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# **Success Factors for B2C E-commerce of Food Products**

Master's Thesis in the Master's Programme Supply Chain Management

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MASTER'S THESIS E 2017:012

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# Abstract

The B2C e-commerce of food products is growing rapidly, but from a relatively low level compared to other product categories. Customers find the e-commerce convenient since they can order their food whenever they like and save time in their everyday life. However, it is not all implementations of e-commerce that have been successful and many different business models exist on the Swedish market competing for success. The aim of this report is to identify the success factors for B2C e-commerce of food products, and to give recommendations on which factors to prioritize for improving the e-commerce business.

The Delphi method is applied to fulfill the aim of the report. As a first step, representatives from companies offering e-commerce of food products and e-commerce experts are interviewed to find potential success factors. In parallel, previous research is studied to identify factors influencing success. Through a coding approach a separate set of success factors are identified from the interviews and the previous researchers. The two separate results are then analyzed and discussed which generates identified success factors in the three different categories: Market related activities, Operations related activities, and Digital infrastructure.

As a second step of the Delphi method, the interviewees participate in a survey which generates a prioritization among the identified success factors. The prioritization is further analyzed and discussed from a time perspective, where the development phase of the e-commerce is considered. It is concluded that some of the identified factors are more critical in the growth phase, while other factors are of essence in the maturity phase or in both phases. Factors that leads to increased sales volumes, larger customer base and increased market share are prioritized today since the e-commerce actors aim to grow. The factors which contributes to increased profitability are not prioritized yet, while factors facilitating the feeling of convenience for the customers are always of importance.

*Key words: Success factors, B2C, e-commerce, food, grocery, trends, growth, convenience, online*

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# 1. Introduction

In the following chapter the background of the study is presented, followed by the aim and the research questions.

## 1.1. Background

E-commerce is increasingly growing due to the fast development of technologies (Yu Ling, 2014). Through e-commerce new challenges and opportunities related to business models and integration between distribution channels have been created. Companies from all different stages of supply chains must change their way of doing business; from the manufacturer to distributors and customers (Salehi et al., 2012). Because of the transformation to e-commerce, the business value chain has changed for many companies (Balaraman and Chandrasekar, 2016). E-commerce makes it easier and faster to communicate across supply chains, which enables cost reductions and contributes to increased globalization (Yu Ling, 2014).

According to Bodini and Zanoli (2011) e-commerce can be defined as a marketplace where the customers are able to purchase different items, order and pay online. Even if selling through e-commerce does not require a physical store, big investments are needed in for example infrastructure and equipment for material handling. Therefore, e-commerce is said to be highly capital intensive (Maras, 2014). One major difference between e-commerce and traditional retailing is that it can be trickier to identify customer groups to target for online actors (Bell et al., 2012). Bell et al. (2012) underline that it is not necessarily people working or living in the nearby area who are potential customers, as is common for traditional retailing. Furthermore, the authors argue that it is common for actors who are only active on the online market to face difficulties to get noticed and attract new customers. Hence, one frequently used strategy is to use for example pop-up stores or establish partnership with well-known retailers, to be present on the physical market as well (Bell et al., 2012; Picot-Coupey et al., 2016).

E-commerce is used in several different industries, but the industries are in different phases of the e-commerce expansion. E-commerce of food products is growing rapidly but it is increasing from a relatively low number of users (PostNord, 2016a). There are several other industries that have come further in the e-commerce development. For example, the sector with shoes and clothes has been and is still the leading position of e-commerce. Furthermore, consumer electronics and books are also sectors in a leading edge of e-commerce (PostNord, 2016a). The business to business (B2B) part of the food supply chain is more developed compared with business to consumer (B2C) (Kinsey and Buhr, 2003). The B2C food industry deals with problems such as how to keep the freshness of the food, damage of the products during handling, low margins, and challenges with logistics (Maras, 2014). Despite the difficulties, B2C e-commerce of food products has during many years shown a strong growth. A significant increase can be seen since 2011, when the revenue was 27,7 MSEK compared to

58,1 MSEK 2016 (PostNord, 2016b). During the third quarter 2016 e-commerce as a whole increased by 15% and the food sector had an increase of 31% in Sweden (PostNord, 2016b).

Despite the strong growth trend, e-commerce it is still a quite new sales channel for the food industry and many different business models for e-commerce are used (Maras, 2014; Colla and Lapoule, 2012). For example, both ICA and Mat.se offer e-commerce as a sales channel for their customers but their business models differ in many aspects. One difference is that ICA have both digital channels and stores as sales channels (Icagruppen, 2017), compared to Mat.se that only offer digital sales channels (Mat.se, 2017). Another difference is that, when purchasing online, ICA's customers can choose between click and collect and home deliveries (ICA, 2017), while all orders are delivered by the last option by Mat.se (Mat.se, 2017). Home delivery means that the customer orders the food online and the grocery bags are delivered to the customer's house (Cagliano et al., 2017). Click and collect is when the customer collects a filled bag with the ordered food at the store or another pick up point (Saskia et al., 2016). When comparing Hemköp and Mat.se, one example of a business model difference can be found in the delivery solutions. Mat.se has their own truck fleet to secure reliable deliveries and optimal route planning (Mat.se, 2017) while Hemköp have has chosen to outsource the delivery activities to key partners (Hemköp, 2017). There are two main product concepts that companies offer to consumers: Own Choice and Dinner Solutions. The Own Choice concept is very similar to the traditional way of shopping groceries, the only difference is that the purchase is made online and not in a physical store. When purchasing the Dinner Solutions, the customer does not have to decide what to order, they receive a bag filled with recipes and the products needed to make the dinners.

