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**Developing B2B relationships by promoting
customer intimacy in e-commerce**

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ABSTRACT:

Developing lasting customer relationships is important for organizations in today's competitive business environment. One strategy to accomplish this is customer intimacy, which refers to creating long and close customer relationships that benefit both parties. A prerequisite for customer intimacy is the acquisition of customer data and the understanding of customers' intentions, needs, and desires so that the company knows how to serve its customers best. At the same time, the e-commerce market is rapidly growing and is projected to grow even more in the next few years. The purpose of the research is to find out what constitutes customer intimacy in e-commerce and how it can be developed in order to improve B2B customer relationships. There is not much research on the subject yet, so this research seeks to provide new information on the field.

The theoretical framework of the research includes definitions and different perspectives on how to develop customer intimacy, as well as presents e-commerce as a sales function. The approach for the research is qualitative, although quantitative methods are also used. The research is a multiple case study, and the empirical data consists of six e-commerce websites, one customer interview, and a survey. The research is conducted in two phases, the first one being analyzing what constitutes customer intimacy at the studied e-commerce sites and the second one includes the interview and survey, which provide insights into what e-commerce functionalities and features customers find important and why. Lastly, the findings are concluded and concrete suggestions for promoting customer intimacy in e-commerce are given.

The research found ten main themes that affect building customer intimacy: communication, communality, product recommendations, customer experiences, product information, customer data collection, transparency, timeliness, customization, and concerns. The results show that customers value clear product technical requirement details and price and purchase information most. The results also highlight the importance of up-to-date and efficient data. This means for example detailed product descriptions with pictures, illustrations, and videos, product comparisons, downloadable documents, buying guides, and product updates. Communication is vital for customer intimacy, and quick responses to customer inquiries and clear contacting options are crucial. Customers are these days increasingly social and want to be included, thus reciprocal communication and the sense of communality promote customer intimacy. Communality features such as allowing customers to openly ask and answer questions, start conversations, comment, and socialize with other customers and the company representatives are especially effective for building customer intimacy. Transparency and openness in every action are important aspects since customers need to understand for example why certain information is collected from them and how it benefits them. They want to be active participants and have the possibility to configure products and personalize the website according to their needs.

KEYWORDS : electronic commerce, business-to-business commerce, customer relationship, customership, customer intimacy, sales promotion

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TIIVISTELMÄ:

Kestävien asiakassuhteiden luominen on erityisen tärkeää nykyajan kilpailullisessa liiketoimintaympäristössä. Yksi strategia tämän tavoitteluun on asiakasläheisyys, jolla viitataan pitkäaikaisen ja läheisten, molempia osapuolia hyödyttävien asiakassuhteiden luomiseen. Asiakasläheisyyden edellytyksenä on asiakastietojen kerääminen ja asiakkaiden aikeiden, tarpeiden ja toiveiden ymmärtäminen, jotta yritys pystyy palvella heitä parhaalla mahdollisella tavalla. Samaan aikaan sähköinen kaupankäynti kasvaa nopeasti, ja sen ennustetaan kasvavan entisestään lähivuosina. Tämän tutkimuksen tavoitteena on selvittää, miten asiakasläheisyys muodostuu verkkokaupoissa ja miten sitä voidaan kehittää B2B-asiakassuhteiden edistämiseksi. Aihetta ei ole vielä juurikaan tutkittu, joten tämä tutkimus pyrkii tuomaan uutta tietoa alalle.

Tutkimuksen teoreettisessa viitekehyksessä esitellään asiakasläheisyyden määritelmiä ja erilaisia näkökulmia sen kehittämiseen, sekä avataan tarkemmin verkkokauppojen roolia myyntitoimintona. Tutkimuksen lähestymistapa on laadullinen, vaikka myös määrällisiä menetelmiä käytetään. Tutkimus on monitapaustutkimus, ja sen empiirinen aineisto koostuu kuudesta verkkokauppasivustosta, yhdestä asiakashaastattelusta ja kyselystä. Tutkimus toteutetaan kahdessa vaiheessa, joista ensimmäisessä analysoidaan, miten asiakasläheisyys muodostuu valituissa verkkokaupoissa. Toinen vaihe koostuu haastattelusta ja kyselystä, jotka avaavat tarkemmin, mitä verkkokaupan toimintoja ja ominaisuuksia asiakkaat pitävät tärkeinä ja miksi. Lopuksi tulosten pohjalta tehdään johtopäätöksiä ja annetaan konkreettisia kehitysehdotuksia verkkokauppojen asiakasläheisyyden kehittämiseksi.

Tutkimuksessa löydettiin 10 pääteemaa, jotka rakentavat asiakasläheisyyttä: viestintä, yhteisöllisyys, tuotesuosituksset, asiakaskokemukset, tuotetiedot, asiakastietojen keräys, läpinäkyvyys, ajantasaisuus, kustomointi ja huolet. Tulokset osoittavat asiakkaiden pitävän tuotteiden selkeitä teknisiä tietoja sekä hinta- ja ostotietoja tärkeimpinä. Tietojen ajantasaisuus ja tehokkuus ovat myös olennaisia. Tällä tarkoitetaan esimerkiksi yksityiskohtaisia tuote-esittelyjä kuvien, kuvitusten ja videoiden kera, tuotevertailuja, ladattavia dokumentteja, osto-oppaita ja tuotepäivityksiä. Viestinnällä on keskeinen rooli asiakasläheisyyden muodostumisessa, ja nopeat vastaukset asiakkaiden kysymyksiin ja selkeät yhteydenottotavat ovat tärkeitä. Asiakkaat ovat nykyään entistä sosiaalisempia ja osallistuvampia, joten asiakasläheisyyttä lisää vastavuoroinen viestintä ja yhteisöllisyys. Erityisen tehokkaita keinoja ovat esimerkiksi mahdollisuus kysyä avoimesti kysymyksiä ja vastata niihin, aloittaa keskustelua, kommentoida ja seurustella muiden asiakkaiden ja yrityksen edustajien kanssa. Myös läpinäkyvyys ja avoimuus ovat tärkeitä tekijöitä, sillä asiakkaat haluavat ymmärtää, miksi heiltä esimerkiksi kerätään tiettyjä tietoja ja miten se hyödyttää heitä. Asiakkaat haluavat olla aktiivisia osallistujia, ja että heillä on mahdollisuus kustomoida tuotteita ja verkkokauppasivustoa tarpeidensa mukaisesti.

AVAINSANAT: electronic commerce, business-to-business commerce, customer relationship, customership, customer intimacy, sales promotion

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Abbreviations

E-commerce Electronic commerce

1 Introduction

The ongoing Fourth Industrial Revolution affects existing business practices in many ways and requires adaptability from organizations to survive and thrive in the modern business environment (Rapp et al., 2011, p. 141). Sales have always had to change with technological, demographic, macroeconomic, and cultural changes in their environment (Syam & Sharma, 2018, p. 135). Technological trends and advances require organizations to keep pace with developments and adopt new technologies in their operations to improve processes and better serve customers (Zoltners et al., 2015). Like everything else, new technologies have in many ways influenced organizations' ways of creating and maintaining their customer relationships (Sleep et al., 2020, p. 1050). Communicating with customers is becoming easier and less expensive, but in order to be able to develop close customer relationships, organizations need to understand the needs and preferences of their customers (Akcura & Srinivasan, 2005, p. 1007).

Organizations are increasingly investing in digitalization, and it is recommended that the focus of sales should be shifted from sales personnel to digital channels (Gartner, 2020b, p. 2). Changed customer buying behavior offers tremendous new opportunities (Gartner, 2020b, p. 7). The application of information technology to commercial and economic activities has led to the emergence of a new interdisciplinary field, e-commerce (Feizollahi et al., 2014, p. 605; Choshin & Ghaffari, 2017, p. 67). The growth of e-commerce has been driven by technological advances, the increasing prevalence of internet users around the world, and mobile devices (Gajewska & Zimon, 2018, p. 26). The boundaries between e-commerce and traditional commerce have blurred, and traditional commerce is projected to eventually disappear altogether as it is unable to meet new demands (Mourya & Gupta, 2015, p. 22; Choshin & Ghaffari, 2017, p. 67). In particular, customers are increasingly preferring a contactless sales transaction, and there is a growing interest in so-called self-service sales, especially in B2B sales (Travis et al., 2020, p. 6; Zijadic et al., 2020, pp. 2-3).

Studies of B2B customers have also found that customers make, on average, 60 % of their purchasing decision completely independent before even contacting a supplier for the first time (Adamson et al., 2012). This includes, for example, exploring solutions, setting requirements, evaluating options, and defining costs (Adamson et al., 2012). These actions such as visiting company's website, downloading brochures, and sharing content, generate plenty of data that can be leveraged throughout the customer journey (Gartner, 2020b, p. 7). This data can be used to serve the customer timelier and better, for example through customized messages and recommendations (Gartner, 2020b, p. 7). In the future, the role of the salesperson will be a kind of information clarifier instead of an information source, which will help self-taught customers to better understand the information they come across (Gartner, 2020b, p. 12).

Such a customer intimate approach has a reinforcing effect on, among other things, the quality and commitment of customer relationships (Rapp et al., 2012, p. 931; Brock & Zhou, 2012, p. 378). Central to this approach is an understanding of the importance of close, long-term customer relationships for businesses (Helander et al., 2013, pp. 30-31). Customer intimacy is much more difficult to develop in a digital environment that is inherently more remote and colder (Bothorel & Pez-Pérard, 2019, p. 203). However, customer intimacy is equally important, or one could even say that more important, to develop and maintain digitally when personal interaction is replaced by technology. A prerequisite for customer intimacy is the acquisition of customer information and the understanding of customers' intentions, needs and desires, and real-time adjustment of offerings based on an individual customer (Bothorel & Pez-Pérard, 2019, p. 204).

Digital sales technologies help to build stronger customer relationships through accurate and effortless communication (Agnihotri et al., 2009, p. 477). Technology also provides several tools to meet sales and customer objectives, for example facilitating the conversion of large amounts of data into a usable format (Hunter & Perreault, 2006, p. 99; Hunter & Perreault, 2007, p. 21). In this case, technology refers to tools that facilitate sales, such as e-commerce sites, customer relationship management systems, sales

automation, and virtual meeting rooms (Rapp et al., 2012, p. 931). This research focuses on e-commerce, which has grown in importance over the last twenty years. Today, even more and more of the trading is happening online and customers have huge opportunities to choose where and how they want to buy a product or service (Hallavo, 2013, p. 20). E-commerce is even said to be a mandatory part of a successful business, regardless of whether it is B2B or B2C sales (Hallavo, 2013, p. 11). E-commerce aims not only to increase the efficiency of operations and seek new growth markets but also to strengthen the commitment of existing customers (Hallavo, 2013, p. 40). However, the transition to e-commerce is not necessarily easy – not even for companies that are leading players in their industries (Hallavo, 2013, p. 77).

E-commerce has changed business practices entirely (Salehi et al., 2012, p. 382). The web is now widely used in the purchasing process not only for buying, but also for checking availability, seeking inspiration and product information, communicating with sellers, comparing products, and reading reviews (Hallavo, 2013, p. 25). The growth of e-commerce sites is driven by changes not only in purchasing behavior but also in communication between manufacturers, distributors, and customers (Hallavo, 2013, p. 26; Salehi et al., 2012, p. 382). In order to respond to these changes, organizations need to understand how customers utilize online services when making purchase decisions (Salehi et al., 2012, p. 382).

Already a few years ago, it was predicted that the popularity of e-commerce would grow in the coming years, especially in high-tech industries (ZS Associates & Reality Works Group, 2014, p. 1). Since then, the corona pandemic further accelerated this and raised the importance of e-commerce as face-to-face interaction was reduced to a minimum. B2B e-commerce is now actively on the minds of many organizations, and it is projected that by 2025, 80 percent of B2B sales interactions between suppliers and buyers will take place digitally (Blum, 2020; Gartner, 2020a). It is clear that nowadays, companies need digital technologies to build close and lasting customer relationships. Organizations today also face increasing pressure to achieve more at lower costs (Rodriguez, 2009, p. 13),

to which e-commerce provides answers. E-commerce has been found to have numerous benefits for both organizations and customers (Tseng et al., 2005, p. 1666). Studies have found, for example, that it improves efficiency and organizational competitiveness, lowers costs, and reaches new customers more widely (Tseng et al., 2005, p. 1666; Hallavo, 2013, p. 19; Gajewska et al., 2020, p. 667). That being said, e-commerce also puts challenges to forming close customer relationships that need to be addressed in order to fully exploit e-commerce.

1.1 Research objectives

The objective of this research is to find out how B2B e-commerce customer relationships can be developed by promoting customer intimacy in e-commerce websites. The research problem is approached with the help of two research questions:

1. What constitutes customer intimacy in e-commerce?
2. How customer intimacy can be developed in e-commerce?

The aim of the research questions is to find out the ways in which customer intimacy can be created in e-commerce when in contrary to traditional sales, interaction is replaced by technology. Customer intimacy is one strategy for value creation, so by understanding how and by what means organizations create close customer relationships digitally, e-commerce processes can be further developed. The research topic was formed on a needs basis and is commissioned by a company that has an important focus for 2021 to develop its e-commerce practices. The research focuses on the e-commerce platforms of six companies, which are viewed from a customer intimacy perspective. An interview is also conducted, and materials of a global e-commerce survey will be utilized. In addition, the aim is to provide concrete suggestions for improvement based on the research results in order to improve e-commerce customer intimacy.

The research topic is particularly relevant, as digitalization and artificial intelligence are expected to have far-reaching and significant impacts on sales work and the technologies

used in it (Singh et al., 2019, p. 2). However, there is a lack of scientific research in the field, although B2B sales are increasingly focused on e-commerce, and the necessity and strategic importance of understanding e-commerce and the impact of information technology are understood (Sleep et al., 2020, pp. 1025-1026; Ohiomah et al., 2019). In recent years, a growing number of experts have also highlighted how customer knowledge and customer intimacy are increasingly important, especially in the B2B market, in order to build strong customer relationships (Brock & Zhou, 2012, p. 370). However, customer intimacy has gained relatively little attention in scientific studies (Osei, 2017, p. 600; Brock & Zhou, 2012, p. 370), and its characteristics and effects have not been addressed specifically in the context of e-commerce. Researchers also lack a unified view of the dimensions of customer intimacy, although it is acknowledged that it has numerous benefits for organizations (Osei, 2017, p. 600).

The subject has thus been approached in previous studies from slightly different perspectives. Salehi et al. (2012) studied the effect of e-commerce website's information convenience on maintaining and developing customer relationships, while Nora (2019a) studied the effect of customer intimacy on customers' interest to make repurchases. Gajewska et al. (2020), on the other hand, study the formation and connection of the quality of e-commerce to customer satisfaction. The research of Choshin and Ghaffar (2017, p. 67), in turn, focuses on the e-commerce success factors of small and medium-sized enterprises to improve communication and relationships between an organization and its stakeholders. Previous studies have also found that the quality of information and online services play a key role in shaping e-commerce user satisfaction (Sharma & Lijuan, 2015, p. 468).

1.2 Structure of the thesis

This thesis is divided into six main chapters: introduction, two theoretical chapters, methodology, empirical analysis, and conclusions. The first main chapter introduces the reader to the topic of the research by presenting the purpose, objectives, and

backgrounds of the research. The second main chapter delves deeper into e-commerce and e-commerce websites and defines the e-commerce framework for this study. The third chapter examines customer intimacy in more detail and its relationship to customer relations, digitalization and e-commerce. The chapter also reviews the development and effects of customer intimacy. After this, the fourth chapter of the research opens in more detail the research methodology, the methods of data acquisition and analysis, and the research process in general. The chapter also introduces the e-commerce sites that are the subject of the study and presents the conducted interview and survey, as well as validates the selection of research material.

The fifth chapter focuses on the research results obtained through the interview, survey, and website analysis by using content analysis as the data analysis method. The chapter is divided into two parts. The first one focuses on the website analysis and the second one on the interview and survey. The sixth and final chapter provides a more detailed overview of the key findings and conclusions in relation to previous research, as well as an assessment of the limitations of the research and possible proposals for further research. The chapter also includes practical suggestions based on the research findings for improving customer intimacy in e-commerce.

2 E-commerce as a sales function

E-commerce (*electronic commerce*) refers to doing business online using the Internet (Sharma & Lijuan, 2015, p. 468). The concept covers both marketing, sales, and the integration of online services (Choshin & Ghaffari, 2017, p. 67). It therefore plays a significant role in identifying, acquiring, and maintaining customer relationships (Choshin & Ghaffari, 2017, p. 67). E-commerce is growing rapidly and offers a wide range of opportunities for organizations (Sharma & Lijuan, 2015, p. 469). However, this is not a new concept; e-commerce has just increasingly received unexpected new trends in recent years (Choshin & Ghaffari, 2017, p. 68). Today, about 33 % of customers prefer a completely contactless sales transaction, and the number is even higher, at 44 %, when considering only the millennials that will account for an increasing number of corporate decision-makers in the next few years (Gartner, 2019; Travis et al., 2020, p. 6). Understanding e-commerce thus makes it possible to gain a competitive edge by serving customers in a more convenient and comfortable way (Gupta & Patil, 2020, p. 3).

For the purposes of this study, e-commerce is defined as a website through which e-commerce is conducted, as defined by TEPA (2018). Such an e-commerce site not only serves as a platform for digital marketing but also handles distribution and logistics when needed (Gupta & Patil, 2020, p. 1). E-commerce can be both business-to-business (B2B), business-to-consumer (B2C) or consumer-to-consumer (C2C) sales (Salehi et al., 2012, p. 383). This study focuses on improving business-to-business e-commerce.

The roles between a supplier and a customer have changed with e-commerce, as customers no longer need salespeople in the same way as before, as they can effortlessly obtain the information they need from the Internet (Marshall et al., 2012, p. 359; Adamson et al., 2012). Before the advent of e-commerce, the relationship between sales and customers was largely based on personal interaction, allowing salespeople to show hands-on how the devices work (Zidajic et al., 2020, p. 8). In e-commerce, this is not possible, so the task is left to technology. E-commerce can optimize and improve the

relationships and communication between an organization and its producers, distributors, and customers (Choshin & Ghaffari, 2017, p. 67).

Websites enable many e-commerce functions (Sharma & Lijuan, 2015, p. 469). Digital e-commerce systems are like dynamic marketing tools that attract and engage customers and support their decision-making by acting as a source of information (Gupta & Patil, 2020, p. 1). It is important for a successful business to understand how different content and channel combinations work in relation to each other and which combination gives the best results (Pyyhtiä et al., 2013, p. 18). The most important thing is to know the customers and their needs, and to act responsibly on the basis of the information, because only in this way can they be served in an appropriate way (Pyyhtiä et al., 2013, p. 18). At the same time, according to Pyyhtiä et al. (2013, p. 18), the trust of the customer relationship is measured, and without it, there is no basis for a successful business.

