ahead with an upgrade or continue with the existing technology?

Flexibility

18. Do you consider your service offerings to be flexible? How? (Capacity, coping with unexpected circumstances, give customers individual treatment)

19. Please, rank the following from 1-8 based on the importance for your company & operations: (each factor can only have one number, e.g. if you choose 1 for Change Management it means that you consider it as the most important factor for the company’s operations).

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Change Management: Changing operations based on internal influence</td>
<td></td>
</tr>
<tr>
<td>* Management Support: Commitment and backing from decision makers</td>
<td></td>
</tr>
<tr>
<td>* Know-How: Skills and Training</td>
<td></td>
</tr>
<tr>
<td>* Customer acceptance/ Focus: Using customer input</td>
<td></td>
</tr>
<tr>
<td>* Quality: In terms of providing service</td>
<td></td>
</tr>
<tr>
<td>* Flexibility: Number of employees, customization of services</td>
<td></td>
</tr>
<tr>
<td>* Service Provision: Being dependable and speedy</td>
<td></td>
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<tr>
<td>* Costs: Internal cost focus, Resulting costs for the external parties</td>
<td></td>
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</tbody>
</table>

Part 3: Service Delivery Systems

20. When did you start implementing the real time chat?
21. Where did the interest towards choosing the real time chat as one of the customer contact channels come from? I.e. (Top-down/ Bottom-up, A suggestion from an employee, Matched competitors, Was a suitable tool to complement the other operations)

22. What do you use real time chat for in your company i.e support, sales both?

23. Apart from the live chat, what types of customer contact technologies are used in your organization?

24. Is the real time chat software built in-house or purchased from a vendor?

25. When you installed the real chat software did you get it customized to your organization?
   a. If yes - please explain the features you added and why?
   b. If no - Please explain how the software was implemented in the website and with the customer support team and the challenges you faced in the process.
Appendix 4. Interview Guide 2

**Operational View**

**Part 1: General information**

1. Your Position and Title:

2. How long have you worked in your business unit/position?

4. Tell us about your experience in electronic commerce and customer support?

**Part 2: Service Delivery Systems**

Appearance (Servicescape)

1. Can you explain the factors that you consider important in ensuring the website appearance is positive to encourage visitors to browse and shop on your website in terms of
   a. User Experience
   b. User Design
   c. Brand Image

Service Process Model

2. What is the average time required to provide service or support to a customer?
3. What is the level of effort required to provide a customer with a service.
4. What is the degree of customization that you offer in your product offerings/service?
5. How many people of are involved in the entire process?
6. How predictable is the demand/request from customers for your products and services. How do you ensure there are enough people in the company to respond to requests?
7. Do you consider the volume of customers you handle as high or low when compared to other e-commerce companies in the same category?
   a. Do you focus on more on the product that is offered or the process of how the service is delivered?
   b. What proportion of your website visitors communicate with an employee of the company?
   c. Does the company focus more on the technologies it has or more on the people who use and deliver the service using these technologies. Why do you think this is the case?
   d. How many people in the company deal with the customer and external stakeholders of the company as compared to the back office operations?
   e. How many people in the company interact with customers, suppliers and partners?
8. What are the different ways in which the customer interacts with the website?
   a. What are the different ways in which the customer can contact the website and communicate with the company?
b. How flexible is the website in meeting the demands of the customer? Please give examples?

Technology & Equipment

9. What are the most important features in the real time chat? Why?

Capacity Planning

10. Do you know how many visitors from the total seek assistance through the real time chat? Do you know the average arrival rate, waiting time and reneging time?
11. What are the important factors and challenges that you consider using the above information when planning for additional resources?
12. What are the maximum chat sessions that a customer support person is encouraged to handle at the same time without compromising on quality? What happens when there are more chat requests than available customer support people?

People, Process & Co-ordination

13. Can you describe the typical journey of your customer on your website. Where in the journey do they normally require real time chat support?
14. How important do you think freedom and autonomy is in handling customer queries and problems without having to escalate them? Can you give examples?
15. How do you measure performance in your job? What are the different metrics related specifically to the real time customer chat process? How do these contribute to the overall business performance of the company?
16. How is the real time chat process and the customer service function connected to other functions and departments? What are the important factors to ensure the customer service level is not affected?
17. What is the role of the real time chat vendor in your department’s process? Is the relationship with the vendor important? If yes why?
18. How is knowledge and learning created, documented and shared in the company?

Realized service delivery

19. What are the aspects of the real chat service that can be improved in your company? How did you identify these gaps?
20. Can you explain how you think the real time chat service contributes to the company’s competitive advantage in the market? How do you assess this?
21. Can you name the various parts in the process where service failures happen? What are the strategies that are adopted to recover? Can you give examples?

Real Time Chat

22. Why do you think customers prefer real time chat to other communication channels like email, phone, faqs etc? Can you give examples where the customer preferred real time chat to other channels? Is this a common trend?
23. Can you describe specific instances or use cases in which customers prefer real-time chat?

24. Do you use real-time chat as a sales tool or to proactively communicate with customers? If yes, can you give us examples and the results?

25. What are the other tools/feature that you use to help you maximize the benefit of real-time chat? (These could be feature inside the chat software or CRM tools).

26. Do you use pre-defined scripts when interacting with customers? What are the specific cases where you use scripts and why?
Appendix 5. Observation Sheet.

Observation

Company No:__________________
Date: __________________
Observation Start Time:______________
Observation End Time:______________

<table>
<thead>
<tr>
<th>Name of Real Time Chat Software</th>
<th>Key Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

Process debrief (Support / Sales)

Number of simultaneous chat sessions

<table>
<thead>
<tr>
<th>Chat session no:</th>
<th>Type of service request: (Failures and Recoveries)</th>
<th>Start time and end time</th>
<th>Use of scripting?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CSF</th>
<th>C1 Market oriented Prospector</th>
<th>C2 Selling Oriented Prospector</th>
<th>C3 Market Oriented Analyzer</th>
<th>C4 Market Oriented Defender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Change management / Re-engineering business processes</td>
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<td>7</td>
<td>7</td>
<td>2</td>
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<td>Management support</td>
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<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Know-how/ Training</td>
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<td>1</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Customer acceptance/Focus</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Service Provision</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Flexibility</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Costs</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
</tbody>
</table>
Appendix 7. Consolidated Service Blueprint.