Yu Ling (2014) underlines that e-commerce has created a new channel for marketing and sales. The new sales channel implies in several benefits for customers purchasing online compared with the experience gained from physical retail stores. Mubarak et al. (2013) mention information availability, customization opportunities, price comparisons and convenience as the most essential benefits. De Kervenoael et al. (2014) and Durand and Gonzalez-Feliu (2012) also mention convenience as a major benefit with e-commerce for customers, since customers can save time and have access to many different stores 24-hours per day. It is not all implementations of e-commerce of food products that have been successful (Maras, 2014; Colla and Lapoule, 2012). Some companies have failed because of the costs and investments needed, problems around the deliveries and the additional preparation with orders (Goethals et al., 2012). Because of the large amount of business models existing on the market, and since several new approaches are developed, it is of interest to identify factors that contributes to success.

## 1.2. Aim

Even though there are many different business models on the market for B2C e-commerce of food products, from now on called e-commerce of food products, several supply chains might have some factors in common that are successful. Through identifying those factors, actors in the e-commerce business can be aware of what must be done to be successful. The need to identify the success factors and to clarify how these factors can be applied leads to the aim of this Master's Thesis.

*The aim is to identify the success factors for B2C e-commerce of food products, and to give recommendations on which factors to prioritize for improving the e-commerce business.*

Two research questions are formulated that together cover the research that needs to be performed to fulfill the aim of this Master's Thesis. RQ1 covers the first part of the aim regarding success factors for e-commerce of food products. To be able to identify success factors it is necessary to first define what characterizes a success factor and then identify what factors that are successful. The first research question is presented below.

*RQ1. What factors influencing success for B2C e-commerce of food can be identified?*

There might be a lot of factors that leads to success but a company cannot invest in all the areas at the same time. To be able to know how to improve the business there is a need to identify which of the factors that are most important for success. As Yu Ling (2014) highlights, the e-commerce market is increasingly growing and there might be a change in which factors that are most critical for success. Therefore, there is a need to see if the prioritization of the critical success factors change as the market develops. The second research question is presented below.

*RQ2. Which of the identified factors are the most critical for success and does the criticality change as the market develops?*

# 2. Methodology

In this chapter, the methodology is presented that is used in the study to be able to answer the research questions and reach the aim of this Master’s Thesis. First the research design is presented followed by a discussion about reliability and validity.

## 2.1. Research design

To fulfill the purpose of this study, which is to identify the success factors for e-commerce of food products and to give recommendations on which factors to prioritize for improving the e-commerce business, different activities are performed. Interviews are conducted with actors on the market for e-commerce of food products and e-commerce experts, in parallel with literature studies to identify success factors according to previous research. In addition, the interviewed actors are asked to participate in a survey which contributes to a prioritization of the identified success factors. The prioritization is of interest to analyze and discuss the criticality of the success factors. An illustration of the research design can be seen in Figure 1, and the research is described on a more detailed level in the following sections.

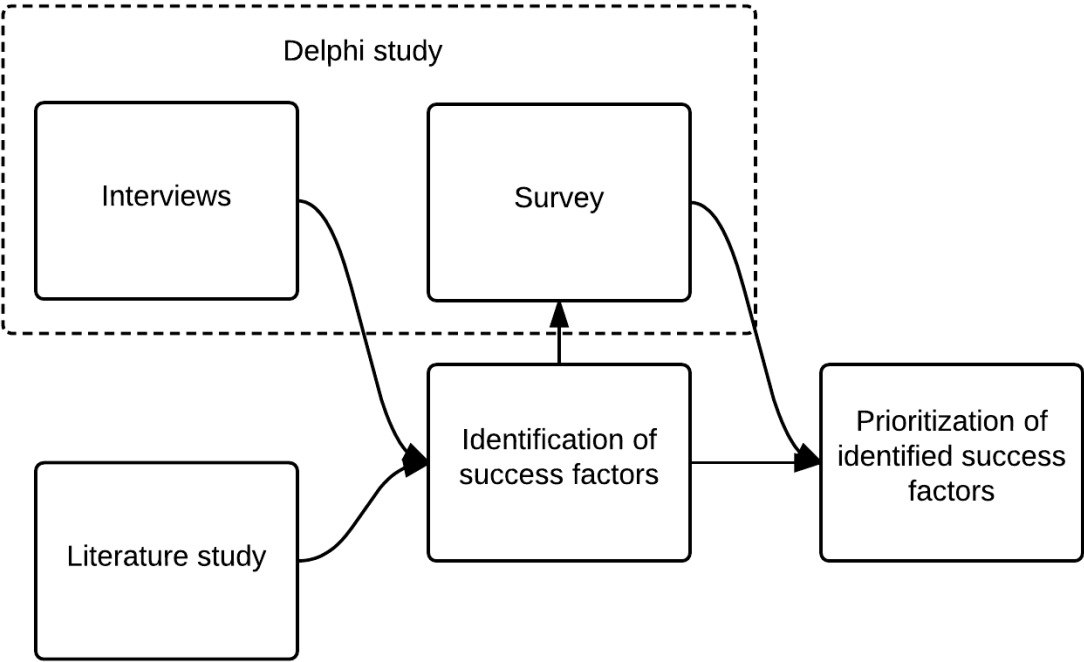


Figure 1. The research design used for the study.

### **2.1.1. Literature study**

The search strings used for the collection of literature are different combinations of the following search words: grocery, e-tailers, e-grocery, food, e-commerce, trend, success, factors, B2C and online. In addition, relevant references used in the articles found by using these search words are studied as well to give a deeper or extended understanding. The research is focused on e-commerce of food products in Sweden, but some solutions from other industries and countries are studied as well to give a broader perspective. Articles published more recently are prioritized in front of more old ones, and articles published earlier than 2010 are not studied. The reason is that the e-commerce of food products grows fast and hence, too old articles may not be relevant. A few exceptions are made when the findings presented in articles published earlier than 2010 are used in recent research as well and can be considered still valid.