2.1 E-commerce sites

B2B e-commerce is seen as a self-service channel that integrates with and complements other sales channels (Travis et al., 2020, p. 7). E-commerce is therefore one service channel among others when paying attention to a multichannel service set (Hallavo, 2013, p. 22). However, Hallavo (2013, pp. 22-23) points out that e-commerce needs to be developed together with other customer channels, such as customer service, product catalogs, marketing, and social media.

E-commerce has numerous benefits for businesses. It has been found, for example, to facilitate the salespeople's work by enabling more efficient, productive, and cheaper sales (Hallavo, 2013, p. 19). E-commerce thus reduces the costs to the retailer when part of the salespeople's work is as if transferred to the customer (Hallavo, 2013, p. 19). Automating sales through e-commerce is common, for example in the technology industry when individual markets are too small or the value return is small for either the customer or the organization itself (Hallavo, 2013, p. 41). This frees up salespeople's time and

resources for better value-added tasks (Hallavo, 2013, p. 41). Self-service channels are therefore particularly suitable, for example, for placing recurring orders (Hallavo, 2013, p. 40). E-commerce expands the market and studies have also found that e-commerce increases organizational competitiveness as well as economic growth and development (Tseng et al., 2005, p. 1666; Choshin & Ghaffari, 2017, p. 68). However, Hallavo (2013, p. 19) points out that e-commerce is more than just online trading and streamlining sales processes cannot be taken as the only starting point for establishing an e-commerce site. A well-designed and developed e-commerce site not only adds value to the product or service offered but also enhances the value of the entire organization (Sharma & Lijuan, 2015, p. 477).

It has also been found that electronic services affect customer engagement (Hallavo, 2013, p. 30). Hallavo (2013, p. 30) suggests that the more satisfied customers are with the electronic services, the more committed they are to the company. The significance of e-commerce depends not only on how many orders are placed through it but more broadly on how the site affects customers' purchasing decisions in general (Hallavo, 2013, p. 32), since some may just look for a product and its details online but purchase it through another channel.

Similar to traditional sales, e-commerce sites compete for customer satisfaction, loyalty, and lasting customer relationships to get the customer to return to the website. The success of e-commerce is affected by several factors (see figure 1). Choshin and Ghaffari (2017, p. 70) argue that e-commerce success is built on four factors: customer satisfaction, e-commerce infrastructure, cost, and public awareness. Mourya and Gupta (2015, p. 28), on the other hand, differentiate personal attention and community relationships as factors in addition to those mentioned by Choshin and Ghaffari. By these, they mean adaptive websites, personalized product recommendations, and advertisements, as well as virtual communities of customers, suppliers, and company representatives where they can share their thoughts and experiences.



Figure 1. Factors affecting e-commerce success.

According to Choshin and Ghaffari (2017, p. 70), customer satisfaction is affected by trust, easy access to information sources, security of providing personal information, and general independence from time and place. Infrastructure refers to the organizational and technological infrastructure, such as the ease of use of a website, a pleasant shopping experience, and an appealing website layout (Choshin & Ghaffari, 2017, p. 70; Mourya & Gupta, 2015, p. 28). According to Salehi et al. (2012, p. 384), e-convenience and thus the success of e-commerce is affected not only by the appearance of the website but also by information and its amount and varieties. In addition, it is important that the customer feels that they can trust the website; the product information it contains, the security of transactions, and the order fulfillment in general (Mourya & Gupta, 2015, p. 28). Customer satisfaction and overall success are also affected by product-related factors such as product selection, competitive pricing, and after-sales customer support (Mourya & Gupta, 2015, p. 28). Choshin and Ghaffari (2017, p. 70) suggest that success is also influenced by the general understanding of e-commerce by customers, employees, and management (Choshin & Ghaffari, 2017, p. 70).

2.2 Functionalities and content of an e-commerce site

When doing business in an online store, customers not only evaluate the quality of the products they are considering, but also the service itself through which the purchase is made (Cochran, 2004, p. 3889). This also covers the quality of the content, such as spelling, grammar, and syntax (Koehn, 2003, p. 11). Salehi et al. (2012, p. 382) divide website design into three areas; navigation, information, and visuality. This study focuses mainly on navigation and information design, which refer to how easy it is to navigate the site and how product or service information has been customized (Salehi et al., 2012, p. 382). Information plays an important role in the purchasing process when buying online (Salehi et al., 2012, p. 384).

Gartner (2020b, p. 11) states that customers are generally satisfied with the quality of the information they receive during a purchasing process. The study finds that 89 % of buyers felt that the information they encountered in a recent purchase was of high quality, relevant and reliable. This means that the business field is very equal, and it is predicted that over the next five years, the competition for data-backed thought leadership will increase even more (Gartner, 2020b, p. 11). However, there is also a downside, as a large amount of reliable information is also perceived as exhausting, as Gartner's (2020b, p. 11) research shows. This is especially the case if contradictory information is found on the subject, which leads to uncertainty and a lower level of customer confidence (Gartner, 2020b, p. 11). Lower confidence can reduce the likelihood of a customer making a significant purchasing decision by as much as 160 % (Gartner, 2020b, p. 11).

Websites that have a visually appealing user experience tend to affect not only the experience of the quality of the service but also the relationship between the service provider and a customer (Sharma & Lijuan, 2015, p. 469). In their survey on the quality of e-commerce customer service, Gajewska and Zimon (2018, p. 32) found that customers valued the most, after fast and efficient customer service, the website's clarity, and ease of understanding. Similarly, the quality of brochures and other marketing materials available in an e-commerce site, as well as the comprehensibility and readability of the

website in general, are important factors (Gajewska et al., 2020, p. 672). According to Salehi et al. (2012, p. 382), the convenience of the information on the website plays an essential role in building customer relationships and attracting customers. Other aspects related to the quality of e-commerce that emerged from the study by Gajewska and Zimon (2018, p. 32) include quick responses to customer inquiries and needs, responding and encouraging ads, professional and hassle-free support, and an individual approach to customers.

Individuality can be enhanced, for example, by visual configuration tools that provide the customer with an opportunity to see the product and possible optional features before making a final decision (Zijadic et al., 2020, p. 7). At best, the customer can interact directly and in real time with the visual representation and see what the product would look like in their own spaces with the selected alternative features (Zidajic et al., 2020, p. 7). Configuration tools that support augmented and virtual reality have been available since 2016, but their deployment has been relatively slow, especially in B2B sales (Zidajic et al., 2020, pp. 7-8). Zidajic et al. (2020, p. 9) also suggest that trade shows could be simulated using augmented and virtual reality. This would allow customers to navigate around the virtual booth, explore products and obtain more information from the chatbot that acts as a seller (Zidajic et al., 2020, p. 9). Augmented reality has been found to strengthen customer relationships, support a positive brand image, and create stronger emotional responses, among other things (Brito et al., 2018, p. 7508). The solutions are widely applicable to various industries and to selling complex products electronically, although the development of this kind of technology is still in its infancy (Zidajic et al., 2020, p. 9). The industry is expected to develop and become more widespread over the next 5–10 years (Zidajic et al., 2020, p. 9).

According to Reklaitis and Pileliene (2019, p. 78) companies on B2B sales have a primary focus on the logic of the product and its features. They suggest that a consultative approach should be prevailing instead of an aggressive deal closing approach. B2B sales involve planned activities and limitations that need to be followed regarding the sales

process, so there are almost no place for personal emotions (Reklaitis & Pileliene, 2019, p. 78). On the contrary, at B2C sales consumers' decisions are more emotional and they do not pay that much attention to other product alternatives or competitors (Reklaitis & Pileliene, 2019, p. 78).

When browsing an online store, users' attention is first drawn to the visual appearance of the website and only then to the text and its content (Lynch & Horton, 2009, p. 205). According to Lynch and Horton (2009, p. 178), the layout of a website helps the user to find out at a glance which things are important and which secondary, as well as to perceive the entities of the site. This is particularly useful because people read online sources differently than printed documents (Lynch & Horton, 2009, p. 231). When reading online, the focus is more on the titles and keywords than reading everything word for word (Lynch & Horton, 2009, p. 231).

It is good for an e-commerce site to be consistent with the company's other electronic services in terms of layout and user experience (Hallavo, 2013, p. 30). Customers use online services because of their ease of use and effortlessness, so it is important that the website is clear and information easy to find (Zilliox, 2001, p. 58; Salehi et al., 2012, p. 383). All content, texts, and other elements of the e-commerce site must therefore have a clear purpose (Zilliox, 2001, p. 58). The position of the content on the website should also be carefully considered. More detailed product information is generally good to be placed on a separate product page instead of the front page, which can then be accessed by clicking on the link on the front page (Zilliox, 2001, p. 68). This makes the layout of the site clearer and saves users time from going through unnecessary information (Zilliox, 2001, p. 68). It has also been noted that a direct link to making a purchase is an effective way to close a deal, so instead of simply presenting products, it is worth selling them directly online (Salehi et al., 2012, p. 383).

3 Customer intimacy as a business strategy

Understanding customer needs and meeting them is the ultimate task of organizations (Rapp et al., 2012, p. 931). The importance of managing customer relationships has long been recognized, and today customer relationship management is a key part of marketing (Bergström & Leppänen, 2018, p. 358; Bügel et al., 2011, p. 248). It is also worth noting that in B2B sales, customer relationships are based on a consensual and a mutually beneficial relationship (Lau, 2007, p. 272). Customers' demands are changing faster today than ever before and organizations are required to keep up with them (Rapp et al., 2012, p. 931). A customer-oriented mindset helps to strengthen the quality of customer relationships, and correspondingly, a close relationship is beneficial as organizations strive to understand and meet the needs of their customers (Rapp et al., 2012, p. 931; Hoffman, 2001, p. 4).

Over the past few decades, customer relationship management has been seen as an increasingly important means of improving customer satisfaction, customer value, and customer retention (Bolton, 2004, p. 44). However, many initiatives to improve them are failing (Osarenkhoe, 2008, p. 169). According to Osei (2017), Ballou presents that the previous agenda of customer relationship management should be replaced by customer intimacy, by which he means that customers perceive every contact with the company as unique and feel good about it. Customer intimacy is thus a strategy that organizations can use to build their customer relationships (Hoffman, 2001, p. 15). This is especially true for organizations that offer personalized solutions to their customers (Hoffman, 2001, p. 15). Mass customization has increased in the 21st century as a result of technology and e-commerce (Kratovichil & Carson, 2005, p. 10). The modern paradox is that companies must constantly strive to reduce their costs while at the same time offering their customers an even wider range of products (Kratovichil & Carson, 2005, p. 10). According to Osarenkhoe (2008, p. 186), companies that call themselves customer-centered must be proficient in building customer relationships in addition to skilled product engineering. He also states that moving from product and sales philosophies to customer intimacy strengthens the company's competitiveness.

The next subchapters take a closer look at the background, definitions, and effects of customer intimacy. In addition, it is defined which factors help developing customer intimacy in e-commerce, which is more remote than traditional sales, and therefore intimacy is formed differently.

3.1 Definition of customer intimacy

Customer relationship marketing emerged in Finland in the 1980s, after which it was applied in practical marketing work in the 1990s (Bergström & Leppänen, 2018, p. 358). Underlying is the idea of moving from anonymous transactions to long-term relationships that develop value over time through trust, commitment, and customer satisfaction (Treacy & Wiersema, 1993; Bothorel & Pez-Pérard, 2019, p. 204). Customer relationships have been studied extensively from these perspectives (see e.g., Tabrani et al., 2018; Hoffman, 2001). However, the concept of customer intimacy remained largely undefined, although several studies have found customer intimacy to be important in maintaining and building successful customer relationships (Brock & Zhou, 2012, p. 371; Osei, 2019, p. 169). Nevertheless, the idea of customer intimacy is not new, as Treacy and Wiersema (1993) introduced its business significance in the early 1990s. Over the last decade, its importance has been increasingly understood.

In their study, Treacy and Wiersema (1993) identify three value disciplines that organizations can focus on in meeting their customers' expectations. These are operational excellence, product leadership, and customer intimacy (Treacy & Wiersema, 1993). According to Pearson (2012, p. 17), more companies today are focusing on customer intimacy. Treacy and Wiersema (1993) define customer intimacy as an approach that focuses on building long-term customer relationships and meeting the wishes of a particular customer rather than focusing on the entire market. Since then, customer intimacy has gained complementary definitions. For example, Brock and Zhou (2012, p. 371) define customer intimacy as the customer's view of a close, value-generating relationship

where there is a consensus with the supplier. Consensus is widely seen as a significant part of customer intimacy (Brock & Zhou, 2012, p. 372). Helander et al. (2013, p. 29) call customer intimacy a strategic co-creation approach that refers to customized responses to customers' latent and public needs. Customer intimate companies put the customer at the center of attention and build their strategy from there by adapting and tailoring their products and services to suit customers' increasingly specific definitions (Pearson, 2012, p. 60; Bügel et al., 2011, p. 247). Therefore, customer intimacy is determined by how well a company and its customers know each other (Cochran, 2004, p. 3886).

In this study, customer intimacy is understood as a combination of these views, that is the goal of creating long and close customer relationships that benefit both parties. Customer intimacy is formed in the customer's mind based on how well they feel that they have been taken into account. Customer intimacy is considered achieved when a strong bond and a trusting relationship have been established between the company and the customer (Nora, 2019a, p. 595). At the heart of customer intimacy is thus an understanding of the importance of close, long-term customer relationships for business (Helander et al., 2013, pp. 30-31). Customer intimacy is evident in all of the company's operations; in its practices, values, norms, and internal operating processes (Helander et al., 2013, p. 30). It is also linked to a variety of factors such as customer loyalty, customer satisfaction, trust, and commitment. However, the starting point for everything is customer loyalty (Pearson, 2012, p. 10). Pearson (2012, p. 60) also adds that analyzing buying habits and being empathetic, trustworthy, and transparent in customer communications form the basis for building intimate relationships with customers.

Kratochvil and Carson (2005, p. 14) distinguish customer intimacy into two categories; brand and market driven (see figure 2). In brand driven customer intimacy, the customer is kept well-informed but is hardly consulted, so communication is largely one-way monologue (Kratochvil & Carson, 2005, p. 14). In market driven customer intimacy, on the other hand, customer needs are at the focus and communication is a two-way dialog (Kratochvil & Carson, 2005, p. 14). Communication is central to the formation of

customer intimacy (Hoffman, 2001, p. 25). According to Kratochvil and Carson (2005, p. 14), market driven customer intimacy works best for complex products and services where understanding customer needs is essential.

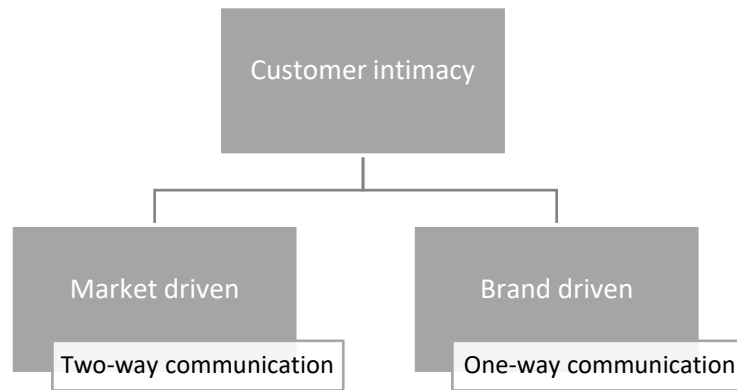


Figure 2. Categories of customer intimacy.

In addition to various definitions, customer intimacy also has alternative terms, as some researchers refer to it as brand intimacy. This however practically refers to the same approach, which focuses on building close customer relationships. MBLM's (2020, p. 4) study states that it improves customer relationships and reciprocity by promoting customer centricity. For consistency, this thesis refers to the approach solely by the term customer intimacy.

3.2 The effects of customer intimacy

Customer intimacy has many benefits for the organization, and it has an essential role in building customer relationships (Brock and Zhou, 2012, p. 379). Focusing on customer intimacy can improve organizational performance, as well as the competitive position in the market (Cuganesan, 2008; Akcura & Srinivasan, 2005; Verweire et al., 2010, p. 5; Treacy & Wiersema, 1993). Brock and Zhou (2012, p. 378), in turn, found it to have positive effects on factors such as level of engagement, customer loyalty, repurchase intentions, customer availability, and customer induced word of mouth. This is also supported

by Nora's (2019a, p. 594) finding that high customer intimacy contributes to customers' repurchase intentions. A customer intimate strategy has also been found to lead to more satisfied employees and better service quality, customer satisfaction, reputation, productivity, increased customer lifecycle value, innovations, and better cross-selling efficiency (Verweire et al. 2010, p. 5; Akcura & Srinivasan, 2005, p. 1007). Customer intimacy is a prerequisite for successful cross-selling, as both are linked by the importance of acquiring customer data (Akcura & Srinivasan, 2005, p. 1007). Hoffman's (2001) observation of the significant impact of customer intimacy on trust and commitment is in turn complemented by research results of Tabrani et al. (2018), who studied the effects of customer intimacy and commitment on customer loyalty.

Customer intimacy thus has a clear connection to customer commitment. Customer intimacy is typically most strongly linked to commitment at the beginning and the end of a relationship (Bügel et al., 2011, p. 256). Bügel et al. (2011, p. 256) interpret this indicates that developing and maintaining customer intimacy helps build a relationship and prevent its termination. It is therefore important to keep an eye on signs that might hint that the customer is considering terminating the relationship to be able to react at the right time (Bügel et al., 2011, p. 256). Signs of this can be, for example, reduced orders or contacts, in which case it is important to try to strengthen customer intimacy for example by contacting the customer personally or arranging a customer day (Bügel et al., 2011, p. 256).

3.3 Developing customer intimacy

Achieving and managing customer intimacy is an essential managerial goal and task for companies (Brock & Zhou, 2012, p. 370). To succeed, it is important to implement the strategy for all organizational functions, such as marketing, human resource management, planning, and IT (Verweire et al., 2010, p. 1). Lattin (1999, p. 12) divides the development of a customer intimate marketing plan into four areas; product development, pricing, distribution, and sales promotion (see figure 3). This research focuses on the

sales promotion side. In addition to these, customer intimacy strategy requires a plan for customer communications and measurement metrics for measuring progress (Lattin, 1999, p. 12). Lattin (1999, p. 22) also recommends deciding a clear target audience for marketing; whether the goal is to acquire new customers or to develop or maintain existing customer relationships.

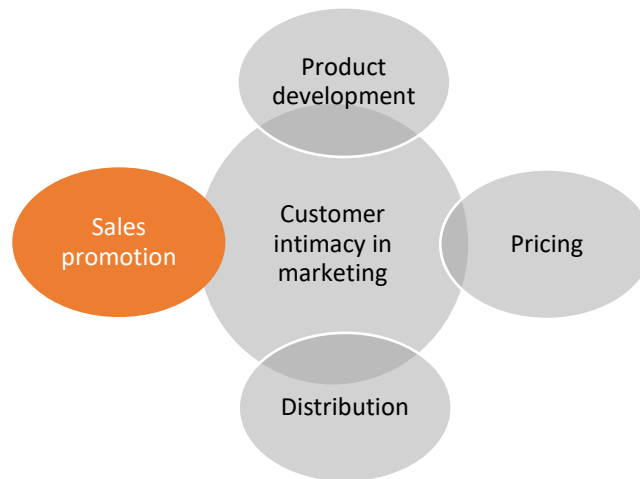


Figure 3. Elements of a customer intimacy marketing plan.