The literature study results in a model summarizing the identified success factors from previous research. It is though not only success factors and the definition of success factors that are presented in the literature. There are also research regarding e-commerce in general, some background information regarding what is happening on the market for e-commerce of food products and a discussion regarding factors which may imply higher risk for the e-commerce actors. These areas are studied to give a broader background information to the presented success factors, but also as complementary information which is valuable for the analysis. For example, the research regarding alternative delivery alternatives which indicates that the delivery solution itself is not determinant for success is useful since some of the interviewed actors state the opposite.

The success factors, and the model summarizing them, are identified by a coding methodology. As Bryman and Bell (2015) state, coding is an effective methodology to analyze and get a concrete result of qualitative data. The coding methodology is applied on the text which forms the theoretical framework presenting previous researches conclusions and reasoning within the area of success factors for e-commerce of food products. As Bryman and Bell (2015) recommend, the text is read several times before the coding methodology is applied, to get an overview of frequently mentioned aspects and to double check if there is a need to add some reasoning from any of the articles used. Factors which are highlighted as critical for success by the researches are marked and then moved to a separate document. According to Bryman and Bell (2015), once these kind of words and phrases are selected, the next step is to find common themes. Therefore, synonyms and similar factors are grouped together. This process is conducted in several steps, to find a reasonable number of common themes. The grouping process results in 19 identified success factors. These success factors, and the underlying words and phrases from the theoretical framework can be found in Appendix 1. One of the risks with the coding approach is that the context disappears during the grouping process (Bryman and Bell, 2015). However, the success factors from previous research are presented both in text, with arguments and reasoning from the authors of why a specific factor is critical for success, and in a summarized Table 2 because of the coding. Hence, the context is not lost and the reader can easily navigate in the text to get an understanding for why each identified factor influence success.

To further concretize the presentation of the identified success factors, the coding process is taken one step further resulting in only three categories, namely market related activities, operations related activities and digital infrastructure. Even though the factors related to digital infrastructure could have been divided into the two other categories, it is decided to keep three separate categories. The reason is that the digital infrastructure is such a characteristic part of the e-commerce business and hence it is of interest to keep those factors clearly separated from the others. This to see which areas related to digital infrastructure that are important to focus on, to succeed. Moreover, the category with market related activities covers factors which are more visible externally at the same time as the factors which are important internally are covered by the category for operations related activities. Hence, this last step of coding generates the model of dividing the success factors into three different categories. This model is used as a structure throughout the empirical data, to make the result of the interviews more easily comparable with the result from the literature study. However, the interviews are conducted in parallel with the literature study, and therefore different success factors are identified but they have the three categories as a common structure. Also in the first part of the analysis, where the success factors found from the literature study and the conducted interviews are merged together, the three categories are used as a structure.

### **2.1.2. Interviews**

The empirical data collection is based on the Delphi method. The Delphi method is a technique for decision making made by opinions from a group of experts (Landeta, 2006; Yand, Zeng and Zhang, 2012). Several rounds of interviews and surveys are conducted with the experts to get a reliable consensus on the studied subject (Yand, Zeng and Zhang, 2012; Okoli and Pawlowski, 2004). Landeta (2006) means that the Delphi method has been developed during the years and can now be a social research technique. The result from the Delphi study does not have to end up in a clear consensus on the asked question today, the method can just be as a help for getting different opinions in a specific subject. Yand, Zeng and Zhang (2012) explain that the Delphi study is a suitable method for example in cases involving large and complex problems with uncertainties, for subjective input from experts and when there is a possibility for breakthroughs that are unexpected.

How many rounds of interviews and surveys that are conducted in a Delphi method depends on the answers that are received in each round. Schmidt (1997) has a model that divides the study into the three following phases:

1. Get as wide view as possible
2. Sort out the most important issues
3. Get a list of ranked issues

In the first phase the goal is to get as wide view as possible about the subject. The issues should be described by the experts because they can talk about the same thing but use different words. After the first round all answers must be submitted in one list where the terms that means the same thing are grouped together. Hence, the first step of the Delphi method in this study is to conduct interviews with experts within e-commerce of food products in Sweden, which is described in this section. The second step of the Delphi method is described



in section 4.1.3 *Identification of success factors* and the third and last step is described in section 4.1.4 *Survey*. The individuals interviewed, the company they represent and the date and type of interview are presented in Table 1 below. The idea is to not let the previous research steer the results from the interviews, but to generate two separate results that later can be analyzed together. Hence, the interviews are performed separately from the literature study, and the general interview guideline can be found in Appendix 2.

**Table 1.** A summary of the interviews.

<b>Company</b>	<b>Name</b>	<b>Position</b>	<b>Interview date</b>	<b>Interview type</b>
Transportnytt	Alexander Kristofferson	Journalist	2017-02-09	Phone
ÅF	Jens Sandström	Head of Digital Businesses	2017-02-13	Phone
Mat.se	Måns Danielson	CEO	2017-02-13	Physical
MatHem	Sandra Pucar	CEO Assistant	2017-02-15	Mail
Middagsfrid	Kicki Theander	Founder	2017-02-15	Mail
ICA Group	Peter Muld	Chief Digital Officer	2017-02-20	Physical
Axfood	Anders Agerberg	Senior adviser Axfood, former CEO Dagab	2017-02-22	Physical
ICA Maxi Kungsbacka	Joacim Lövgren	CEO	2017-03-03	Physical
DB Schenker Logistics	Mikael Eisner	CEO	2017-03-14	Physical
DB Schenker	Magnus Markgård	Business Intelligence and Marketing	2017-03-14	Physical
DB Schenker	Andreas Anderzon	Customer Solution and Product Manager	2017-03-14	Physical

When conducting the interviews, it is of interest to find a balance between having prepared topics and questions and the possibility to add additional questions during the interview. Hence, all interviews are semi-structured which according to Bryman and Bell (2015) allow for flexibility during the interviews. The reason flexibility is needed is because this Master's Thesis is mainly based on qualitative research. In accordance with Bryman and Bell's (2015) arguments, the aim with qualitative interviews is often to gain good insight into the interviewees opinion and experience, which is enabled by semi-structured interviews.