The B2B e-commerce platform can be complemented by portal applications that offer opportunities to increase communication and collaboration in addition to the traditional features such as navigating the page, asking for additional information, and storing information (Turban et al., 2015, pp. 190-191). Portals enable the personalization of pages based on an individual user and connect different sites and services, such as sales, project support, marketing, and various databases (Turban, 2015, p. 191). In addition, the portal may include features and topics such as news, best practices and lessons learned, directories, and help customers to identify industry experts (Turban et al., 2015, p. 191). The following chapters take a closer look at how e-commerce sites and portals support the development of customer intimacy. There are several factors that researchers see affecting customer intimacy in e-commerce, and they have been collected in figure 4. The factors will be presented in more detail in the following chapters.

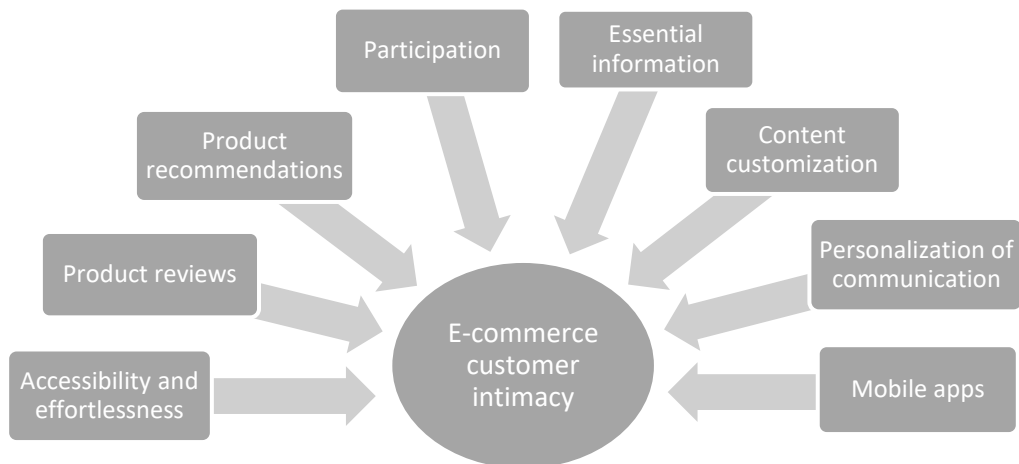


Figure 4. Factors building customer intimacy in e-commerce.

3.3.1 Customer data and personalization accordingly

Successful building of customer intimacy requires the systematic collection and utilization of information related to the customer and the relationship (Helander et al., 2013, p. 30). In addition, the approach requires a holistic understanding of the customer's business and the ability to identify and develop the company's expertise in relation to the customer's future needs (Helander et al., 2013, p. 32). Therefore, customer intimacy is based on the utilization of customer intelligence (Gobble, 2015, p. 56). Promoting customer intimacy also requires activity from the customer, who must be willing to provide the company with sufficient information about their needs and wants, so that the company can understand them and act accordingly, for example in marketing campaigns or product design (Cochran, 2004, p. 3886; Lattin, 1999, p. 14). This interaction is easy in traditional sales by face-to-face or over the phone (Cochran, 2004, p. 3886). This way the information needed by the company can be easily obtained both verbally and by reading body language and interpreting the context and the customer's operating environment (Cochran, 2004, p. 3886). Online, however, customers are often more reluctant to give their personal information to a company, especially if they do not know what it is used for (Cochran, 2004, p. 3886; Pearson, 2012, p. 35). Technology has anyway boosted data

collection and analysis and allows immediate responses such as sending a proper offer or displaying alternative content for the customer (Pearson, 2012, p. 26). In general, responsible use of customer data provides tremendous opportunities and benefits both for companies and their customers (Pearson, 2012, s. 51).

In order to better serve online customers, websites seek to collect a variety of information about their customers (see table 1), such as names, postal and email addresses, phone numbers, and ultimately also customer preferences, desires, and thoughts (Cochran, 2004, p. 3887). It is however recommended to collect only the data that the company really needs (Pearson, 2012, p. 213). One way to collect customer data is through cookies, which allow a site to identify whether that user has visited the site before. If so, the site can use cookies to improve the user experience, for example, by authenticating the user and tracking his or her session and clicks, or by storing the user's preferred settings and the contents of the shopping cart (Woods, 2011, p. 23). Customer relationship management systems assist in data collection, management, and analysis (Cochran, 2004, p. 3891).

Table 1. Different types of consumer data (adapted from Bothorel & Pez-Pérard, 2019, p. 209).

	EXAMPLES	PROVENANCE
SOCIO-DEMOGRAPHIC DATA	Personal data such as first name, last name, gender, date of birth, postal address, e-mail address, telephone number, etc. Professional information such as socio-professional group and position	Order and registration forms, data reported in the customer online account
TRANSACTIONAL DATA	Products and quantities purchased, purchase dates, frequency of purchases, payment methods	Orders and purchases, requests for quotations, newsletter subscriptions, white paper downloads
BEHAVIORAL DATA	Navigational behavior, such as pages visited, time spent per pages, clicks, liked/shared products, and comments. Reactions to newsletters, emails, customer surveys, etc.	Cookies, data from touchpoints, customer surveys

	EXAMPLES	PROVENANCE
USAGE DATA	Use of products/services, such as moments of consumption and their regularity, habits, feelings, etc.	Online services, products, and connected objects
SOCIAL INTERACTION DATA	Tastes, preferences, reactions, etc.	Social networks, platforms for sharing opinions and comments

It is important that customers feel that they are benefiting from providing information, for example through better value creation or with price reductions (Akcura & Srinivasan, 2005, p. 1008). Transparency why the company wants the information and how it will be used helps to obtain it (Cochran, 2004, p. 3889; Pearson, 2021, p. 235). This creates a positive circle, as Brock and Zhou (2012, p. 377) found in their study that high customer intimacy facilitates the acquisition of personal information, and correspondingly, this information allows the firm to serve the customer more closely. Personalization of content based on customer's behavioral data is nowadays a part of marketer's actions to build stronger customer relationships (Pyyhtiä et al., 2013, p. 18; Kalaignanam et al., 2018, p. 265). There are several ways to personalize an e-commerce site, such as personal customer accounts that allow, among other things, user identification, order tracking, personalized notifications, customizing the look and feel of a website, providing product recommendations, and targeted ads (Kalaignanam et al., 2018, pp. 265, 269).

Lattin (1999, p. 13) distinguishes the utilization of customer data on two separate levels; one in which the data collected from the customer is utilized to better serve him or her, and another one in which the data is collected from other customers. The latter is practical especially if personal communication is too expensive in relation to the value produced by the customer (Lattin, 1999, p. 13). This individual approach can be called customer-centric marketing, where marketing aims to meet the needs and desires of an individual customer, or mass customization, which refers more broadly to not only marketing communications but also tailoring products or services to individual customer needs (Sheth et al., 2000, p. 55; Kratochvil & Carson, 2005, pp. 10, 16). Such activities improve the quality of customer contacts and increase customer loyalty, as well as minimize losses when the contacts are of higher quality (Kratochvil & Carson, 2005, pp. 17-

18). For example, a website can be customized based on each customer's personal data and needs (Lattin, 1999, p. 15). An online store may display the products the customer viewed last time or the products they purchased before and recommend some additional features or accessories available to them.

3.3.2 Communication

Hoffman (2001, pp. 22, 97) emphasizes the importance of communication skills in building customer relationships. Communication is an integral part of creating customer intimacy, as communication helps to reach customers and better understand their needs, desires, preferences, and behaviors (Hoffman, 2001, p. 25; Lattin, 1999, p. 12). The importance of writing skills in particular is growing, as our communication is based more on writing than for a long time (Peterson, 2020). Information technology plays a crucial role here, as customer communication serves as the basis for the company's operations; for its business ideas, marketing, and sales (Kratochvil & Carson, 2005, p. 14). In the realization of customer intimacy, not only those who operate close to the customer but also other functions and processes are important (Helander et al., 2013, p. 21).

Communication is all about sending the right message at the right time to the right customer. Successful motivational communication has to have proper content and be positioned within an appropriate context to both influence the buying behavior and reinforce loyalty (Pearson, 2012, p. 129). To become a customer intimate company, therefore, requires utilizing the collected customer data properly in communications in order to serve customers better. This is however often lacked according to Pearson (2012, p. 94); companies often try to collect more and more information from customers while at the same time continuing to speak to them through mass communication channels with the same message to everyone.

Pearson (2012, pp. 114-115, 127) points out that individual and cultural differences affect the interpretations of messages and suggests they should be taken into account in

the marketing communications context. By this, he means the individual lifestyle choices, passions, ethnicities, and personal differences that affect what people value. One may for example pay more attention to the benefits that the product offers to the company's customers and the other to the practical benefits it offers to the company itself, such as reducing costs. The content should therefore resonate with the individual customer so that it creates value and ultimately leads to emotional loyalty and engagement (Pearson, 2012, p. 127). While emotional loyalty is necessary for customer intimacy, Pearson (2012, p. 127) sees the mix of emotional and behavioral loyalty as more useful.

According to Gobble (2015, p. 58), when developing customer intimacy, it is important for a company to present itself as a partner instead of just a manufacturer or marketer. When customers see the firm as a trustworthy advisor, they are often more open, receptive, proactive, and communicative (Brock & Zhou, 2012, p. 379). It appears that those customers are likely to ask such advisors for information proactively before making actual decisions or budgets (Brock & Zhou, 2012, p. 374). Brock and Zhou (2012, p. 374) argue that customer intimacy is one way to get such an advisor status. The customer should also feel that the company really meets his or her values and needs (Gobble, 2015, p. 58). It is not enough that customers can provide feedback or ask for help, but instead, communication should be meaningful and reciprocal (Gobble, 2015, p. 58). In addition, communication should not happen just when the customer is disappointed with the company (Pearson, 2012, p. 157).

In terms of customer intimacy, it is best to have a single contact person appointed to the customer with whom they are in contact to make the organization appear unified (Helander et al., 2013, p. 62). However, this might not always be possible. Brock and Zhou (2012, p. 379) also point out that to understand customers' motives and behavior, companies should understand better the "why" questions instead of "what" questions; why the customer uses a given product, why the customer works with the competitor and such. Without some level of customer knowledge, it is unlikely that the customer

will feel that the company understands him or her, and thus customer intimacy will not be experienced (Brock & Zhou, 2012, p. 372).

Bügel et al. (2011, p. 256) even compare the customer intimacy that arises in customer relationships with the feelings of intimacy formed in love relationships. They define customer intimacy as being formed by intimacy and passion in the same way as love. According to them, organizations should create intimacy at the beginning of a customer relationship by contacting and introducing the organization and what it has to offer in a personalized and attractive way. The early stages of a customer relationship are generally overlooked, although there is an opportunity to create a good foundation for customer intimacy (Bügel et al., 2011, p. 256). For this reason, the front page of a website can be crucial, as it should arouse the visitor's interest to get the casual visitor to become a customer (Mourya & Gupta, 2015, p. 28), with whom a close and lasting relationship can then be established.

3.3.3 Digital services and features

Weinman (2013) suggests that nowadays, with the development of digitalization and big data, one could also talk about collective intimacy instead of customer intimacy. He illustrates this with a traditional means of increasing customer intimacy: many online services utilize data they collect from multiple different users to form product recommendations. These recommendations may seem personal, but in fact, they might be based on data extracted from up to millions of different users (Weinman, 2013). Product recommendations can be based for example on user demographics, past purchasing behavior, or on the site's best-selling products (Vaidya & Khachane, 2017, p. 103). There is also a downside to this, as Gobbler (2015, p. 57) points out, the line between an appropriate and excessive amount of information is blurred and customers may easily feel their privacy violated.

As mentioned in chapter 2.1, the infrastructure of an e-commerce platform affects e-commerce success. Similarly, Helander et al. (2013, p. 62) highlight that operations should be easy, effortless, and accessible to the customer whenever needed in order to foster customer intimacy. Previous studies have also found that organizations utilizing smartphone ecosystem perform better in customer intimacy measurements and they have also been found to increase customer loyalty and satisfaction with their real-time applications (MBLM, 2020, p. 30; Turban et al., 2015, p. 264). In particular, content and information services, such as YouTube, Netflix, and Amazon, increase customer intimacy, but also providing mobile applications increases the sense of intimacy (MBLM, 2020, p. 30). However, they are not as effective as content services, as applications can easily be seen as utilities or built-in aspects of the smartphone experience (MBLM, 2020, p. 30). According to MBLM (2017), the connection of these to higher customer intimacy is based on the fact that they are seen as useful – they make the user smarter and more capable, they connect people, and, above all, they are an integral part of users' daily lives. The popularity of mobile commerce, which refers to e-commerce that takes place via a mobile phone and a mobile application, is projected to grow (Mourya & Gupta, 2014, pp. 82-84).

Liebmann (2000, p. 134) highlights the concept of e-intimacy and points out that there are many different levels of customer relationships in B2B e-commerce that need to be distinguished. According to him, bottom-level relationships are kind of acquaintances that make an occasional purchase in a company's online store in much the same way as is done in B2C sales. The next level is a little closer and may involve other communication channels such as e-mail or telephone (Liebmann, 2000, p. 134). Customer relationships at the highest level are intimate, and the customer may be offered various additional services or access to an enterprise resource planning (ERP) system that lower-level customers do not get (Liebmann, 2000, p. 134). The relationship is then strategically valuable to both parties and the trade is bound by precise contractual obligations (Liebmann, 2000, p. 134). Differentiating customer relationships makes sense, as it is not profitable to offer the occasional one-time customer access to a complex ERP system and, on the

other hand, a close customer may not feel valued the way they deserve in the same click-and-buy environment that everyone has access to (Liebmann, 2000, p. 134).

Helander et al. (2013, p. 31) suggest that, from a customer perspective, customer intimacy is enhanced by the fact that all services are provided from a single location rather than a fragmented network. Offering a complete solution is seen as a competitive advantage (Helander et al., 2013, p. 15). Customer intimacy has also been noted to increase if the company's business processes are aligned with the customer's processes (Helander et al., 2013, p. 30). However, the views of a company and its customer on functional practices do not always meet. In this case, it is necessary to consider whether to serve the customer in ways that are most natural to the company itself or in ways that suit the customer best (Helander et al., 2013, p. 61). For example, Helander et al. (2013, p. 61) point out that sometimes personal contact may be more effective for a company than developing and maintaining an electronic system. Personal contact also deepens the customer relationship faster and provides the information needed to develop customer intimacy more easily (Helander et al., 2013, p. 61). This paradox needs to be dealt with when considering e-commerce.

3.3.4 Engagement and communality

Customers today are increasingly social and willing to actively participate in the purchasing process (Turban et al., 2015, p. 26). Customer intimacy has been found to be stronger the more inclusive the market is (Bügel et al., 2011, p. 255). Customers are willing to provide feedback, write product reviews, share product recommendations, and make contacts (Turban et al., 2015, p. 26; Pearson, 2012, p. 26). Weinman (2013) also emphasizes that social relationships are related to customer intimacy. However, according to him, the relationship is not limited only between customers and the company but can also be between customers. In the same way, Nunes (2005, p. 15) recommends companies to involve other customers, business partners, employees, and even competitors in the discussion to create more fruitful relationships. Utilizing such relationships and

contacts can provide more insight into their needs and preferences (Weinman, 2013). The social platform can be built into the company's system or be some existing separate service (Weinman, 2013).

Community strengthens the exchange of information between customers, which at the same time promotes trust on the website (Bart et al., 2005, p. 136). In addition to a discussion forum, another way to promote this is by providing product reviews in the online store. In fact, people tend to trust not only the recommendations of their acquaintances and family members but also product reviews and recommendations of users unfamiliar to them (Nielsen, 2015, p. 4). Nunes (2005, p. 17) also points out that people usually do not just discuss with a salesperson before the purchase but also with friends, competing sellers, and trusted advisors. By initiating this kind of discussion allows the company to engage in and manage these conversations (Nunes, 2005, p. 17). Allowing writing a review on a website is therefore a way to promote trust and thus also customer intimacy (Koehn, 2003, p. 10; Nora, 2019b, p. 3134).

3.3.5 Value co-creation

According to Helander et al. (2013, p. 31), a practical way to increase customer intimacy is to create value together with the customer. To create an intimate and personal customer relationship, it is often required to involve the customer in the value creation process (Fleck & Ambroise, 2019, p. 39). For example, by giving the customer an opportunity to customize certain parts of the product. The flexibility of the interaction is also essential, that is, the freedom to choose how features are presented, selected, and delivered (Miceli et al., 2007, p. 9). The value experienced by the customer is thus formed based on both the content and website characteristics (Miceli et al., 2007, p. 10).

Shared value creation is closely related to personalization and user engagement that were discussed in previous chapters. Randall et al. (2005, pp. 71-83) call this customizing customization and present some good practices for online stores offering customization,

whose customers have different skill levels on the expert-novice scale and thus expect different levels of service. They urge e-commerce sites to provide, among other things, different starting points for customization, sufficient information about optional features and their benefits and implications - for example with a help button - and rich product illustrations that allow comparing it to some other product.

4 Research methodology

This chapter describes the methods and research strategy used in the research and introduces the target companies. The last part of the chapter will assess the reliability of the study. The research method and analysis are based on the research questions presented in the introduction. Methodology refers to the researcher's assumptions about the nature and essence of the research subject and the perception of how to obtain information about the phenomenon (Juuti & Puusa, 2020, p. 9). It is therefore a set of background theories on the basis of which the research is conducted (Saunders et al., 2007, p. 3).

4.1 Research strategy

The approach for this research is qualitative, as it is best suited to answer the research questions presented in the introduction. Qualitative research seeks to bring out new perspectives and produce new information on the subject, as well as to describe and understand phenomena or certain types of activities (Juuti & Puusa, 2020, pp. 196-200; Tuomi & Sarajärvi, 2018, p. 74; Ojasalo et al., 2014, p. 105). It is well suited for researching unfamiliar subjects or deepening understanding of the subject (Ojasalo et al., 2014, p. 105). The starting point is the description of real life, and often the researcher is involved in the activities on the basis of which he or she makes own justified interpretations of the phenomenon (Ojasalo et al., 2014, p. 105). Overall, qualitative research is diverse and allows to conduct a wide range of research within the framework of one's interest, research problem, and conception of science (Eskola & Suoranta, 1998, p. 105). Methods of quantitative analysis can also be applied to qualitative research (Eskola & Suoranta, 1998, p. 119), as is done in this study. In quantitative analysis, observations are substantiated by figures and the statistical connections between them (Alasuutari, 2011, p. 28). Quantitative methods are used to clarify issues related to numbers and percentages, but it can also simply mean for example classifying data into different categories (Heikkilä, 2014, p. 15; Eskola & Suoranta, 1998, p. 119).