As can be seen in Table 1, there are different types of interviews conducted. Even though the preferred interview type is physical meetings, some exceptions are made. MatHem and Middagsfrid have a very busy schedule this spring, and hence mail interviews are more suitable for them. Moreover, phone interviews are conducted with Jens at ÅF and Alexander at Transportnytt because of geographical practicalities. During the phone interviews, the same possibilities to use follow up questions are given and hence, the quality of the data gained from those interviews are considered as good as data from physical meetings. The mail interviews give less possibilities for follow up questions. Therefore, more detailed questions are formulated to MatHem and Middagsfrid to compensate for that. In addition, follow-up questions are asked by mail to clarify and develop some reasoning from the answers of the interview questions.

When deciding upon what companies to get in touch with, it is of interest to interview the larger actors who have been established on the market for B2C food products in Sweden for a long time, but have included e-commerce in their business as well. Hence, ICA Group, Axfood, and Coop are contacted. Unfortunately, Coop is not able to participate in an interview, which could be explained by Bryman and Bell's (2015) reasoning. Bryman and Bell (2015) discuss the issue of getting in touch with the right people for the interviews. Managers do often have a tight schedule and it might be hard to find a convenient time to conduct the interview, while employees in lower levels of the organization may not be allowed to be interviewed during productive working time (Bryman and Bell, 2015). Since Coop is not included in this study, it could be interesting for future research to add their perspectives on success factors for e-commerce of food products as well. ICA Group and Axfood are also considered as valuable companies to study since they own a relatively large part of their supply chain, including the supply stage. Hence, a supply chain perspective is applied when interviewing those actors to see how the early stages of the supply chain is affected by implementing e-commerce.

Since ICA Group collaborate with independent owners of food stores, an interview with one ICA Maxi store is conducted, to give valuable input on the more practical aspects of e-commerce in combination with a physical store. Actors who have entered the market more recently, with focus solely on e-commerce are of interest to interview as well. Therefore, interviews are conducted with Mat.se and MatHem. Since some actors on the market only sell through e-commerce while others use both e-commerce and traditional stores, ICA Group, ICA Maxi, Axfood, Mat.se, and MatHem are considered to cover those different strategies in a good way, because it is of interest to interview representatives from both approaches. In addition, companies are chosen to make sure that the two product concepts on the market, Own Choice, and Dinner Solutions, are covered. Hence, Linas Matkasse and Middagsfrid are contacted to include actors who solely focus on Dinner Solutions to be able to identify differences in the reasoning regarding success factors. Unfortunately, it is not possible to get in contact with any relevant representative at Linas Matkasse during this spring. Since there are different delivery solutions offered on the market, it is of interest to get input from distribution experts regarding potential success factors for e-commerce of food products. Hence, interviews are conducted with both DB Schenker and DB Schenker Logistics. Finally, e-commerce experts, from ÅF and Transportnytt, are interviewed to get a broader perspective, including success factors and learning identified in e-commerce of both food products but other product categories as well.

When selecting what individuals to interview from the different companies, managers working with e-commerce on a strategic level are contacted. In some companies, the CEO is considered to have the best knowledge in this area, such as at Mat.se and ICA Maxi, and at other companies there is a role with responsibility for the e-commerce channel, such as at ICA Group. The positions of the interviewed individuals can be seen in Table 1.

All interviews that are held as physical interviews are recorded to secure high quality of the data. The recordings are used for transcription of the interviews. Ethical aspect of recording is considered through asking each interviewee if it is okay to record and to use their names in the report. As Bryman and Bell (2003) point out, it is important to be clear on what topics that is discussed, to agree upon anonymity and to not reveal any information that is sensitive for the company or the privacy of the interviewee. Hence, the topics to be discussed are sent to the companies in advance, to make sure that the right individuals with knowledge in the area are met and to prepare them for the interview. Success factors highlighted by each interviewee, and the reasoning behind, are presented in chapter 4. *Empirical data*. Chapter 4 presents each company's view on successful e-commerce strategies, but also some background information regarding each company and the interviewed individuals. The presented information from each company is based on the same structure as in the theoretical framework, starting by activities related to the market, followed by those related to operations and finally factors related to digital infrastructure to make the results more easily comparable.

### **2.1.3. Identification of success factors**

The purpose of the first part of the analysis is to answer the first research question of this report. The section is structured based on the three categories presented in the theoretical framework. Hence, the identified success factors connected to market related activities are presented and discussed first, followed by factors connected to operations related activities, and finally factors related to digital infrastructure.