The philosophical starting point of this thesis is interpretive research, which emphasizes making interpretations in producing information (Saunders & Tosey, 2012, p. 58). A multiple case study was chosen as the research strategy, as a case study allows the production of rich and detailed material and allows the phenomenon to be examined in the context of its environment (Juuti & Puusa, 2020, pp. 196-200; Hirsjärvi et al., 2009, pp. 134-135). A case study is well suited for creating development ideas and solutions (Ojasalo et al., 2014, p. 37), which is one of the objectives of this research. In case studies, the aim is typically to produce in-depth and detailed information, meaning that it is essential to focus on a narrow rather than a broad topic (Ojasalo et al., 2014, pp. 52-53). It is also typical for case studies to have several different methods of data acquisition to obtain an in-depth and holistic picture (Ojasalo et al., 2014, p. 37). This applies to this research as well since the data is acquired both by collecting it from existing e-commerce websites and through an interview and a survey.

In a case study, the topic can be chosen on several grounds, for example, because it is as typical and representative as possible, some kind of borderline case, or because it is in some way unique or exceptional (Eskola & Suoranta, 1998, p. 49). Eskola and Suoranta (1998, pp. 49-50) also highlight how all qualitative studies are in a way case studies. A case can be, for example, a whole company, one of its divisions, a process or a group of employees or customers, or a small number of separate cases that are in some way related to each other (Ojasalo et al. 2014, p. 37; Hirsjärvi et al., 2009, p. 134). In this research, the cases are the e-commerce sites that will be introduced in the next chapter.

A case study typically involves certain steps (see figure 5) that are followed in this study as well. In a case study, the researcher typically has some prior knowledge of the topic, which makes it possible to define a preliminary development task (Ojasalo et al., 2014, p. 54). However, it is normal that the development task may change as the research progresses and new information is obtained on the subject (Ojasalo et al., 2014, p. 54). In

this research, the development task did not change during the process, but it was clarified and adjusted.

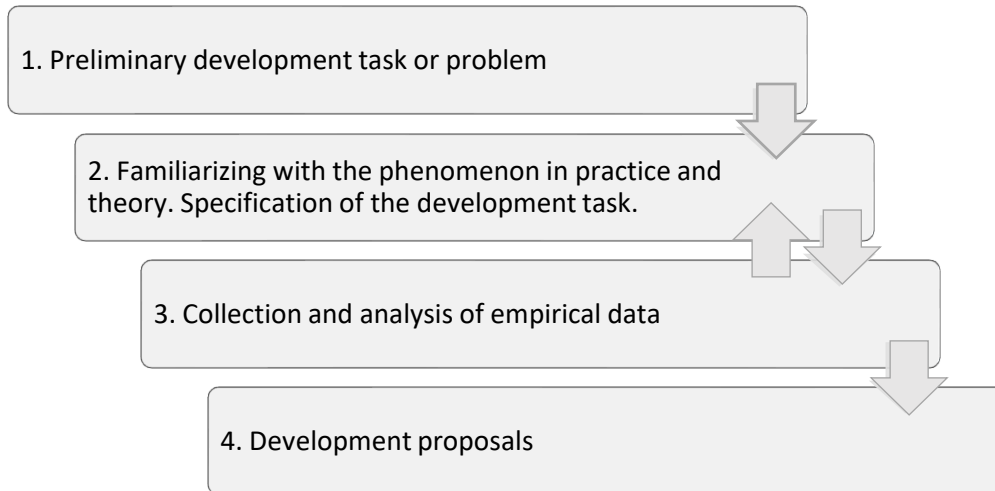


Figure 5. Steps of a case study research (adapted from Ojasalo et al., 2014, p. 54).

4.2 Description and acquisition of the research material

The research material for this study is acquired in multiple steps, the first one being sampling the material from existing e-commerce sites. The e-commerce sites under investigation were determined on the following clauses. Firstly, the companies had to have a website for e-commerce purposes, and secondly, they had to be on the industrial automation line of business. One exception was made for this in order to get an in-depth overview of customer intimacy in e-commerce by taking a closer look at how a known customer intimate online retail company works. Some of the e-commerce sites sell just the company's products and some work as a platform for third-party products as well. However, this is not relevant for the research and is therefore not addressed. The e-commerce sites and companies included in the research are listed in table 2. The empirical research material was collected from the e-commerce sites during May and June 2021.

Table 2. Companies and their e-commerce sites included in the research.

Company	E-commerce site	URL
ABB	ABB Ability Marketplace™	https://eu.marketplace.ability.abb
Siemens	Siemens MindSphere	https://siemens.mindsphere.io/en
Schneider Electric	Schneider Electric Exchange	https://exchange.se.com
Honeywell	Honeywell Marketplace	https://marketplace.honeywell.com
PTC	PTC Marketplace	https://www.ptc.com/en/marketplace
Amazon	Amazon	https://www.amazon.co.uk

The second part of the research material is generated in the research process by conducting an interview because when wanting to know how a customer really perceives customer intimacy and how it should be developed, it is simplest to ask directly. Interviews are the most common data acquisition methods in qualitative research, and it can be seen as a conversation that has a beforehand defined goal (Juuti & Puusa, 2020, p. 99). Conducting an interview is a great way to collect information about previously unknown and little studied subjects (Hirsjärvi & Hurme, 2015, p. 35). There are several interview techniques that vary depending on their degree of structuring, which means how freely the interview is conducted (Juuti & Puusa, 2020, p. 105). This research uses a semi-structured interview which suits the needs and objectives of the research best. A semi-structured interview has an interview structure that is determined in advance, but it is more flexible than a structured interview, in which the answer options are defined as well (Juuti & Puusa, 2020, p. 105).

The interview was conducted in June 2021 via Microsoft Teams. The one-to-one interview lasted approximately 44 minutes. The interview questions were provided to the interviewee a week before the actual interview so that he had an opportunity to get to know them and familiarize himself with the subject. Tuomi and Sarajärvi (2018, pp. 85-68) recommend this as it helps to obtain as much information as possible about the subject. The interview was recorded, after which it was transcribed in order to be able to analyze it. The interviewee was selected for the interview because the thesis commissioning company had knowledge that the company where the interviewee works has

been eager to further develop e-commerce. Therefore, it could be presumed that the interviewee would have meaningful points of view on the subject. The interviewee works in the steel industry and his role is closely related to procurement. The interviewee's anonymity has been protected and he is therefore called by the term interviewee and not his name.

However, interviews are usually expensive and time-consuming, so when wanting to get answers from a larger group of people, surveys provide an easier way (Tuomi & Sarajärvi, 2018, p. 86; Ojasalo et al., 2014, p. 40). Therefore, the research material also includes a survey that was conducted in 2020 by the thesis commissioning company ABB Oy. The survey was conducted in 16 countries across the globe with a total number of 260 survey respondents. 35 % of the respondents were from Europe, 35 % from Asia-Pacific, and 30 % from the Americas. The respondents are divided into four groups: channel partners (131), original equipment manufacturers (37), end-users (24), and finally local ABB sales units (68), which will be excluded from this research because the focus is on customers.

4.3 Analysis

The data analysis provides clarity on the research material in order to produce new information on the research topic (Eskola & Suoranta, 1998, p. 100). The aim is to summarize the material and bring out clear and meaningful observations from the seemingly fragmented material (Eskola & Suoranta, 1998, p. 100). This research uses content analysis as the data analysis method, which means analysis of written, seen, or heard content (Tuomi & Sarajärvi, 2018, p. 78). It is one of the most common methods in qualitative research and can be applied to a wide range of studies (Juuti & Puusa, 2020, p. 144). Qualitative content analysis is good at answering descriptive research questions (Schreier, 2012, p. 43). The analysis thus brings clarity to the data so that reliable and reproducible conclusions can be drawn from the phenomenon (Krippendorff, 2013, p. 24). Therefore, the analysis must be credible and truthful, and the solutions must be justified (Juuti & Puusa, 2020, p. 144). Qualitative content analysis can be applied to

various materials, such as websites, company brochures, newspaper articles, and interview transcripts (Schreier, 2012, pp. 2-3). This study uses both interview transcripts, survey answers, and websites, which means that there are both primary and secondary data involved.

Content analysis can be implemented in three ways: data-based, theory-based, or theory-driven (Tuomi & Sarajärvi, 2009, pp. 95-98). This study uses theory-driven analysis, in which previous knowledge and theories aid the analysis, but the analysis is not entirely based on theory or research data (Tuomi & Sarajärvi, 2009, pp. 97-98). This means that both theoretical background and the researcher's own interpretations that are based on the observations are affecting the analysis. Whereas in data-based analysis, the theoretical concepts are entirely based on the research data and theory-based analysis is guided by previous knowledge and the categories are formed based on it (Tuomi & Sarajärvi, 2018, pp. 97-98). Content analysis is generally thought to consist of certain stages, which include the selection of the analysis unit, familiarization with the material, reduction of the material, classification, theming and typing of the material, and interpretation (Juuti & Puusa, 2020, p. 144; Tuomi & Sarajärvi, 2018, pp. 104-105). Qualitative research usually collects data in several stages and using parallel methods, which results in the data acquisition and analysis stages being partially overlapping and the analysis is carried out through the research process (Juuti & Puusa, 2020, p. 141). This is typical for a qualitative research (Juuti & Puusa, 2020, p. 10), and happened in this research as well. Some researchers consider content analysis to be a method that combines qualitative and quantitative data and analysis (Juuti & Puusa, 2020, p. 144). This is also done in this study since the survey results are clarified by counting the numbers of responses and their percentages. This helps to understand the findings and their prevalence.

4.4 Reliability of the research

Assessing the reliability of a research is an important part of every research because although researchers aim to avoid errors, the reliability and validity of results can vary

(Hirsjärvi et al., 2009, p. 231; Tuomi & Sarajärvi, 2018, p. 158). Validity refers to how well a chosen research method measures the intended subject and reliability indicates how well the research results are repeatable (Hirsjärvi et al., 2009, p. 231; Tuomi & Sarajärvi, 2018, p. 160). However, there are no unambiguous guidelines for assessing the reliability of a qualitative research (Tuomi & Sarajärvi, 2018, p. 161).

The evaluation of qualitative research mainly means the evaluation of the reliability of the research process, so it is basically about the justification and truthfulness of the arguments (Eskola & Suoranta, 1998, pp. 152-153). The main criterion for reliability is, according to Eskola and Suoranta (1998, p. 154), the researcher, so the reliability of the entire research process is assessed. The reliability of qualitative research is more difficult to assess than quantitative since in qualitative research it is more difficult to distinguish between the analysis of research material and reliability assessment (Eskola & Suoranta, 1998, p. 151).

5 Research results

This chapter presents and analyses the key findings that emerged from the research. The chapter is divided into two parts: the focus is first on the analysis of the e-commerce sites and then on the survey and conducted interview. The first chapter is approaching the first research question, what constitutes customer intimacy in e-commerce, and the second chapter focuses more on how to develop it. The objectives are approached through content analysis in order to analyze both contents and functionalities that increase customer intimacy in the e-commerce sites and the themes that come up from the interview and the survey. The focus is therefore not only on the text, that is most common in content analysis but also on the functionalities that websites provide.

After deciding on research questions and material, content analysis usually starts with building a coding frame by dividing material into several categories (Schreier, 2012, p. 5). This was done in this research as well and there were found 10 themes in the research material, which are presented in table 3. The themes are partly overlapping since some of them are affected by each other. For example, communality feeling is promoted by communication and product reviews provided by other customers, but it was clearer to divide these into own categories since they have their own characteristics. The themes are addressed in more detail in the following chapters.

Table 3. The found themes and their descriptions.

THEME	DESCRIPTION
Product recommendations	General and personalized product recommendations
Customer experiences	Success stories, product reviews, quotations, etc.
Communication	Chat, contact forms, frequently asked questions, customer support, usage of “you” and “we” pronouns, questions & answers, etc.
Communality	Discussion forums, interactive questions & answers, sharing options, etc.
Product information	Product comparisons, clear product descriptions, inventory, pictures, screenshots, videos, downloadable documents, etc.
Customer data collection	Cookies, forms, etc.

THEME	DESCRIPTION
Transparency	Transparency on data collection, privacy and general openness
Timeliness	Speed and convenience of usage, real-time information, efficiency and accuracy of data
Customization	Configuration of products, website personalization
Concerns	Lack of integration, difficulties to find right information and resources, reliability and accuracy of content and product reviews, etc.

5.1 Customer intimacy at the e-commerce sites

As explained in chapter 3.3.1., customer intimacy is based on acquiring customer data in order to serve customers better (Helander et al., 2013, p. 30). With this information, companies can fulfill their customers' needs and desires better. This is visible for example on product recommendations and alternative functions that the sites provide. Customer data can be collected for example through cookies (Woods, 2011, p. 23).

All the e-commerce sites under investigation request accepting cookies when entering the site. This is common in e-commerce and some even require accepting them upon entrance (Akcura & Srinivasan, 2005, p. 1008). This is the case with ABB Ability Marketplace™ (2020a), which declares that *"We use cookies to personalize content and provide you with a better user experience. By continuing to use this website, you agree to the use of cookies"*. The reason why cookies are used and should be accepted is explained on each site. This is in line with building customer intimacy through telling why and what for data is collected so that the customers know that they are benefiting from it (Akcura & Srinivasan, 2005, p. 1008; Cochran, 2004, p. 3886; Pearson, 2012, p. 35). PTC, Schneider Electric, Siemens, Honeywell, and Amazon also allow the visitor to customize cookies and set their preferences. Visitors can for example allow just the necessary cookies, performance cookies, customization cookies, or marketing cookies. Customer data is also collected through filling up forms to contact sales, which is the case at Honeywell

Marketplace's contact us form. The customer is also required to accept marketing communications in order to submit the contact form.

5.1.1 Product recommendations

Amazon is a forerunner when it comes to customer intimacy (Natarelli & Plapler, 2015). Amazon provides a lot of help for the customer's purchasing decision. The site recommends products based on what is selling best, which are new products, what is most wished for, and what people have most given as a gift. Amazon has also a feature that suggests gift ideas for certain groups of people based on their gender, age, and interests. When looking at some product, Amazon also provides information on what is frequently bought together with it or a suggestion of some deal when buying something else with it. The site also tells what other customers bought together with it. One could say that nowadays product recommendations serve as digital salespeople (Vaidya & Khachane, 2017, p. 100).

In addition to general recommendations, Amazon provides personalized recommendations based on previous activity on the site. When entering the first page, there are presented the most recently viewed item, related products to previously looked items, and also products inspired by personal browsing history. The categories are partially overlapping, since *"related to items you've viewed"* and *"inspired by your browsing history"* are both based on previously viewed products. Having both categories visible, Amazon is able to convey a message of having a lot of personal recommendations for the customer. The first page also collects different top deals and trending products, which are not based on personal activity but on what other people are interested in. This is normal, as sites often utilize customer data collected from other customers (Lattin, 1999, p. 13). That means that the data collected from other customers is used for serving another customer. Lattin (1999, p. 13) explains this by an example of how people buying certain products have often something in common that can be used for serving the customer. In

the case of Amazon, this is visible for example in the suggestions for items that are frequently bought together.

Amazon is trying to provide better recommendations by asking the registered customers to help by providing additional information. Customers can rate products, mark products that they own and which they are not interested in so that the site can do better suggestions (see image 1). Besides information on personal preferences, Amazon suggests the customer adds information for example about possible pets to get to know the customers better. Customers can include information about their pet's name, breed, age, gender and favorite brands, toys, and dietary preferences. The more information the customer gives, the better recommendations he or she gets. This is also explained in the customer help desk, where Amazon (2021) tells that recommendations are formed based on past purchases, items a person has told to own, and what they have rated. The activity on the site is also compared to other users and the suggestions change regularly (Amazon, 2011). This is also promoting customer intimacy by being upfront and telling how the information is utilized (Cochran, 2004, p. 3889). When customers understand why certain information is collected, they are usually more willing to provide it (Cochran, 2004, p. 3889).

Your Amazon.co.uk Your Browsing History Recommended For You Improve Your Recommendations Your Public Profile Learn More

Your Amazon.co.uk > Improve Your Recommendations

(If you're not Sarianne, [click here.](#))

Help us make better recommendations. You can refine your recommendations by rating items or adjusting the checkboxes.

Items you've marked "I own it"

You currently have no items marked 'I own it'.
To add items you own that were not purchased at Amazon, mark them 'I own it'.

EDIT YOUR COLLECTION

- Items you've purchased
- Videos you've watched
- Items you've marked "I own it"**
- Items you've rated
- Items you've marked "Not interested"

Image 1. Improve your recommendations at Amazon.

The other e-commerce sites under investigation do not provide personal recommendations such as Amazon offers. Instead, some of them provide general recommendations such as similar or related products to a product someone is looking at. This is the case at Honeywell Marketplace, PTC Marketplace, and Schneider Electric Exchange. The recommendations are the same to everyone looking at the same product. This is working fine in this situation since the categories include only similar products to the one in question and related products to it. The personal touch that promotes customer intimacy even more, like personalized recommendations such as Amazon provides, is lacking. However, it can be interpreted that the general recommendations are better than no recommendations at all, because they are helping the kind of customer who is searching for a specific product, and it is therefore promoting a sense of customer intimacy.

5.1.2 Customer experiences

Customer intimacy is also promoted by showing how other customers have experienced the products and service with the company so that the possible new customer gets an outsider's opinion. Amazon, PTC Marketplace, and Honeywell Marketplace do this by allowing their customers to write product reviews that are visible to other customers. This promotes trust since people tend to trust other people better than just the company (Dou et al., 2012, p. 1555). At this moment most of the products at PTC and Honeywell Marketplace do not have reviews, which means they are not in their full potential yet. However, there is one product at PTC Marketplace that has been rated with three stars all though it says at the reviews section of the product page that there are no reviews yet. This raises a question where the three-star rating is based on. Perhaps a customer has reviewed the product with three stars without writing an explanation, but when it comes to customer intimacy, it would be best to be transparent and show where it was based on. This way visitors looking at the product could identify the reviewer as a real customer. Similarly, ABB Ability Marketplace™ has an inconsistency regarding product

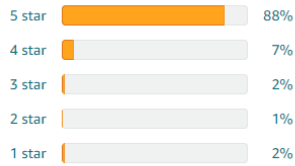
reviews and ratings. The search function allows filtering the products based on their rating, even though there is no more information about where the ratings are based on.

In contrast to them, Amazon has many reviews on almost every product, and they are shown in multiple ways (see image 2). Visitors can for example search the relevant reviews by a keyword, see how some specific feature is evaluated, or go through the images that customers have sent and compare them to the official product images. Amazon also explains how the ratings are calculated so that the customer understands the process. This promotes trust on the website which in turn builds customer intimacy (see e.g., Koehn, 2003, p. 10; Nora, 2019b, p. 3134). There are both negative and positive comments visible, which fosters trust as well. The website allows changing the order of the reviews either based on top reviews or most recent ones. This is done by allowing visitors to rate the reviews if they find them helpful. The reviewers are labeled with a verified purchase tag if Amazon recognizes that they actually have purchased the product from Amazon. This way visitors know that they are real customers which makes it easier to believe in them and their opinion. Visitors can also view the reviewer's profile to see more detailed information about the reviewer, such as other reviews, a total count of helpful votes, reviewer ranking, and possible profile picture. All these things promote customer intimacy by creating a sense of closeness, intimacy, and trust towards the company and its customers.

Customer reviews

★★★★★ 4.8 out of 5

97,388 global ratings



How are ratings calculated?

By feature

Battery life	★★★★★ 4.6
Sound quality	★★★★★ 4.5
Comfort	★★★★★ 4.5
Volume control	★★★★★ 4.3
For working out	★★★★★ 4.3
Noise cancellation	★★★★☆ 4.0

See less

Review this product

Share your thoughts with other customers

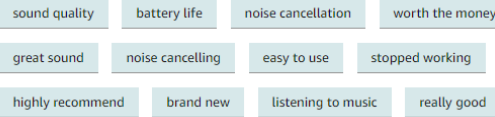
Write a customer review

Reviews with images



See all customer images

Read reviews that mention



Top reviews

Top reviews from United Kingdom



Mr Karl M Burrows

★★★★★ be aware, they are the new airpods but come in the first gen charging case

Reviewed in the United Kingdom on 2 April 2019

Verified Purchase

This is not an issue if you don't wish to pay the extra £40 for the wireless charging case up front, you can always buy a case at a later date for £79 from the apple store... but if you are looking for a wireless charging experience, then these are not the ones for you..

I initially thought I have been sent the first gen headphones as there are no obvious changes in appearance, but after doing a bit of research, you get a first gen charging case with the new 2nd gen headphones.. they are the latest model as advertised. so I am happy man now.

906 people found this helpful

Helpful

Report abuse

Image 2. Customer reviews at Amazon.

Siemens MindSphere does not allow its customers to write product reviews but has collected separately a couple of comments from them. These comments focus on the benefits that the e-commerce site in general or some specific product provides. The quotations also include the name, title, and company that the given customer works at, and product reviews have also a star rating (see image 3). The quotations look similar to the product reviews, but in fact, they should not be compared since these are different in terms of that customers are not encouraged to give the quotations and they are not openly posted on the site. In a similar way, Schneider Electric Exchange and PTC Marketplace have collected a few comments from their customers about their experiences. These promote the e-commerce site in general and encourage new customers to join.

Edge2Web Director for MindSphere provides the power and ease of use we need to deliver sophisticated digital services to our customers regarding the operating parameters and status of their industrial wash systems. Additionally, Edge2Web team has become a key partner in our digital industrial initiatives.

Patrick Doherty, Director of Engineering, N.S. Corporation



Image 3. Customer's comment on a product at Siemens MindSphere.

Customers' opinions and experiences can also be presented by showing success stories. Schneider Electric Exchange and Siemens MindSphere have included stories about how their solutions have helped their customers. Siemens MindSphere has success stories both in video and written form, when as Schneider Electric Exchange has them in writing. Siemens MindSphere has a whole page for the success stories, "Made with MindSphere", where customers can search and filter the cases based on region, industry, company, or some specific search word. This allows customers to save their time by going through just the relevant ones. ABB Ability Marketplace™ has a section for reference stories too, but there is no further information about the cases. This is discussed in more detail in next chapter. Success stories differ from product reviews in a way that they are usually initiated by the company and only include successful cases. Product reviews on the other hand may provide both good and bad reviews. However, success stories promote customer intimacy as well by showing the products and their benefits on a deeper level, so that the customer can gain a deeper understanding of the offering. Seeing how things are handled and what works for other companies may help the customer to broaden the perspective and get a better understanding of the quality of the service.

5.1.3 Communication

Communication plays a major role in forming customer intimacy because communication is needed for being able to fully support customer needs. Customers want to feel that their time is valued, and they want to get answers fast and effortlessly. It has been found that 77 % of people think that valuing their time is the most important thing

related to good online customer service (Legget, 2015). Therefore, for building customer intimacy it is important that relevant information is easily found on an e-commerce site and that customers can easily contact the firm.

Nowadays customer service is happening increasingly through an online chat (Følstad et al., 2018, p. 1), which enables fast communication. However, most of the e-commerce sites included in this research lack this feature. All sites have clear contact options available, such as contact forms or direct links to send an email, but only Amazon and PTC have chat functions for customer service purposes. Both use chatbots, which are starting to take the role of contact and customer support (Julienne et al., 2019, p. 163). PTC Marketplace has redirected its contact us link to the company site, where they have both a contact form and a chat. The chat uses first a chatbot that asks questions about customers' interests and personal details and then connects to a live chat with a human expert. Amazon is also using a chatbot at first, which provides help to simple questions. If the chatbot cannot help, the customer can choose to talk to a human through chat or via a phone call. This promotes customer intimacy because generally, chatbots involve a small risk regarding contentment of customer relationships, but by offering also other alternatives for communication the risk is reduced (Simon, 2019, p. 172).

Schneider Electric Exchange provides a feedback option, which is always visible on the right side of the page. The feedback function allows giving feedback of some specific part of the page or generic feedback of the website in general. After picking the wanted option, the customer is provided with a few questions and he or she can choose the feedback type to be a suggestion, compliment, issue, or a question (see image 4). Making it easy to provide feedback likely boosts the customers' activity to provide it.

The image shows a feedback form for Schneider Electric. At the top, it features the Schneider Electric logo and a close button (X). The first question is "How would you rate your experience today?" with five green stars, the fourth of which is outlined. Below this is the question "Please select a feedback type?" with a dropdown menu currently showing "Question". The dropdown menu is open, displaying options: "- Choose a subject -", "Suggestion", "Compliment", "Issue", and "Question". The second question is "How would you rate the speed of our website?" with three radio button options: "Slow", "Good enough", and "Fast". At the bottom left, it says "Powered by GetFeedback" with a small logo. At the bottom right, there is a blue "Submit" button. The background of the form is a blurred screenshot of the Schneider Electric website, showing "View Product" buttons and a "Feedback" button on the right side.











Image 4. Feedback function at Schneider Electric Exchange.

In addition to contacting options, customer intimacy is affected by how well information is communicated and how easy it is to find the answers. Amazon has gathered all the relevant information at the customer service centre, which welcomes the customer by saying *“Welcome to your Customer Service Centre, [name]. You can quickly take care of most things here or we’ll connect you to someone if needed”*. That way they are making sure the customer knows that also personal help is available, and they make it more intimate by addressing the customer directly with their name. The service centre has a search function that allows the customer to search help for a specific need or browse through the topics (see image 5), which makes the process easier for the customer.

Welcome to your Customer Service Centre, Sarianne

You can quickly take care of most things here or we'll connect you to someone if needed.

What do you need help with today?

 <p>Your Orders Track parcels Edit or cancel orders</p>	 <p>Returns & Refunds Return or exchange items Print return mailing labels</p>	 <p>Digital Services and Device Support Find device help & support Troubleshoot device issues</p>
 <p>Manage Prime Learn about Prime benefits Cancel membership</p>	 <p>Payment Options Add or edit payment methods Edit expired debit, credit card</p>	 <p>Account Settings Change email address or password Update login information</p>
 <p>Report Something Suspicious Scam Call or Phishing Email</p>	 <p>Gift Cards & Top Up View balance or redeem a card</p>	 <p>Contact Us Contact our Customer Service via Phone or Chat</p>
 <p>COVID-19 and Amazon FAQs about the impact on ordering</p>		

Search the help library *Type something like, "question about a charge"*

Browse Help Topics

<p>Recommended Topics ></p> <ul style="list-style-type: none"> Where's My Stuff ? Managing Your Orders Managing Your Account 	<p>Learn how to...</p> <ul style="list-style-type: none"> International Delivery Rates & Times Why Tracking Information May Not be Available Delivery Restrictions 	<p>Quick Solutions</p> <ul style="list-style-type: none"> Track Parcels or View Orders Manage Your Payment Methods Return or Replace Items Change Name, E-mail, or
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Image 5. Amazon Customer Service Centre.

Customers can also be supported by providing alternative materials and resources as Siemens MindSphere does. The e-commerce site has among other things tutorials, guides, visualizations, documents, tool kits, examples, glossaries, and web components that are available for every visitor. Similar to that, Schneider Electric Exchange offers SDK platforms and toolkits, APIs, datasets, and free trials for ready-to-use analytics. The other e-commerce sites under investigation do not have that many additional materials, but ABB, Honeywell, PTC, and also Schneider Electric have collected frequently asked questions to help customers find the most common answers faster. Siemens MindSphere has this as well but reading them requires registering, so it is not that simple to get access. ABB Ability Marketplace™ has also a wiki and offers related training to help adopt the e-commerce tool. The wiki that ABB Ability Marketplace™ has fosters the transparency of the marketplace functions and purposes and hence makes the customer feel closer to the company. The wiki provides information on how to use the marketplace, about the benefits of using it, about the planned growth program details and commercial onboarding information. Not all these are necessary information for the customer but providing

them promotes openness and trust, which can be linked to customer intimacy (see e.g., Pearson, 2012, p. 60).

Openness is also related to questions and answers sections (Q&A) that Amazon, PTC Marketplace, and Honeywell Marketplace have on their product pages, where signed in customers can ask and answer questions and everyone can see them. The Q&A supports communication by providing alternative communication channels, which also promotes customer intimacy since customer intimacy is about meeting the needs and desires of customers, and providing multiple alternatives raises the chances to meet them. The Q&A benefits future customers as well because the questions and answers stay visible at the site. This helps both the company and customers since most common questions have probably already been answered and this way new customers do not have to ask them again. The Q&As foster also a communality feeling, which is discussed in more detail in the next chapter. It should also be noted that having multiple communication channel options involves a downside: all the channels should be actively followed, and messages answered quickly. This is not the case in the following example of the Q&A section at PTC Marketplace on image 6, where it can be seen that there was almost 4 months delay on the answer.

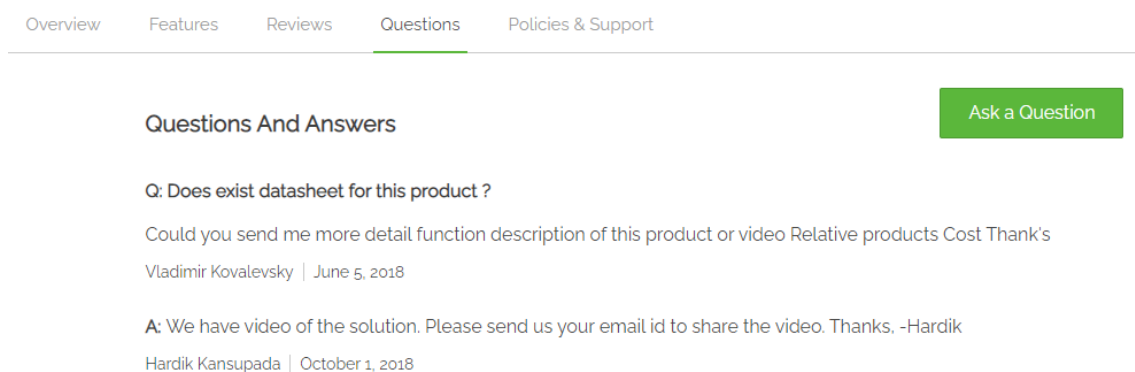


Image 6. Questions and answers section at PTC Marketplace.

As mentioned in chapter 2.2., customers' perceptions of the quality of the e-commerce site are affected by the products itself but also by the quality of the content (Koehn, 2003,

p. 11). This means that also spelling and grammar matter. Therefore, a conclusion can be drawn that inconsistencies and other defects that the sites may have affect it. There can be found a few errors at the e-commerce sites under investigation that weaken the perception of the quality. For example, PTC Marketplace has a faulty title, *“uieditor.profile.ProductSimilarApps.sliderTitle”*, on their similar product recommendations and it is clear that the title includes information that is not meant for customers but to the website developers. Also, ABB Ability Marketplace™ has listed a few reference story headlines to provide examples of how industries are using their solutions (see image 7). Pictures and headlines imply that there is more to the story, but the links are missing.



Image 7. Reference stories at ABB Ability Marketplace™.

In terms of customer intimacy, it is best if all services are provided through a single location (Helander et al., 2013, p. 31). ABB Ability Marketplace™ is promoted as *“your one-stop online portal for software services for digital industries”* and therefore implies to the customer that it provides everything through a single channel. This can be seen at the Schneider Electric Exchange too since it combines both the marketplace, communities, and support at the same platform.

The way we communicate conveys messages and it can be interpreted that word choices play a key role in building customer intimacy in digital environments as well. All the sites use quite a lot of second-person pronoun *“you”* to create a sense of intimacy and closeness. Directly addressing the customer may lead to a higher tendency to initiate a dialogue (Labrecque et al., 2020. p. 807), and therefore conveys a stronger and more

intimate relationship. These can be seen in phrases like *“your privacy”*, *“customized to your needs”* and *“you get value”*. First-person plural pronouns such as *“we”* and *“us”*, can also be connected to customer intimacy, since they signal inclusiveness and a relationship with the brand (Labrecque et al., 2020, p. 807). However, this kind of language is not common in the analyzed e-commerce sites. The pronoun *“we”* is rather used when referring to the company and its members, not to the company and the customer, like in the following example from ABB Ability Marketplace™: *“Need help? We’ve put together most frequently asked questions and gather articles to give you even more information about this store.”* This means that the *“we”* does not include the customer and refers just to the company, so the inclusiveness is not as strong as it would be if *“we”* were used for referring to both company and the customer.

However, highlighting the company as a close community is likely to give a warm impression about the company. Likewise, presenting the company as a partner instead of just a manufacturer or a marketer promotes customer intimacy (Gobble, 2015, p. 58). This is done, for example, on Siemens MindSphere that uses phrases like *“It’s not just a tool, we take you by the hand”* and *“Starting as a customer to work with MindSphere means joining a life cycle”*. In addition, Siemens MindSphere has a page for becoming a partner, where they urge companies to join their partner ecosystem.

5.1.4 Communalities

As stated in chapter 3.3.4, customer intimacy is stronger the more inclusive the marketplace is (Bügel et al., 2011, p. 255). Customers are nowadays increasingly social and want to be included (Turban et al., 2015, p. 26). In this research, these features are described as belonging to the theme of communalities, which refers to the sense of communalities and togetherness that prevails among customers and the representatives of the company.

This is especially strong at the Schneider Electric Exchange, which has communities where customers can have discussions about their questions and topics of interest, read blog posts, watch webinars, and suggest ideas. The communities are accessible to everyone, which makes it appealing to new visitors to browse them through and find out what they are like. Starting a conversation and commenting requires registering but being able to take a look before making the decision to register makes it transparent and gives the customer an incentive to become a part of the community. However, there is a downside that needs to be kept in mind, as it also allows competitors to keep an eye on the comments and perhaps even steal ideas or customers (Nunes, 2005, p. 16).

In addition to being able to communicate with other customers and Schneider Electric representatives, the communality feeling is fostered by showing how many people have looked and commented on a certain post. The registered customers have profiles where some basic information is presented about them, such as name, company, when they registered to the community, and when they were last active. Many users have their pictures as profile pictures which creates a sense of closeness among the customers as well. The users are also ranked by how active they are at commenting on the forums and how many likes do their comments get. Comments that have provided the right answer to the questions are also marked as a solution. This way customers really see that there are active users and that it is possible to get help and form actual relationships with them. The community is also transparent about the number of members and how many posts have been created in total. The idea suggestions can be labeled which helps customers to find topics that interest them, and their approval statutes are also visible. This shows customers that the suggestions are taken seriously and some of them might get accepted.

Siemens MindSphere has as well community features and cooperation is strongly promoted on the site. There is profound information on the benefits of becoming a partner or working with a partner. The featured partners and their use cases are presented, as well as partner profiles that each partner has for letting customers learn more about them. The partner profiles provide additional information of the company, its industry

focuses, partner roles and sometimes they offer related downloadable resources such as case studies. Siemens has also the Siemens Community which is linked to the MindSphere e-commerce site. The community has many similarities to the Schneider Electric Exchange communities: it allows registered customers to start discussions, comment on them, and like them, it shows how many active members the community has and how many people have viewed certain discussion. Each member has as well a profile page with basic information about them and their activity in the community. The members are also ranked, and they can earn badges based on their activity.

Amazon supports purchasing decision-making by providing a questions and answers section, where customers can ask questions and answer them based on their experience. As mentioned earlier, allowing discussion and socialization between customers promotes customer intimacy (Weinman, 2013). This is also connected to engagement, which has been found to increase the level of customer intimacy. Engaging customers by encouraging them to provide feedback, share product recommendations, write product reviews, and connect to other customers is promoting the sense of communality, which is in turn linked to customer intimacy (Turban et al., 2015, p. 26; Pearson, 2012, p. 26; Weinman, 2013). Honeywell and PTC Marketplaces have similar functionalities as well. The product pages include a questions and answers section, where signed in customers can ask and answer questions. However, this feature is not in much use so the social relationships between customers are still limited. Amazon has also a wish list feature, which means that customers can list their needs and ideas and share the list with people they know. This encourages communality furthermore and makes the shopping experience a social event.

Like Siemens MindSphere, instead of having integrated communities, Honeywell Marketplace links to different platforms that provide community features, such as Tech Support Community and Honeywell Developer Portal. These features require registering and they include for example guides, product documentation, code samples, API descriptions, discussion forums, and tutorials that help to create applications that integrate with

Honeywell's devices. The Tech Support Community has a forum where customers can ask questions and comment on each other's questions. Despite the fact that these platforms are separate from the marketplace, they are worth noting since they support the marketplace and are clearly visible there. The marketplace, in general, is advertised as a forum that brings together innovators and customers: *"Get Connected - Collaborate with other innovators and customers to shape the future of the industrial enterprise"*.

It can also be concluded that communality feeling is indirectly affected by product reviews that customers provide to the site. This way customers can read each other's experiences and the customer community is becoming visible. Some sites such as Amazon even allow interaction by letting customers vote the answer if they find it helpful. This theme is treated better in chapter 5.1.1.

5.1.5 Product information

All the e-commerce sites under investigation have separate pages for more detailed product information, which is generally considered good and user-friendly practice (Zilliox, 2001, p. 68). The product pages have many similarities but also differences in terms of how they promote customer intimacy. E-commerce is more remote and colder than traditional selling which means that the quality of product information is even more important. Many of the sites have separated the most important details into a table or some kind of list so that they are easily recognized. For example, ABB Ability Marketplace™ has listed the benefits of the products so that they are highlighted (see image 8). This way the customer is quickly provided with the main product qualities and their time is saved by not needing to go through a long description. This can be interpreted as valuing customers' time by providing the information fast and easily, which is linked to customer intimacy by giving customers a feeling that they have been taken into account.