The identification of success factors is made based on the result from the literature study of previous research, and on the results of the interviews, as illustrated in Figure 1. From the literature study, several success factors are identified. From the empirical data on the other hand, a large amount of different success factors is identified. As Bryman and Bell (2015) stress, transcripts quickly result in a huge amount of qualitative data. To get a more uniform and comparable result from the interviews, coding is performed on the transcriptions from the interviews. To create a list of success factors, and to shorten it, is also the second step in the Delphi method applied in this study. As Schmidt (1997) describes, the second step, after getting a wide view of the studied area, is that the researchers should shorten the list by using one single word for a term that is used in different ways. Hence, the coding is considered as a suitable method for this second step of the Delphi method. The same coding approach is adopted as when coding the studied previous research, described in section 4.1.1 *Literature study*. Hence, the transcribed materials are read several times before starting coding. To read the material thoroughly before starting coding makes it easier to spot the most critical factors, and not get stuck into less important details (Bryman and Bell, 2015). Bryman and Bell (2015) argue that the data should be coded as soon as possible since it sharpens the understanding of the data. Hence, coding is performed within a few days after each interview. The next step is to perform the coding and to group similar factors, highlighted by different companies, into common themes. Bryman and Bell (2015) underline that the terms grouped together should be compiled into index to make sure that it is easy to find the origin of the emerging themes. Such compilation can be found in Appendix 3. From conducting the coding, some success factors discussed by the interviewees are also mentioned in previous

research. Therefore, the same formulation of the success factors is used when possible, to clarify the similarities between research and practice. Bryman and Bell (2015) also confirm this comparison, who states that linkages should be made between theory and the collected data. To avoid the fragmentation of data, which Bryman and Bell (2015) discuss as a potential risk with coding, the success factors and related reasoning mentioned by each interviewee, how the grouping is done and identified success factors are presented for the reader who then can follow the whole process.

#### **2.1.4. Survey**

Since the result of the conducted interview is a relatively long list of success factors, it is of interest to find patterns for what factors that are the most critical for success. Hence, a survey is designed to enable such prioritization among the identified success factors, which constitutes the third and last stage of the Delphi method approach. As described by Schmidt (1997) the third and last step of the Delphi method is to get a list of ranked issues. Hence, when a wide view is gained and the most important issues are identified, the survey enables a ranked list of the identified factors. Schmidt (1997) states that the list of identified issues, or in this case identified success factors, should be sent to the experts for ranking. The author argues that the list should be random sorted and the experts should rank at least 10%, depending on how many items the list consists of, as the most important. If the expert chose any item, it should be deleted from the list. In the last phase, the scaled list is sent to the experts where they are asked to rank the issues (Schmidt, 1997).

Since the actors studied have come different far in their e-commerce development, the questions in the survey are formulated to take care of that consideration. The following three questions are asked to the interviewees:

1. Based on the prerequisites of your company, what six success factors would you say contributes the most to success?
2. If you would start a new e-commerce of food products today, what six factors would you invest in to reach success?
3. Would you say that there are some factors which do not contribute to success for e-commerce of food?

The two first two questions give valuable input since it is possible to differentiate the general success factors from those factors that depend more on context and the current situation of the different companies. From the conducted interviews, the participants see more than six of the factors as contributing to success, but the participants were asked to choose only six factors to see their prioritization. The list of factors can be seen in Table 3, which is a compilation of the highlighted factors from the interviews after the coding procedure described in section 2.1.3 Identification of success factors. Six factors out of 21 identified factors is considerably more than the 10 % recommended by Schmidt (1997) and the list of factors was randomly sorted, hence the author's recommendation for the last step of a Delphi study was followed. The Delphi study can be use as validity for the study, because the interviewees can revise the answers (Okoli and Pawlowski, 2004; Schmidt, 1997). The influence of hidden psychological effects may be reduced when the same question is asked several times with different

approaches (Landeta, 2006). Hence, since the interviewees got two separate opportunities to highlight success factors, the result of the empirical data can be strengthened through this second step of the Delphi study. In a few cases, the participants in the survey chose other success factors than they discussed during the interviews, follow up questions are therefore asked to those participants to motivate their choices and add to the reasoning in the corresponding section in chapter 4. *Empirical data*.

Okoli and Pawlowski (2004) point out another benefit with the Delphi method, that better answers may be obtained from the survey because direct confrontation with the interviewees can be avoided. Hence, the survey constitutes a good complement to the conducted interviews. Yand, Zeng and Zhang (2012) argue that anonymity should be applied when possible. Hence, even though the interviewees are asked to state their names in the survey, they are told that their answers are anonymously presented in the report. The names are only used to be able to match their answers with their reasoning during the interviews, and thereby to open for follow-up questions. Hence, this matching is a validation of the interview results as well. The third question was included to see if the participants do not agree that the all the listed factors contributed to success. Schmidt's (1997) recommendation to exclude the factors which were not selected as successful in question 1 or 2 where the identified factors were ranked was not followed, since most participants agree that all factors contributed to success but to a different extent. Instead, the third question compensate for this by enabling the participants to indicate if there are some factors which are irrelevant for reaching success.

Even though the Delphi study approach is viewed as a good method to identify the most critical success factors, since at least two rounds of data collection are conducted with the studied companies, the required time is considered. As Yand, Zeng and Zhang (2012) point out, one weakness with the method is that the interviewed experts need to allow repetitive interviews or surveys, which results in higher cost compared to only one round of interviews. Landeta (2006) also explains that the Delphi method is relatively time consuming. However, the number of questions and the formulation of those questions are carefully considered to minimize the required time for the interviewees at the same time as the complementary information searched for is collected.

### **2.1.5. Prioritization of identified success factors**

Since the second research question in this study implies a need to investigate which of the identified factors that are the most critical for success and to analyze if the criticality change as the market develops, the analysis is performed in two steps. The first step involves a prioritization among the identified success factors to illustrate how the studied companies prioritize among the identified factors influencing success. The second step involves an analysis of the identified success factors during the different development phases to see if there is a relation between factors which are critical for success in a short and long-term perspective.