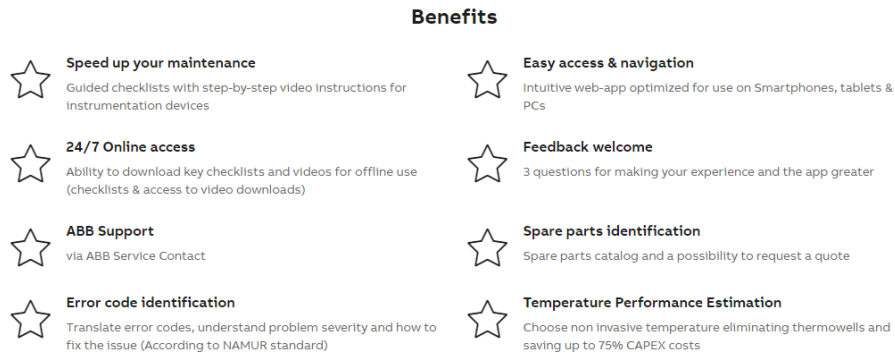


Image 8. Product benefits on product pages at ABB Ability Marketplace™.

Amazon shows detailed information about the products and their price availability and inventory. The product inventory is in real-time and if the inventory is running low, it tells the exact number of products that are left. This is likely to help customers in their purchasing decision-making by allowing them to foresee if a product they are considering is about to run out. The price information is transparent and if the item is on sale, Amazon shows both the original price and the deal price but also counts how much the customer would be able to save with the deal. If available, Amazon also shows different pricing options for used products. The site also gives straight away an estimate on how fast the product will be delivered, and options for faster delivery if they are available.

In order to present detailed product information, Amazon provides clear product descriptions with a lot of pictures, questions & answers section, reviews, and similar product recommendations. The latter are presented and analyzed in other chapters, but they are crucial to the whole. Pictures play a huge role at Amazon, and they are using both marketing pictures, adverts, user pictures, and technical illustrations to present the products. The product pages include also ready-made tables to compare different products or models. This helps the customer to make a purchasing decision by showing the differences between the products at a glance. Product comparisons are possible also at Honeywell Marketplace and PTC Marketplace, which have very similar platforms for product catalogs. Both of them allow the customer to pick 2-4 products that he or she wants to compare. The comparisons include basic information about the features, prices,

categories, developers, editions, and ratings if there are any (see image 9). This gives the customer a good overview of the relevant products and their qualities. A conclusion can be drawn that helping the customer with the purchase decision develops customer intimacy, since customer intimacy is based on value-generating relationship (Brock & Zhou, 2012, p. 371), and these qualities generate value by making the process easier for the customer.




			
	View Profile	View Profile	View Profile
Name	Movilizer for Cloud DSD	Movilizer for SAP DSD	Movilizer for SAP PM/CS
Description	Route Sales, Management and Support	DSD software for SAP Users	Field-Force App for SAP PM/CS
Features	<ul style="list-style-type: none"> • Mobile Sales • Mobile Delivery • Management Portal 	<ul style="list-style-type: none"> • Fully integrated with SAP • Fully aligned with SAP pricing • Flexible approach 	<ul style="list-style-type: none"> • SAP Integration • Out-of-the-box Apps • Mashed-up Apps • Offline Operations & Security
Starting Price	\$37.00 /Mo	\$32.00 /Mo	\$32.00 /Mo
Category	Solution - Direct Store Delivery (DSD), Developed By - Honeywell, Language - English, Value Proposition - Analytics/Dashboards, Value Proposition - Asset Visibility / Traceability, Value Proposition - Process Compliance, Value Proposition - Productivity	Solution - Direct Store Delivery (DSD), Developed By - Honeywell, Value Proposition - Analytics/Dashboards, Value Proposition - Asset Visibility / Traceability, Value Proposition - Process Compliance, Value Proposition - Productivity	Solution - Enterprise Asset Management (EAM), Solution - Task/Workflow Management, Industry - Field Service, Industry - Government, Industry - Manufacturing, Industry - Utilities, Developed By - Honeywell, Technology - Smartphone/Mobile Computer, Technology - Wearable Device, Language - Chinese (Simplified), Language - English, Language - French, Language - German, Language - Italian, Language - Portuguese, Language - Russian, Language - Spanish, App Group - Featured, App Group - Popular, Value Proposition - Analytics/Dashboards, Value Proposition - Asset Visibility / Traceability, Value Proposition - Process Compliance, Value Proposition - Productivity, Value Proposition - Quality, Value Proposition - Safety, Value Proposition - Security
Developer	Honeywell	Honeywell	Honeywell
Rating	★ ★ ★ ★ ★ This product has no reviews.	★ ★ ★ ★ ★ This product has no reviews.	★ ★ ★ ★ ★ This product has no reviews.
Editions	• Recurring Edition	• Recurring Edition	• Recurring Edition

Image 9. Product comparisons at Honeywell Marketplace.

All the product pages are presented in similar ways at Honeywell Marketplace, and each include the same elements (see image 10). There are keywords right under the headline so that the visitors quickly get the main information about the product. Keywords are such as productivity, communication/collaboration, security, and quality. Product pages have a contact us button clearly visible at the top of the page, which makes contacting seem easily accessible and approachable. This creates intimacy by showing that if needed, the customer can have contact with actual salespeople and is not alone even

though it is an e-commerce platform. Product details are collected in a table, which makes it easy to detect the main qualities. The details include solution, industry, language, technology, value proposition, developed by, app group, developer, and pricing information. The product pages have systematic appearances and they are divided into six subcategories. The first page is an overview of the product and its features and benefits, then there is more detailed information about the features, possible reviews and questions, policies and support – including a direct phone number for support –, additional resources, and lastly editions and pricing information.

The screenshot shows a product page for 'Guided Work Solutions for Distribution Centers' on the Honeywell Marketplace. The page is structured as follows:

- Header:** Features a red circular icon with a headset and a 'Contact us' button. The main title is 'Guided Work Solutions for Distribution Centers' with a subtitle 'Voice Directed work for Distribution Centers'. Below this are several category tags: 'PROCESS COMPLIANCE', 'PRODUCTIVITY', 'QUALITY', 'SAFETY', 'PICKING/REPLENISHMENT', 'TASK/WORKFLOW MANAGEMENT', 'WAREHOUSE MANAGEMENT SYSTEM (WMS)', and 'DISTRIBUTION CENTER / WAREHOUSE'. A 'Learn More' button is also present.
- Navigation:** A horizontal menu with links for 'Overview', 'Features', 'Reviews', 'Questions', 'Policies & Support', and 'Editions & Pricing'.
- Main Content Area:**
 - Section Header:** 'Guided Work Solutions for Distribution Centers'.
 - Description:** 'Voice Directed Work for Distribution Centers. Workflows include Order Picking, Replenishment, Cycle Counting, and Receiving functions to name a few.'
 - Image:** A photograph of a worker in a warehouse using a handheld device to pick items from a pallet.
 - Buttons:** A blue 'Take the Tour' button.
 - Features and Benefits:** A grid of six sections:
 - Productivity Gains:** 'Achieve maximum efficiency by gaining up to 35% productivity improvements by leveraging voice directed work in your operation. This is accomplished by focusing your workers on the tasks in a hands...' with a 'Show more' link.
 - Accuracy Improvements:** 'Improve the accuracy of your order fulfillment and on-hand inventory information.'
 - Flexible Deployments:** 'Each workflow is different and our solution is designed with flexibility in mind. The solution will be configured to leverage voice guidance, scanning, or screen based interaction based on industr...' with a 'Show more' link.
 - Speed to Value:** 'The solution isn't customized... It's configured. This allows for fast deployments, allowing your business to achieve a return on your investment in record time.'
 - Multi-Modal Support:** 'Enables Directed Work processes leveraging voice, scanning, and screen based interactio...' with a 'Learn More' link.
 - Workflows Supported:** 'Supports the common warehouse processes such as Order Picking, Receiving, Replenishment...' with a 'Learn More' link.
 - Operating System Support:** 'Guided Work Solutions is a device agnostic software solution that supports Android and ...' with a 'Learn More' link.
- Right Sidebar:**
 - View Screenshots:** 1 screenshot available.
 - Read Documentation:** A link to view documentation.
 - DETAILS:** A list of attributes including Value Proposition (Process Compliance, Productivity, Quality, Safety), App Group (Featured), Solution (Picking/Replenishment, Task/Workflow Management, Warehouse Management System (WMS)), Language (Arabic, Chinese (Simplified), Chinese (Traditional), English, French, German, Italian, Korean, Portuguese, Russian, Spanish), Developed By (Honeywell), OS Supported (Android, iOS), Industry (Distribution Center / Warehouse), and Developer (Honeywell).
 - PRICING:** 'Recurring Edition \$102.50 per month'.
- Footer:** A grey bar containing 'Learn More' and 'Take the Tour' buttons.

Image 10. Product page at Honeywell Marketplace.

The product pages of the e-commerce sites under investigation have additional information on the products, such as screenshots, videos, and downloadable documents. Honeywell and ABB have for example screenshots of the products and systems, and Siemens MindSphere and Schneider Electric Exchange screenshots and videos on some of their products. Screenshots of the products bring them closer to the customers and they can see how the system looks like – so that they know what they are buying. Amazon sells different types of products but has as well many pictures of the products. However, Amazon presents all the information on the product page or links to a different page instead of providing downloadable documents. Amazon's questions and answers section was discussed in the previous chapter about communality because that feature allows customers to discuss with each other. But it is also worth mentioning here since it provides important product information as well.

5.1.6 Mobile apps

As mentioned in chapter 3.3.3, mobile apps are great at fostering customer intimacy. However, only one of the investigated e-commerce sites, Amazon, has a mobile app. Providing mobile applications increases customer intimacy by offering an easy, always close solution that is an integral part of users' daily lives (MBLM, 2017). The Amazon app makes sure to be easy and effortless by offering notifications on new deals and by automatically showing only products that ship to the location of the user. The app also allows searching with voice instead of writing, and to scan product barcodes and images to find relevant products easily. The app provides a single platform where all the necessary information is at hand.

5.2 Customers' take on customer intimacy

This chapter delves deeper into customers' minds about customer intimacy related e-commerce functionalities with information gathered from the survey and conducted

interview. The aspects are for the most part similar to what came up in the previous chapter, but these bring light to understanding why they are important to customers.

5.2.1 Purchasing process preferences

The survey results show that all the customer segments; channel partners, original equipment manufacturers (OEMs), and end-users are highly interested in self-serving their online procurement requirements. They prefer self-serving especially when product specifications are known, when managing and accessing product related information or information on inventory, invoice, order status, and history, when reordering something and when they are ordering consumables or spare parts. On average, over five online platforms are used in their procurements needs, except for OEMs who mostly use one. These B2B e-commerce platforms are mostly used for searching and selecting products. In addition to features enabling searching and configuring products, also purchasing, and ordering as well as managing and accessing purchase-related data are wanted features.

The survey gathered information about customers' purchasing process preferences. It turns out, that web-shops, punchout, and email are most popular for buying. Punchout means that the buyer has access to the supplier's website within the firm's own procurement application (Chieu et al., 2003, p. 63). Online search and punchout are most popular for searching, and email and punchout for selecting suppliers and products. For aftersales, most of the survey respondents use email instead of modern e-commerce platforms. The survey shows also interest in using mobile applications for procurement needs. This information was complemented in the interview by asking about contacting preferences. The interviewee had a clear preference for apps rather than other forms of communication. The advantage of apps is according to him, that *"everything remains at one place"* which helps to find all the relevant information fast. The second-best option for the interviewee is email, which is mostly used for clarifying things or giving more specific information. When asking about key factors where the interviewee company

bases the selection of a supplier, he points out that they would like to *“have the timelines [for the solution] also built in; we would like to see what is the reliability factor for the supplier, what is it that the supplier can offer us in terms of versatility of product”*. Having this information on the app can therefore be inferred to be beneficial for customer intimacy.

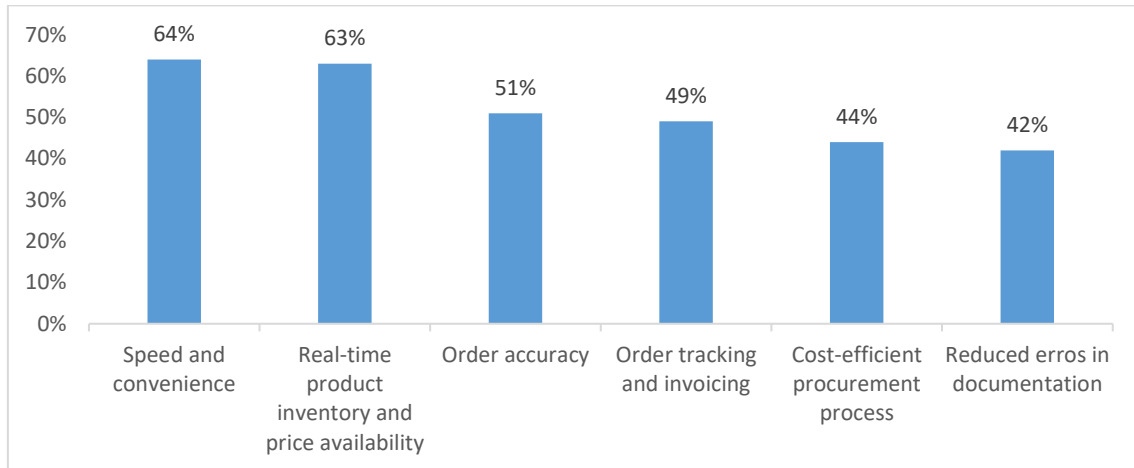
It is common for companies in the industry to evaluate life cycle costs rather than choosing the least cost proposition at the moment. This is another thing to consider when providing information for choosing the supplier. The interviewee also points out that they look into information about how the vendor has supplied to them in the past, what is their failure rate, and how the vendor handles delivery, by which he means the following:

And last aspect is on delivery, which would mean how the vendor delivers that communication, how the vendor delivers the digital solutions, how the vendor delivers a quote and request for quotation, how the vendor is able to digitally swiftly agree to our needs, how the vendor is able to customize solutions because they have products in their basket which can be customized.

This shows that speed and convenience play a crucial role in the selection of a supplier. This places high demands for the e-commerce platform for being able to enable these. The finding is supported and complemented by the survey results, which highlight how real-time information is vital for online product selection. Punchout generally delivers this efficiently, and respondents name the key benefits for punchout being speed and convenience, real-time information about product inventory and price availability, and order accuracy. Other benefits that the respondents value are order tracking and invoicing options, cost-efficient procurement process, and reduced errors in documentation (see table 4). All these make the purchasing process fast and easy for the customer, making punchout systems preferable e-commerce solutions for many customers. Especially channel partners and end-users showed interest in punchout. This is an interesting finding, and the results can be applied to other e-commerce platforms as well. Learning from

the key benefits of punchout and developing other platforms accordingly as well can be recommended.

Table 4. Key benefits of a punchout system.



The conducted interview reveals similar findings. The interviewee highlights that data efficiency and effectiveness are important factors that need to exist in e-commerce. By data efficiency he means the following:

...efficiency of data, it means how recent the data is, how quickly the data is able to change itself, say for example there is a change in something. So, it should be like the NASDAQ – it should be like the sense of discipline, it should be something which is moving along with what is happening.

This means that all the information on an e-commerce site needs to be correct, up-to-date, and preferably agile changing on its own. The interviewee describes this with an example of a delay because of having to call the firm because of not being certain that the information is decent, since it has not been updated for over a year. He also highlights the quality of the information, which he refers to as data effectiveness:

...it [the data] should be very clearly legible and very attractive. So, you have to build that attractiveness factor around it. — What prompts me more or attracts me more do e.g., watersport is the photograph, is the video, are the other digital tools, which are attached to this whole thing. The look and feel that are not from one dimension but a multi-dimensional aspect, like say, for the rotated view, you

can move this way, that way, you can see the product by different angles. That is something which will excite you and this is needed because till you don't do this, the attraction won't come. It's like selling yourself.

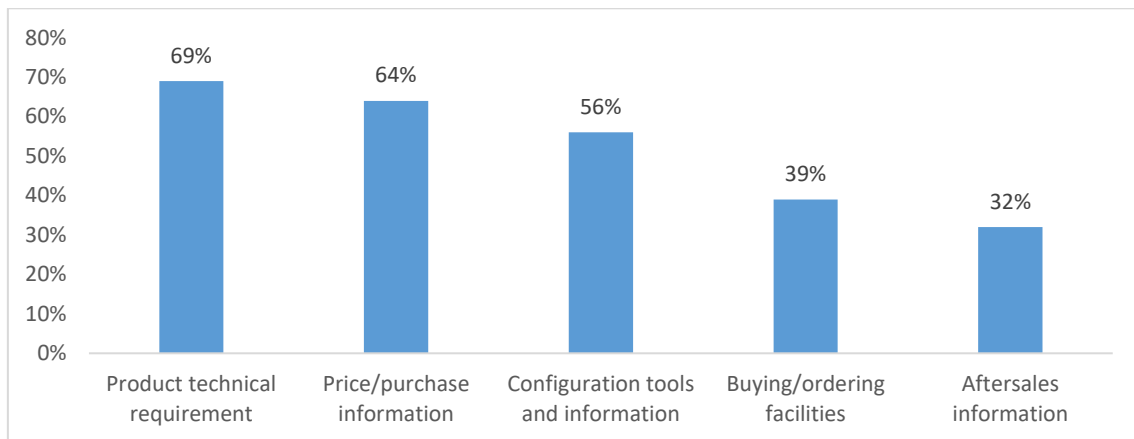
This highlights the importance of pictures, videos, and additional materials that show the product clearly. It is important for customers to get a clear conception of the product and its details for being able to make the purchasing decision online. Multiple pictures, videos, and preferably a 360° angle picture show the product from different angles and let the customer fully see the product. The interviewee emphasizes attraction and excitement, which he sees as important aspects of e-commerce. Therefore, it can be generalized that all pictures, screenshots of the system, videos, and illustrations reinforce the customer's interest and excitement towards the product and make the e-commerce site feel more customer intimate.

The interviewee sees potential in digitalizing the e-commerce process even more. He proposes that a digital catalog should be provided to the key vendors, where they can take a look at the possible product changes. If the customer then feels like they need more information about the technical changes, they could request for a fresh presentation, or even better, there could be a ready video clip that presents the changes. He also points out that there are systems, which are technically witted and can suggest the customer alternatives which are *"better on lead time, suggesting items which we can buy with a common functionality but at a lesser price"* or products that have more value. According to him, the industry is still quite nascent on this. He suggests that the next phase would be to improve digital flexibility by allowing mixing and matching the products from various options. However, he remarks that it should be made easy for the customer and should not require massive knowledge on the categories. This is in line with what was discussed in chapter 3.3.5 about different skill levels and customizing customization by providing for example different starting points and sufficient information, as Randall et al. (2005, pp. 71-83) suggest.

5.2.2 Needs and feature preferences

The survey gained a deeper understanding of the respondents' needs and preferences for an e-commerce platform. Answering these key needs and feature preferences is likely to promote customer intimacy and boost the adoption of e-commerce furthermore. Information on product technical requirements were seen as most important and was followed with price and purchasing information (see table 5). These were named as the most important features in each customer segment that participated in the survey. This means that they see up-to-date product and pricing information as the most important aspects. Configuration tools and information, buying and ordering facilities, and aftersales information were also named.

Table 5. Respondents' needs and preferences for an e-commerce platform.



The survey respondents highlight for example the need for real-time tracking and product inventory information, ability to request special pricing and discounts online, advanced site search with altering and merchandising capabilities, and in general the ability to self-serve and find all the relevant information online to make the purchasing decision on their own. These themes include both functionalities, interactive features, and product data features. The most important interactive feature according to channel partners is a call back or follow-up option from a customer representative and the second most important is an online chat option with a customer service representative. However, OEMs and end-users found online inquiries to sales units equally important as

to call back and follow-up options and rated the online chat function after them. As presented in chapter 5.1.3, communication is vital for building customer intimacy. Channel partners also find website personalization to one's specific preferences more important than OEMs and end-users. 55 % of channel partners rated site personalization as useful or critical, where as 32 % of OEMs and only 22 % of end-users found it useful or critical. All respondent groups find product comparisons mostly useful as well as downloadable product spec sheets and buying guides mostly critical. More detailed information and examples about the needs and preferences for B2B e-commerce platforms are collected in table 6. These features can be associated with customer intimacy because they answer to customers' needs and desires, and therefore promote the sense of intimacy by better online service.

Table 6. Definitions for the survey respondents' e-commerce platform preferences (adapted from ABB, 2020b).

THEME	FEATURES
PRODUCT TECHNICAL INFORMATION	<ul style="list-style-type: none"> Product updates Detailed product descriptions (pictures, illustrations, videos) Downloadable product spec sheets and buying guides Product comparisons Warranties and aftersales information Operations, servicing, and maintenance information
PRICE AND PURCHASE INFORMATION	<ul style="list-style-type: none"> Create pre-approved product lists for other buyers within my company Custom price lists and catalogues assigned to customers Tracking of discount programs Ability to request special pricing and discounts online Ability to run reports on purchasing history Management of company credit/invoices Tracking of open orders, quotes, shipments and purchasing history Inventory visibility – amount and location of goods published on site Call back or follow-up option from customer representative Online chat with a customer service representative
CONFIGURATION TOOLS AND INFORMATION	<ul style="list-style-type: none"> Online product selection and configuration Ability to give ratings and reviews Easy, simple, and integrated selection and configuration tools Advanced site search with altering and merchandising capabilities Ability to generate own content (e.g., create selling catalogues) Site personalization Access through mobile phones and tablets

THEME	FEATURES
BUYING AND ORDERING FACILITIES	Quick payment options (e.g., one-click purchasing) Ability to share and edit a cart with other buyers in the company Online request for quote process Online purchase approval workflows (e.g., order routed to supervisor for approval before order is submitted) Quick order forms and simple reorders Support for subscription orders (e.g., replenishment) Set up buyers within my own organization and assign roles, permissions and buying thresholds
AFTERSALES INFORMATION	Initiation and management of returns Support for subscription services (e.g., maintenance, delivery) Aftersales information and support for installed product Replacement, spare parts, consumables Digital services and remote condition monitoring Energy efficiency/optimization Access to service network Warranty and aftersales information and support Ability to access/generate/renew licensing agreements Access to service networks and remote services

5.2.3 Challenges and concerns

The survey reveals some challenges and concerns that the respondents face while adopting B2B online tools. Answering these challenges would help improving customer intimacy. The answers vary a bit regarding the customer segment, but in general, it can be concluded that they are worried that it might be difficult to find the right information and resources online. That need is best met by providing clear product descriptions, guides, and general information about the procedures. Also not having a one-stop online shop for procurement needs raises concerns, as well as a lack of integration between different e-commerce platforms. Some respondents mention possible problems with the tools' reliability and accuracy of the content – for example, if the tool is not available in the buyer's local language. Lack of flexibility and support across multiple departments, difficulties to understand the functionalities of the tools, and lack of warranty and aftersales information, order tracking, and real-time product inventory details are also mentioned.

Even though most of the survey respondents found the ability to give ratings and reviews at least somewhat useful, the interview revealed a concern that some customers may have regarding their trustworthiness and relevance. It is a known problem that not everyone trusts product reviews and many websites try to answer this by requiring signing in so that only those who actually have purchased a product can give a review. However, some customers may still have doubts for them, as the interviewee explains:

We believe that those product reviews may not be always correct and may not be coming from the right hands or right mouth and people with the right experience to do so, but yes, internally we have a process to check the product reviews and that happens through one-on-one contact.

The interviewee describes that their internal process means asking personally from their contact in the industry about a certain product, which they know the company has been using and which they are contemplating. This way they know the review to be correct. The interviewee points out that it would be useful if these kinds of reviews were collated by various companies and provided in a closed environment. He also emphasizes that even in e-commerce, personal contact is important. He sees that the selling and negotiation processes should happen in person, because *“as a salesman, you don’t only sell a product, you also sell emotion, you also sell feelings”*.

For customer intimate e-commerce, it is important to be sure that the company’s workforce, as well as the customers, know how to use the systems and digital tools. The interviewee calls this capability building and sees it as an important first step when adopting e-commerce. According to him, the second step is making sure that everyone knows the data is safe and secure, and that there is no one else watching it.

6 Discussion and conclusions

The final chapter of the thesis presents the conclusions and empirical findings of the research with a reflection to previous literature. The limitations of the research and proposals for further research are also presented, along with practical suggestions for improving customer intimacy in e-commerce. The objective of this research was to gain an understanding of what constitutes customer intimacy in e-commerce and how it could be developed. These objectives were met and new information on what features, elements, and functionalities promote customer intimacy in an online sales environment was gained. Development ideas were gathered by learning more about customers' needs and preferences for an e-commerce platform. The conclusions will be presented in the next subchapter and then concrete suggestions for improvement are given in the subsequent chapter. The research found ten main themes that affect the building of customer intimacy. These themes are product recommendations, customer experiences, communication, communality, product information, customer data collection, transparency, timeliness, customization, and concerns. Each of them includes several use cases. The examples are collected in table 3 in the previous chapter.

The results obtained in the analysis of e-commerce sites and in the survey and interview revealed similar findings that support each other. These results are also in line with previous literature and research, although most of the previous research focuses on customer intimacy either in a traditional sales environment or B2C market. Therefore, this research complements the field by concentrating on the B2B market and gaining an understanding of customer intimacy in e-commerce, which differs from traditional sales in numerous ways. The first and main difference between traditional and e-commerce is the lack of personal interaction. This can be replaced with certain functionalities that e-commerce sites offer. Many of these functionalities and features that were found to promote customer intimacy are related to what Turban et al. (2015, 190-191) call portal applications.

6.1 Key findings in reflection to previous literature

Next the key conclusions will each be presented briefly and then opened in more detail and in reflection to previous research. The statements conclude what constitutes customer intimacy in e-commerce but they also provide recommendations for what to keep in mind when developing customer intimacy in e-commerce.

- 1. Fast, efficient, and hassle-free e-commerce experience with detailed product technical information is needed. The information has to be up-to-date and supported by multiple types of data.**

The findings were similar to what Gajewska and Zimon (2018, p. 32) and Gajewska et al. (2020, p. 672) found about customers' values in e-commerce. They name fast and efficient customer service, website's clarity, ease of understanding, and quality of content most important factors. Also, quick responses, hassle-free support, and an individual approach to customers were mentioned. This research supports and complements the findings by showing that customers in the technology industry find clear and up-to-date product technical requirement details as the most important features. The quality and efficiency of data are also seen as very important factors, which means for example detailed descriptions with pictures, illustrations, videos, product comparisons, downloadable documents, buying guides, and product updates. The data should be as recent and real-time as possible and easily found. Ease of finding the right information has also been identified in previous literature as an important factor (Zilliox, 2001, p. 58).

- 2. Providing sufficient price and purchase information is important as well as offering the opportunity to request special pricing, track orders, and access product inventory information.**

The second most important aspect for technology customers is sufficient price and purchase information. This means that they value for example the ability to request special

pricing online and want to be able to find all the necessary information to make the purchase by themselves. The customers also value real-time order tracking and product inventory information. However, these were not common features of the studied e-commerce sites, but this can be explained by the fact that the e-commerce sites are mostly selling downloadable applications, so the information is not that relevant. It is important to keep in mind that not just the product details are important, but also the information about the purchasing process in general. Self-serving is particularly popular when the products are known or when the customer wants to access or manage information related to the product or inventory, invoice, or order status. And in line with Hallavo (2013, p. 40), self-serving is common when reordering something.

3. Product information should be presented in multiple ways: tables, product comparisons, downloadable resources, pictures, screenshots, and videos.

The e-commerce sites that were under investigation have many similarities regarding product information. Most of them have gathered main features on a table or some kind of list so that the customer can easily spot the main characteristics of the product. Half of the companies also allow product comparisons, which help customers choosing the right product. The product pages have multiple pictures of the products and downloadable additional resources. Nevertheless, none of the e-commerce sites under investigation offered the possibility to rotate the pictures and look at the products from a 360° angle view, even though this was mentioned as an important feature in the interview. However, this may be connected to the fact that most of the e-commerce sites sell applications and therefore it is not that relevant to be able to rotate the product. Instead, screenshots of the system, videos, and alternative downloadable documents are used. Zidajic et al. (2020, p. 7) suggest that visual configuration tools that support augmented and virtual reality would be good for e-commerce since they allow the customer to select alternative features and see what the product would look like in their place. However, these kinds of features were not used on the studied e-commerce sites. This may be

related to the product types and also because all the e-commerce sites, except Amazon, were working on the B2B market and as Zidajic et al. (2020, pp. 7-8) mention, the deployment has been relatively slow especially in B2B sales.

4. Communication is vital. Reciprocal communication should be promoted.

Similar to the findings of Gajewska and Zimon (2018, p. 32), quick responses to customer inquiries were seen as important and most of the customers that participated in the research preferred a callback or follow-up option with a customer representative. Online chat functions and online inquiries are also valued. Therefore, it is important to offer simple and clear contacting options in case the customer needs help with the purchasing decision. This supports the fact that communication is vital for building customer intimacy (see e.g., Hoffman, 2001, p. 25; Lattin, 1999, p. 12). All the studied companies see clear contacting options as crucial. The contacting options are clearly visible and easily accessible on the e-commerce sites, which is likely to lower the threshold to give feedback. It also appeared from the research that B2B companies are investing in reciprocal communication, which is important for customer intimacy according to Gobble (2015, p. 58). This means, that the e-commerce sites under investigation promoted the option to provide feedback, ask questions, give product reviews and some even had discussion forums. Kratochvil and Carson (2005, p. 14) call this kind of two-way dialog market driven customer intimacy. These results, therefore, provide clarity to how market driven customer intimacy can be promoted in e-commerce.

5. Customers can be engaged with communality functionalities.

Reciprocal communication is closely linked to communality and engagement, which are as well important to customer intimacy. Turban et al. (2015, p. 26) argue that customers are increasingly social and active these days. It seems that companies have also

recognized this since most of the studied e-commerce sites offered these kinds of functionalities that activate the customer. Some had integrated them into the e-commerce platform and some had linked different platforms such as discussion forums to the e-commerce site. However, not all the studied sites have features and functionalities that promote communality. ABB Ability Marketplace™ has none of the features, whereas others have at least one in use. It is also clear that communality prevails both between the company and its customers, but also between customers, as Weinman (2013) states. This is visible in the functionalities that promote communality feeling since all of them allow communication also between customers. However, it is worth noting that even though some function is offered, it is not necessarily in much use. This is the case with PTC Marketplace's and Honeywell Marketplace's questions and answers and reviews sections, which have only a few comments. It is possible that they are quite new functions and therefore people have not found them yet, and the deployment is still in progress.

6. Customers want to be involved in the process, both in customizing products but also in personalizing the e-commerce site according to their needs.

Interestingly, the acquired survey results emphasized more the need to let the customers personalize the e-commerce site according to their preferences, whereas Kalaignanam et al. (2018, pp. 265, 269) focus more on the company's side of things. They itemize for example user identification, product recommendations, targeted ads, and personalized notifications. These two points of view are surely related and overlap each other, but the results of this survey suggest that more focus should be put on the customers' side; allowing them to make choices and add preferences about the e-commerce site. This goes well along with what Randall et al. (2005, pp. 71-83) call customizing customization, even though the focus of customization is on the products instead of the e-commerce site. The research results also support the observation of Kratochvil and Carson (2005, p. 10) that there is a growing desire among customers to be able to customize products by mixing and matching various options.

7. Mobile applications are wanted because of their ease of use and they are likely to promote customer intimacy.

When choosing e-commerce as the purchasing channel, the most appreciated thing is the ease of use and effortlessness (Zilliox, 2001, p. 58; Salehi et al., 2012, p. 383). The e-commerce platform should therefore be as user-friendly as possible and accessible whenever needed (Helander et al., 2013, p. 62). Similar findings were done in this research as well. The interviewee preferred apps, which allow every detail to be found in the same place instead of having to go through different platforms and many emails. Apps are also accessible whenever needed, which is likely to promote customer intimacy. Previous studies have also found that mobile applications increase customer intimacy by connecting people and being useful parts of users' daily lives (MBLM, 2020, p. 30). This research backs the previous findings by providing information that all apps, not just mobile apps, are preferred and seen as a useful way of communication in e-commerce.

8. We should learn from B2C e-commerce practices.

As was the prognosis, Amazon performed best on customer intimacy. Even though Amazon is mainly working on the B2C market, a lot can be learned from it. This is because even in B2B commerce there are individual human beings behind the purchases and the e-commerce site functionalities and features affect them and their decisions. Reklaitis and Pileliene (2019, p. 78) claim that emotions do not play a role in B2B commerce, but it can be argued that it is not really possible to make decisions totally emotionless. Even in B2B e-commerce and with all the limitations and predefined procedures that exist in the sales process, there are always humans behind it who are affected by what they feel – subconsciously or consciously. The feelings can be as simple as whether they trust the company and its website or whether they feel like the company can answer their needs.

Therefore, there is also potential for building a sense of customer intimacy at B2B e-commerce. As Reklaitis and Pileliene (2019, pp. 77-78) state, both B2B and B2C have the importance of customer orientation in common. The purchasing decision-making may look different in B2B sales and include more people than in B2C, but the basics in forming relationships remain the same. Therefore, it is worth learning from Amazon, the customer intimacy forerunner, as Natarelli and Plapler (2015) call the company.

6.2 Practical suggestions

The findings of this research provide several practical implications to help companies reach their full potential in e-commerce. This subchapter presents these concrete suggestions on which actions would help improving customer intimacy in e-commerce.

Information content and e-commerce platform characteristics

Based on the results acquired in this research, it can be recommended to focus on providing good technical information and sufficient price and purchase-related information on an e-commerce site. Customers want to be able to request special pricing and discounts online. Real-time updates on inventory and possible product changes as well as product tracking options are also important. Customers value speed and convenience, so it is important to offer efficient processes. This could be acquired for example through a punchout e-commerce system or by providing an e-commerce application, which would allow accessing all the relevant materials in one place. The possibility to access the e-commerce platform via mobile phone or a tablet is also recommended.

Up-to-date information with multiple types of data

The data on the e-commerce platform should be as up-to-date as possible, preferably even real-time and agile changing on its own. It is important that the customer knows that he or she can trust the data to be correct and updated. This could mean letting them know that the data changes on their own or by showing when it was most recently checked or updated. The data should be presented in multiple forms that support each

other so that the customer can read the ones he or she finds useful. This means for example tables compiling the main details, downloadable product spec sheets and other documents, illustrations, pictures, screenshots, videos, and product comparisons. It seems that the more there are pictures and videos of the product, the more it engages and helps to make the purchasing decision. Depending on the product type, one option would also be to have a 360° angle picture, so that the customer can rotate it and see the product from every angle.

Present customers' experiences reliably with product reviews or success stories

In addition to these, presenting customers' experiences such as product reviews and success stories may help to make the purchasing decision. However, it should be noted that some customers may be sceptical about the reviews provided by other customers. Therefore, the reviews should be controlled and each reviewer needs to be a verified customer. Providing some general information about the reviewers, such as their companies, titles, and roles within the procurement process might promote trust. Success stories on the other hand provide an even more controlled environment to demonstrate the offering and benefits it has provided to some customers. They also work as examples that can inspire other possible customers.

Different types of product recommendations and a possibility to compare products

Product recommendations that the e-commerce sites provide can help the customer to find similar products, related products, or for example upgrades, accessories, or additional products to their previous purchases. The recommendations can also be based on products that the customer has looked at, what other customers have bought along with something else, or on some attributes such as which is better on lead time or price-wise. These aid customers to find and select products, and may save some time when similar products are accessible from the top of the front page or at the first looked product, instead of having to go through the entire product catalog or having to think about proper search words. Similarly, the ability to compare products is recommendable since it helps customers to get an overview of the products and supports the decision-

making, especially if multiple products address the same goal. The customers should be able to choose which products are compared, but this could be supported by ready-made comparison tables that are visible on the product pages.

Promote customer engagement and communality by reciprocal communication

Since customers are nowadays increasingly social and active (Turban et al., 2015, p. 26), companies should consider offering communality features in e-commerce. Options for this are for example discussion forums, where customers can start conversations with other customers and the company representatives, and other forms that support reciprocal communication, such as questions & answers sections or commenting fields for example on success stories or blog posts. Allowing sharing and editing the shopping cart with others in the company is also one way to promote customer intimacy.

Provide learning support and multiple communication channels

It is also necessary to ensure that support for learning to utilize e-commerce digital tools is available both for the company personnel and its customers. This can be done by offering training and uploading downloadable materials, such as buying guides, to the e-commerce site. In addition, it is crucial that contact options are clearly visible on e-commerce. Even though e-commerce is a self-service channel, some customers may need help and support in the purchasing process. Therefore, it is necessary to provide preferably multiple communication channels from which the customer can choose the one he or she prefers. These follow-up and callback options can be for example contact form, chat, email address, or a phone number. Another option would be to offer the option to directly book a short online meeting with a sales representative, possibly via a calendar function. This would make scheduling the meeting a lot easier for the customer since he or she could simply pick the best option from the multiple dates and times available.