The identified list of success factors and the result from the survey contribute to the first step of the analysis, to create a prioritization of the identified success factors. The result of the survey is analyzed from several perspectives to find patterns in the collected answers. However, the number of participating companies is too few to draw any conclusions regarding differences between for example success factors for companies only active on the online market compared to those who have physical stores as well, actors with internal competence regarding digital infrastructure compared to those who have chosen to outsource that function etc. Instead, the summarized result of the actors' answers on question one and two from the survey are used to draw conclusions regarding successful e-commerce strategies. This is also in line with what the Delphi method suggests. However, as discussed by Yand, Zeng and Zhang (2012) and Landeta (2006) one weakness with the Delphi method is that if the experts have different amount of knowledge, the experts with most knowledge about the subject have the same impact in the result with the experts that may not know about a special area that much. To handle that issue, the interviewees are carefully selected, see section 4.1.2 *Interviews*. In addition, only the answers by the actors who owns the relationships with end consumers of food are included since they are considered to have the best knowledge regarding what the customers need and how to fulfill it in a successful manner. Therefore, the answers from ICA Group, ICA Maxi, MatHem, Mat.se, Middagsfrid and Axfood are summarized and analyzed to find a prioritization among the identified success factors.

When analyzing how the identified success factors can be prioritized based on the result of the survey, the answers to the second question regarding what factors to invest in if a new e-commerce for food is established are considered most valuable. The reason is that no history, such as existing supply chain networks, from the participating companies influences the answers. However, the result from the first question is used as well, and the differences in ranking are analyzed to not overlook any essential success factors. The result of the analysis is presented in section 5.2.1 Criticality of the identified success factors, and summarized in Table 6.

The second step of the analysis, to analyze the criticality of the identified success factors in different development phases, is presented in section 5.3.3 Criticality of the identified success factors in the different development phases. The theory presented in section 2.2. *Definition of success factors during the different phases of the product lifecycle* is used to analyze the identified success factors and to discuss reasons behind the result of the survey and hence also the prioritization presented. Through considering the definition of a success factor it is clear why the studied companies highlight several success factors but do not invest in all of them yet. The definition of a success factor in the different development phases is used to categorize the identified factors into which of the development phases they are the most relevant for. The definition of a success factor in the growth phase is used since the market for B2C e-commerce of food products is in that phase today, and the definition of the maturity phase is used as well since that is the coming phase. The introduction phase is already passed and hence considered as irrelevant for analysis and discussion, while the decline phase feels very distant from the current situation. Motivation and explanation behind each identified success factor can be found in section 5.1 *Identification of success factors*, and these

motivations are used as a basis for categorizing the factors into the growth phase, maturity phase or both. For example, both previous research and some of the studied companies argue that the success factor related to innovatively and to continuously develop new solutions is closely connected to the growth of a company. Hence, that factor is categorized as a success factor which is the most relevant during the growth phase. Another example is the success factor related to the use of distribution fees to cover costs for picking and delivery, which is identified since it contributes to increased profitability. The profitability focus is especially critical for the maturity phase, and is hence categorized into that development phase. All identified factors are discussed based on the same approach, and the result of the analysis can be seen in Figure 13.

## **2.2. Reliability and validity**

The validity of a result can be divided into internal and external validity (Bryman and Bell, 2015). How generalizable the findings are depending on the external validity (Bryman and Bell, 2015). To secure high external validity, several companies are interviewed and studied. Furthermore, as described in section 4.1.2 *Interviews*, the companies are strategically chosen to cover a range of different actors active on the market for B2C e-commerce of food products and to give additional input from other actors who can be considered experts in e-commerce. The generalization is important for this study since different actors should be able to use the findings to improve current businesses or enter the market. Of course, it would have strengthened the external validity if even more actors are included in the study. But given the timeframe it is considered more valuable to get a deeper understanding for the reasoning behind factors the chosen companies highlight as success factors compared to including many but on a less detailed level.

The internal validity is depending on if the result developed by the researcher matches the reality (Bryman and Bell, 2015). Since several companies, in different supply chain positions and with different strategies have been studied, in combination with a summary of relevant research, the internal validity can be expected to be high. The external reliability is high if it is possible to replicate a conducted study (Bryman and Bell, 2015). For this Master's Thesis, the method chapter together with the appendixes describes what is done, how and when. Despite the description, it is most likely be hard to replicate this Master's Thesis. One of the main reasons is that the e-commerce of food products for the B2C market is growing and hence, some circumstances might be changing over time leading to a different result. Even if for example the same questions are asked to the same individuals representing the different companies in a couple of months, the answers will most likely not be the same. The market is changing, and the companies are adopting to those changes and strives to drive the development of the e-commerce forward. Hence, new learning might be gained leading to new success factors or shifted focus. However, the methodology used can be applied to conduct a similar study in the future to analyze if the focus has shifted.

To secure high internal reliability, meaning that the researchers should agree about what they have heard during for example interviews (Bryman and Bell, 2015), a joint discussion is held after each interview and notes summarizing the collected data have are made. In addition, each recorded interview is transcribed to further avoid misunderstandings or that some information is forgotten. The conducted survey is also contributing to high internal reliability since the interviewees get the possibility to choose the most critical success factors personally. Hence, any misinterpretations from the interviews are further avoided by analyzing if the result from the interviews matches the answers in the survey and if not, follow up questions are asked and the results updated.



# 3. Theoretical framework

E-commerce in general is increasingly growing and the consumers market has started to reach a more mature level of purchasing online (PostNord, 2016b). In the same pace as the online based stores are established, the more essential it is for the e-commerce actors to differentiate their offer (PostNord, 2016b).

The food market distinguishes from other product markets by involving products that are perishable, seasonable and have low value to weight ratio (Goethals et al, 2012). Moreover, food purchases can be characterized as necessary and repetitive (Goethals et al, 2012; Vanelslander et al., 2013). This means that the customers more often get in touch with the ordering and delivery process and the processes should therefore to be as convenient as possible, without generating too high costs for the actors involved in the supply chain (Vanelslander et al., 2013). In the following section the recent trends are presented, alternative strategies for distribution centers and delivery solutions are discussed and the risks involved for e-commerce actors are highlighted.

## 3.1. The growth of e-commerce

The B2C market for groceries online is growing rapidly, but from a low level (Tadei et al., 2016), see Figure 2. In Sweden, grocery e-commerce is growing fastest compared to e-commerce in other branches (Dhandel, 2016). During 2016, the e-commerce of food products grew with 39 % while the total market for food products grew with 4 % (Dhandel, 2016). Furthermore, the growth potential is significant since only 1,4 % of the total market for food products is represented by e-commerce (Dhandel, 2016). Hence, the network of physical stores is still the dominant sales channel in this branch.

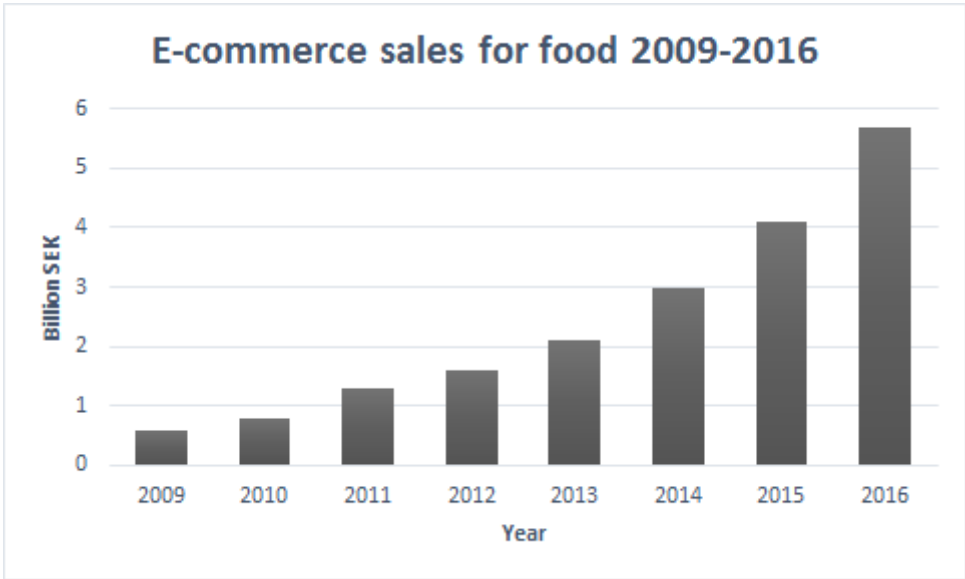


Figure 2. The sales for food online (interpreted by Dhandel, 2016).

E-commerce is something that the consumers are starting to see as a routine. The step to purchase food online is not that high anymore when the customers are used to be digitally active (Dhandel, 2016). Another factor that lower the barrier to purchase food online is the expanded use of mobile phones, it allows us to order the food online when having some time over. The mobile phone makes it also easier for the consumer to both track the delivery and to give feedback to the company (Maras, 2014). Major reasons for purchasing food online is convenience and to save time on everyday life (eg. Dhandel, 2016; Saskia et al., 2016; Colla and Lapoule, 2012). Another benefit for customers using e-commerce is that they can perform the purchase whenever and wherever they want (Colla and Lapoule, 2012). The bigger assortment when purchasing online is the most increasing reason people chose to buy groceries online. The biggest reason is still however that the customer does not have to carry the bags home (Dhandel, 2016).

Buying online instead of in a physical store will imply less waste of food for the customers. When ordering online, customers tend to purchase only according to their plan (Colla and Lapoule, 2012; Liås, 2016). The customer has the possibility to check what needs to be bought and what is still left at home if ordering from home (Matseholding, 2016). According to Axfood (2017) more customers purchase ecological food online than in stores which has a positive impact on the environment. A company that sells food online can order the same amount of food as will be sold the day after and the wastage will therefore be low (Matseholding, 2016). The wastage will also be lower in the e-commerce channel since there is no need to expose the groceries in shelves in a store or to stock a lot of fruits just so it looks good (Matseholding, 2016).

Typical customers in Sweden that purchase food products online are, according to Dhandel (2016) between 26 and 35 years old with kids, living in one of the larger cities in Sweden. Moreover, Dhandel (2016) states that there is a trend indicating that customers with a better economic situation tend to buy food products online. Among the customers who have not tried e-commerce for food products yet, 10 % thought that they will start shop online during year 2017 (Dhandel, 2017).

Today, the United Kingdom is the leading market for e-commerce of food products in Europe (Dhandel, 2016). In United Kingdom, e-commerce actors quickly implement new innovative solutions and customers tend to try these solutions quickly (Dhandel, 2016). The e-commerce expansion in the United Kingdom have resulted in fewer traditional grocery stores, but an increase in smaller more specialized stores aiming to fulfill immediate customer needs or offering extra high quality products (Dhandel, 2016). Ocado is one of the largest actors offering e-commerce of groceries (OcadoGroup, 2015), but it took 15 years for the company to generate profit (Saskia et al., 2016). Since groceries represent the largest of all retail markets, and because the market is growing quickly, Ocado argues that there are big opportunities for groceries online. The company highlights that one key factor for success is that they have technology specially designed for their business. Moreover, Ocado's supply chain consists of only suppliers, central warehouses, and customers, so no retail stores are involved (OcadoGroup, 2015). The company focus on delivering the best shopping experience in terms of service, range, and price (OcadoGroup, 2015). To deliver the best

shopping experience in a long run, Ocado (2015) means that economies of scale, automation, order accuracy, on time deliveries, ease of use, assortment and competitive prices are essential. In addition, low delivery fees, end-to-end platform solution, innovation and technology development are critical (Ocado, 2015).

### **3.1.1. Recent trends**

The supply chain of food is changing with the entrance of e-commerce on the market. Actors that only sell food online act as a new intermediary in the supply chain (Saskia et al., 2016). The e-commerce also implies in a new way of managing the distribution and production (Bodini and Zanolli, 2011). One of the biggest trends according to PostNord (2016b) is that the e-commerce companies must focus on the accessibility and convenience for the consumers. Amazon is one actor pushing this trend, because they offer a collected supply of many different products and the possibility to get very fast deliveries.