Lower the threshold to contact and present people behind the e-commerce site

It should also be kept in mind that communication initiated by the customer should not just happen when the customer has a problem and is disappointed with the company

(Pearson, 2012, p. 157). Instead, giving feedback and having meaningful conversations should be made easy and promoted on the e-commerce site so that customers feel that they can contact the company even with minor issues, ideas, queries, or questions. Since customer intimacy is strengthened by assigning a single contact person for the customer (Helander et al., 2013, p. 62), this should also be adapted to suit e-commerce. If just one contact person is not logistically possible, companies should consider presenting the e-commerce team that helps in the purchasing process at the e-commerce site. Knowing who is responsible and ready to answer the possible queries that customers have gives a more human and intimate sense of the purchasing process.

Pay attention to language usage, correctness, and website navigation

In e-commerce, customer intimacy is, to a large extent, built based on written communication and website functions. Therefore, language usage and word choices play a major role. Addressing the customer directly with the second-person pronoun “you” and using the first-person plural pronoun “we” make the communication seem more personal. In addition, presenting the company as a partner is recommended. It should also be ensured that the content on the e-commerce platform is of high quality and does not include flaws such as spelling or grammar mistakes or missing links. The site should be easy to navigate so that customers find the right information easily. The search function should also be advanced with altering and merchandising capabilities.

Utilize website personalization and product customizations

Offering the possibility to personalize the website according to one’s specific preferences is worth considering since especially channel partners of the survey found it useful. This could mean functionalities such as allowing to follow product updates, ordering notifications about new products, and customize the look and feel of the website, for example by showing products from a certain category always first or showing product reviews from certain industries or companies only. Similarly, allowing product customizations might be worth considering, since creating intimate and personal relationships often require value co-creation (Fleck & Ambroise, 2019, p. 39). If customization is available, it is

recommended to provide support and different starting points for customization, since customers have different skill levels (Randall et al. 2005, pp. 71-83).

Transparency and openness in everything

It can be concluded that allowing the customer to be an active participant in the purchasing process and general transparency and openness are important. The data collection that customer intimacy requires has to be transparent and the customers need to be told why and for what purpose some information is gathered from them, despite whether the information is collected through cookies, forms, or some other way. They need to feel that they benefit from giving the information. Therefore, it is also important not to disturb the customer too much by constantly asking to fill up surveys and forms – even if they are arranged by different divisions of the company because they are one and the same to the customer. The information should rather be shared throughout the company. The benefits should be visible for the customer and even demonstrated once in a while. This could mean for example sending a newsletter about a specific interest area of the customer, addressing a certain question in marketing communications, or making a video to answer some key questions of a product. All in all, general transparency in communications about e-commerce functions, operations, and procedures behind them is fostering the customer relationship.

6.3 Limitations and proposals for further research

Despite the researcher's attempt to be thorough in the research process, there are a few limitations to the research. In a qualitative case study, it is not relevant to have a large group of subjects under investigation, since the goal is to conduct a high-quality and profound analysis on a rather narrow topic (Ojasalo et al., 2014, pp. 52-53). Therefore, the number of studied e-commerce sites was decided to be six so that each of them could be thoroughly analyzed. It is also worth keeping in mind, that only one customer was interviewed for the research, so no valid conclusions can be drawn from it. The point was rather to complement the results from the survey and gain a better understanding

of the backgrounds. The interview was also conducted in English, which was neither the interviewer's nor the interviewee's native language, so that may have affected the understanding of the questions and the quality of answers. However, the questions were explained carefully so that misunderstandings would not arise. It should also be kept in mind that the survey was conducted among a technology company's customers, so the results might differ in another line of business. Nonetheless, these results still provide new information and guidelines for promoting customer intimacy in e-commerce that can be applied and adjusted into different fields.

What comes to further research proposals, one interesting future research idea would be to study if the customers' needs and preferences differ in another industry and how should customer intimacy be promoted in such an environment. This research found that customers in the technology industry find product technical requirement details as most important, but the situation might be different for example in the pharmaceutical industry. In the same way, it would be interesting to find out on a deeper level whether there are differences between B2B and B2C customers when it comes to customer intimacy. Even though this research slightly addressed the question and came to the conclusion that B2B e-commerce can learn from Amazon's actions to promote customer intimacy, there might be some differences on a deeper level. One can assume that since the purchasing decision-making process is different, B2B and B2C customers might value for example different aspects of the product descriptions.

As the research results showed, even though most technology customers find product reviews at least somewhat useful, are there also some doubts about their trustworthiness and relevance. Therefore, it would be interesting to research further how customers in the technology industry see ratings and reviews, and how important functionalities they are for building customer intimacy in e-commerce.

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Appendices

Appendix 1. Interview questions

General information

1. What is your job title and how long have you worked in the field?
2. How would you describe your relationship to e-commerce?

E-commerce journey and experience

3. Please describe your typical e-commerce purchasing process (*e.g., product search, supplier selection, ordering, aftersales, etc.*)
4. Do you feel that you get enough support when making purchases (*e.g., product information, documents, order tracking, connect with a salesperson, etc.*)? Why/Why not?
5. What is your preferred contacting method when you need assistance?
6. What do you think are the typical conditions that need to exist for an e-commerce website?
7. What are your key factors when choosing whom to buy from?
8. How do you typically search, compare, and select products or services? Wishes and pain points?
9. What do you think about product reviews that are provided by other customers?
10. Could you describe some challenges you face in e-commerce?

Appendix 2. Survey questions

Glossary of terms used in the survey (ABB, 2020b)

Online procurement or eProcurement: It is the provision of business-to-business purchase and sale products and services through the Internet as well as other information and networking systems, such as electronic data interchange and enterprise resource planning

Self-serve: An ability to perform procurement activity without any external help or support

E-commerce/digital channels: Accessing, buying and selling goods and services using the internet, mobile network or online infrastructure throughout the entire customer and partner journey

System-to-system: An integration of supplier and customer systems (ERP, eProcurement systems, or Warehouse Management Systems) with the objective of facilitating the placing of orders and exchange of related information such as delivery time and invoices without human intervention

Punchout/web-EDI: An e-procurement solution that allows customers to place orders directly from their eProcurement system in the supplier's web-shop and receive invoices and delivery information

Punchout: An integration of supplier and customer systems (ERP, eProcurement systems, or Warehouse Management Systems) with the objective of facilitating the placing of orders and exchange of related information such as delivery time and invoices without human intervention

Electronic Data Interchange (EDI): In the context of this survey, EDI is the system-to-system exchange of purchase orders and invoices in a standard electronic format between business partners

Web-shop: An online portal that requires customers to log in and provide PO or product serial numbers to access information regarding their orders, delivery and logistics; also allows the customer to access warranty, spare parts and existing service agreements related to the installed base

Marketplace: An online portal (such as Amazon and Alibaba) hosted for suppliers (manufacturers, distributors, service providers and retailers) to market and sell their products and services

Supplier marketplace: A supplier-owned branded marketplace, where its distributors can offer their products and services to third-party customers online. Typically managed by the supplier, who provides digital content and digital marketing for lead generation; while the channel partner oversees inventories, processes and logistics

ABB marketplace: ABB-owned marketplace, where ABB's distributors can offer their products and services to third-party customers online. ABB manages the platform and provides digital content and digital marketing for lead generation; while the channel partner oversees inventories, processes and logistics

1. **What age group do you fall under?**
2. **What best describes your current role?**
3. **Which of these ABB products / services do you buy?**
 [LV IEC Motors] [LV NEMA Motors] [LV Drives][MV Motors] [MV Drives] [Services]
 [Other]
4. **What best describes your product and service offerings for LV motors, LV drives and related services?**
 [Products only] [Installation] [Integration] [Commissioning] [Engineering]
5. **What best describes your relationship with ABB?**
6. **What is the approximate split (%) between standard and engineered specialised products in your purchase of LV drives and LV motors?**
7. **What best defines your organisation's practices / policies for online procurement?**
8. **What best defines your organisation's team capability for online procurement?**
9. **How critical is online procurement for your organisation?**
10. **Which of these priorities are you looking to address using B2B e-commerce and online tools?**

[Reducing error rates] [Improve systems integration] [Lowering cost of procuring]
 [Increasing quote generation] [Simplify configuration] [Better inventory management]
 [Supporting aftersales and warranty needs] [Other]

11. Do you prefer or want to self-serve when procuring online for LV drives, LV motors and related services?

I prefer / want to self-serve when...

[Searching and configuring products] [Accessing and managing all my purchase-related data (e.g., order history, accounts, credits and SLAs)] [Purchasing / ordering pre-selected products] [Looking for information, parts and services for aftersales]

I do not prefer to self-serve because...

[The products I order are complex / customised and require critical support] [It is easier to just call my supplier] [Other]

12. When searching and configuring for a product, in which instances / situations would you prefer to self-serve?

[When I know the product specification] [When I do not know the product specification] [For new projects only] [For replacing / upgrading an existing product] [For reordering only]

13. When accessing and managing information, in which instances / situations would you prefer to self-serve?

[Accessing inventory information] [Accessing product-related information] [Accessing and negotiating pricing] [Accessing invoices and order history] [Selecting and configuring products] [Managing account, address and authority levels] [Reviewing credit and other financials] [Accessing order status information and tracking] [Managing communications preferences]

14. When purchasing / ordering online, in which instances / situations would you prefer to self-serve?

[Ordering engineered products for the first time] [Reordering engineered products]
 [Ordering standard or configurable products for the first time] [Reordering standard or configurable products]

15. For which of the following aftersales activities would you prefer to self-serve?

[Returning products] [Ordering product consumables and spare parts] [Identifying or comparing replacement products] [Checking warranties] [Troubleshooting]

16. Is there anything else you would like to self-serve when purchasing online?

17. What are the major challenges faced while adopting B2B online tools and technologies for procurement of LV drives, LV motors and related services?

[No online one-stop shops for procurement needs] [Tools are not reliable, fast, or accurate] [Tools are not in the local language] [No flexibility to support various department needs (procurement, manufacturing, aftersales, etc.)] [Difficult to integrate different e-procurement platforms] [No punchout or web EDI options] [Difficult to train our staff to use the tools / technologies] [Difficult to find the right information and resources] [Difficult to understand the functionality or terminology of the tools] [Cannot access order status and real-time product inventory data] [No warranty and aftersales information and support] [Other]

18. What are the top five e-commerce features / attributes that are most valued by your organisation?

[Digital marketing to create awareness about supplier offerings] [Availability of high-quality digital content (e.g. HD videos / photos)] [Updated information about products and pricing online] [Ability to self-serve and find all the information needed to make purchasing decisions on your own] [Ability to place order in bulk instead of searching for individual products and ordering] [Integrated end-to-end online web-shop] [Punchout or web EDI connectivity] [e-Catalogue and real-time tracking of product inventory] [Ability to request special pricing and discounts online] [Website personalisation to my specific preferences] [Combination of end-to-end online purchasing experience and excellent offline customer support when required] [Other]

19. Which are the channels / platforms that your organisation uses / or plans to use for procuring LV drives, LV motors and related services?

[e-Catalogue / punchout, web EDI] [Electronic Data Interchange (EDI)] [Supplier web shop] [Third-party marketplaces (Alibaba, Amazon, etc.)] [Supplier

marketplace] [Email - Request for Quotation / Request for Information] [Online search engines (Google, Baidu, etc.)] [Mobile applications (WhatsApp, WeChat, etc.)] [Other online channels / platforms] [Offline channel (e.g., talk to sales representatives, in-person store visits, trade shows etc.)]

20. For which activities across the purchase journey, does your organisation prefer to use an e-catalogue / punchout / web EDI?

[Searching products] [Selecting product/supplier] [Buying products and services]
[Purchasing aftersales support and services]

21. For which activities across the purchase journey, does your organisation prefer to use EDI?

[Searching products] [Selecting product/supplier] [Buying products and services]
[Purchasing aftersales support and services]

22. For which activities across the purchase journey, does your organisation prefer to use supplier web shop?

[Searching products] [Selecting product/supplier] [Buying products and services]
[Purchasing aftersales support and services]

23. For which activities across the purchase journey, does your organisation prefer to use third-party marketplaces (Alibaba, Amazon, etc.)?

[Searching products] [Selecting product/supplier] [Buying products and services]
[Purchasing aftersales support and services]

24. For which activities across the purchase journey, does your organisation prefer to use supplier marketplaces?

[Searching products] [Selecting product/supplier] [Buying products and services]
[Purchasing aftersales support and services]

25. For which activities across the purchase journey, does your organisation prefer to use email RFQ / RFIs?

[Searching products] [Selecting product/supplier] [Buying products and services]
[Purchasing aftersales support and services]

26. For which activities across the purchase journey, does your organisation prefer to use online search engines (Google, Baidu, etc.)?

[Searching products] [Selecting product/supplier] [Buying products and services]
 [Purchasing aftersales support and services]

27. For which activities across the purchase journey, does your organisation prefer to use mobile applications (WhatsApp, WeChat, etc.)?

[Searching products] [Selecting product/supplier] [Buying products and services]
 [Purchasing aftersales support and services]

28. For which activities across the purchase journey, does your organisation prefer to use other online channels / platforms?

[Searching products] [Selecting product/supplier] [Buying products and services]
 [Purchasing aftersales support and services]

29. For which activities across the purchase journey, does your organisation prefer to use the offline mode?

[Searching products] [Selecting product/supplier] [Buying products and services]
 [Purchasing aftersales support and services]

30. Why is your organisation not interested in using e-catalogue / punchout / web EDI for purchasing LV motors, LV drives and related services?

[Requires a very large investment] [Our current internal tools are not suitable for such integration] [Our company policy doesn't permit to use this] [Adds to the complexity and creates additional work] [Difficult to train staff to use these platforms]
 [Other]

31. What is / are the major benefits of using e-commerce web EDI / punchout?

[Real-time product inventory and price availability] [Cost-efficient procurement process] [Order accuracy] [Reduced errors in documentation] [Speed and convenience]
 [Simple integration with own e-procurement system] [Flexible pricing options]
 [Ease of use of supplier's web shop] [Order tracking and invoicing] [Other]

32. Why is your organisation not interested in using web shops for purchasing LV motors, LV drives and related services?

[Difficult to use] [Doesn't provide all the information I need to make a decision] [Inability to negotiate and ask for special discounts] [Adds to the complexity and creates additional work] [Our company policy doesn't permit to use this] [Other]

33. Where do you plan to use supplier web shops for procurement of LV motors, LV drives and related services?

34. What best describes your organisation's need for purchasing / ordering on supplier web shops? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Quick payments options (e.g. one-click purchasing)] [Ability to share and edit a cart with other buyers in the company] [Online request for quote process] [Online purchase approval workflows (i.e., order routed to supervisor for approval before order is submitted)] [Quick order forms (e.g. enter / upload SKUs, simple reorder)] [Support for subscription orders (e.g. replenishment)] [Set up buyers within my own organisation and assign roles, permissions and buying thresholds] [Create pre-approved product lists for other buyers within my company] [Custom price lists and catalogues assigned to customers]

35. What best describes your organisation's need for managing and accessing information on supplier web shops? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Tracking of discounts programs] [Ability to run reports on purchasing history] [Management of company credit / invoices] [Online product selection and configuration] [Tracking of open orders, quotes, shipments and purchasing history]

36. What best describes your organisation's need for aftersales services on supplier web shops? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Initiation and management of returns] [Support for subscription services (e.g., maintenance, delivery)] [Aftersales information and support for installed products] [Replacement] [Digital services and remote condition monitoring] [Spare parts] [Consumables] [Energy efficiency / optimisation] [Product upgrades] [Access to service network] [Warranty and aftersales information and support]

37. What best describes your organisation's need for interactive features on supplier web shops? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Online chat with a customer service representative] [Online inquiries to sales units] [Call back or follow-up option from customer representative]

38. Are there any other interactive features that you would consider critical for supplier web-shops? (Respond if applicable)

39. What best describes your organisation's use / preference for product data features for supplier web shops? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Detailed product descriptions – Photos, illustrations and videos] [Downloadable product spec sheets and buying guides] [Inventory visibility – Amount and location of goods published on site] [Product comparisons] [Warranties and aftersales information] [Operations, servicing and maintenance information]

40. Are there any other product data features that you would consider critical for supplier web-shops? (Respond if applicable)

41. What best describes your organisation's use / preference for functionalities within supplier web shops? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Ability to give ratings and reviews] [Easy, simple and integrated selection and configuration tools] [Advanced site search with altering and merchandising capabilities] [Ability to generate our own content (e.g., create selling catalogues)] [Access / generate / renew licensing agreements] [Site personalisation] [Access to service networks and remote services] [Access through mobile phones and tablets]

42. Are there any other functionalities that you would consider critical for supplier web-shops? (Respond if applicable)

43. If we provide a web-EDI/punchout/e-catalogue solution that meets all your requirements, what percentage of your ABB purchases would you estimate could move online over the next 24 months?

44. If we provide a web-shop solution that meets all your requirements, what percentage of your ABB purchases would you estimate could move online over the next 24 months?

45. If we provide a web-EDI/punchout/e-catalogue and a web-shop solution that meet all your requirements, what percentage of your ABB purchases would you estimate could move online over the next 24 months?

46. Does your organisation use / or plan to use any online platforms to sell ABB LV motors, LV drives and related services?

47. What would your organisation need to sell ABB products online?

[Support on digital content (e.g., catalogues, technical spec sheets, buying guides, photos, videos)] [Support on e-commerce platforms like marketplaces or web shops] [Support with training] [Support with marketing] [We are not interested in selling online] [Other]

48. What type of online sales platforms do you use / or plan to use to sell ABB LV motors, LV drives and related services?

[RFQs via email] [e-Catalogues] [Web shop] [Third-party marketplaces (Amazon, Alibaba)] [Supplier marketplaces] [EDI] [Social media applications (WhatsApp, WeChat, Facebook)] [Other]

49. How critical is e-commerce / digital marketing for your organisation?

50. Which of these priorities is your organisation looking to address using e-commerce platforms for product sales?

[Increase our revenue] [Improve our customer experience] [Reduce cost of sales] [Increase geographic reach] [Strengthen our service capabilities] [Other]

51. Would your organisation be open to sell LV motors, LV drives and related services through ABB's marketplace?

52. What are your concerns about using an ABB marketplace to sell LV motors, LV drives and related services?

[Competition from other ABB distributors in terms of price and availability] [Operating and maintenance cost of the platform] [Ability to manage logistics (manage returns and fast delivery)] [Other]

53. What would make the ABB marketplace an attractive platform to sell LV motors, LV drives and related services? (1 – not useful, 2 – somewhat useful, 3 – useful and 4 – critical)

[Ability to sell additional services and aftersales support (cross / up selling)] [Ability to sell non-competing products] [Lower transaction cost compared to third-party marketplaces (Amazon, Alibaba, etc.)] [Ability to process online / digital payments]

[Push from ABB to move smaller orders down to the marketplace to be served by distributors] [Support from ABB for digital marketing and lead generation] [Training from ABB about digital sales, marketing, and online operation] [Others, please specify]

54. If we provide an ABB marketplace that meets all your expectations, what percentage of your ABB product sales would you estimate could move online over the next 24 months?