Cagliano et al. (2017) mention also that one of the challenges for the companies when adapting to e-commerce is how to coordinate the supply chain. PostNord (2016) mention that more retailers chose to adapt their strategies to the omni-channel concept, with a combination of physical store and e-commerce. The consumer can buy something online and pick it up in a store or in a opposite way. Companies that already sell food in physical stores have started to create an omni-channel concept where groceries are sold in the physical stores and online (Dhandel, 2016). However, how to handle to the omni-channel is something the companies still have a lot of questions regarding and there are a lot of improvement possibilities (Liebe and Capshaw, 2015). The goal is to offer a seamless shopping experience for the customers, independent of which channels that are used (Hübner et al., 2016b). To enable such seamless shopping experience, departments must work together (Picot-Coupey et al., 2016). There is an increasing trend to use social media channels for online marketing and hence, the omni-channel thinking must be applied in those channels as well to give a consistent message (Balaraman and Chandrasekar, 2016).

The e-commerce market has for many years been dominated by niched e-commerce actors but there is a transformation going on now. Most the biggest food chains have also started to adapt to the digital market (Dhandel, 2016). The trend is also that already established actors put a lot of effort in the marketing activities and to expand their market share. For the companies within the food market, there is a trend to continuously search for new ways to expand the logistics network and offer other solutions for transportation in the future (Dhandel, 2016). The home deliveries are today centered around the biggest cities and the people living in rural areas only have the choice to pick up their groceries in pick up points in most of the cases. According to Dhandel (2016), to increase the consumer market, companies must find other delivery solutions even in rural areas.

The pricing strategy is something the online actors within the food industry deal with. The consumers head towards to expect free deliveries rather than see it as a time saving service to pay for. Goethals et al. (2012) say that more people could start to buy groceries online if it is possible with home delivery and if it is free. The actors have therefore the dilemma to match the prices in the physical store with the additional costs for deliveries (Dhandel, 2016). One

solution for this can be that the companies should be better at communicate the time saved by home deliveries and the alternative costs. They can also develop the delivery offerings to increase the experienced value of the delivery service (Dhandel, 2016). PostNord (2016b) argues that the consumers are getting less price sensitive and that the whole experience of the purchase is more important than finding the lowest price for a product (PostNord, 2016b).

It is getting more important to meet the consumers' requirements at the delivery in a more innovative and flexible way. The companies must offer delivery alternatives adopted to local needs (PostNord, 2016b). The logistics has turn out to be more consumer driven than traditionally (Liebe and Capshaw, 2015). The consumers are getting more used to buy online which implies that they put higher requirements on the deliveries, as well as they want to have more choices of delivery alternatives (PostNord, 2016b). An effect of this is that it is more important to listen to and understand the consumers need. The consumer's opinion plays therefore a more important role for the companies. Hence, it is of interest to collect and analyze information regarding customers' preferences (Balaraman and Chandrasekar, 2016). The trend is also that the consumers expect to get their order faster than before which put higher requirement on the deliveries (Liebe and Capshaw, 2015).

Additional services are another trend that PostNord (2016b) is seeing. For example, that it will be possible to get the electronics installed, the food carried into the fridge or help to carry the new sofa into the right room in the house. Another service that is expected to increase is the information services, the consumer wants to have the possibility to easily follow and control the deliveries. Moreover, the use of mobile phones during online purchasing processes is increasing among customers (Balaraman and Chandrasekar, 2016; Yu Ling, 2014).

### **3.1.2. Alternative strategies for distribution centers**

The increase in e-commerce have forced most the traditional actors on the market to implement e-commerce as well and thereby it becomes necessary to evaluate and eventually change existing business models (Liås, 2016). One strategy for managing e-commerce of food products Maras (2014) mentions is to combine retail stores with online sales. Maras (2014) argues that actors who have this strategy often offer both home delivery and click and collect services for their customers. Orders are either picked at the shelves in stores or at separate e-commerce distribution centers (Colla and Lapoule, 2012; Maras, 2014). According to Saskia et al., (2016) and Vanelslander et al., (2013), the online orders can preferably be picked from the aisles in the physical stores if the volume of orders to pick is manageable. Doing so, less investments will be needed since no distribution center will be used, the already existing stock can be used and the last mile distance becomes shorter. However, picking in stores might lead to unexpected stock outs (Vanelslander et al., 2013). Another strategy Maras (2014) mentions is to have a separate warehouse where food products to be sold through e-commerce are stocked, but no physical stores are used. According to Goethals et al. (2012) this strategy can be interesting from a cost perspective. For example, the facilities can be significantly less expensive and there will be no cost for relocating products that customers have placed at the wrong spot in the store.

### **3.1.3. Alternative strategies for delivery solutions**

There are several alternative ways to solve the delivery of e-commerce of food products. Different concepts have shown to be successful in different countries (Saskia et al., 2016), which underlines the need to analyze each market thoroughly before selecting delivery strategy. Generally, there are two main alternatives for customer deliveries: click and collect, and home deliveries (Saskia et al., 2016). Click and collect means that the customer drives to a pick-up point where the groceries are packed in bags. Goethals et al. (2012) have found out that for many customers' home delivery as an option is an important factor when considering buying groceries online or not. The delivery choice of home delivery can be attended or unattended delivery (Hübner et al., 2016a). For example, both in UK and in Switzerland home deliveries are most commonly used, while drive-through stations based on the click and collect alternative is dominating the French market (Hübner et al., 2016a). Actors who are already active on the market of food products through physical stores generally prefer to use their existing supply chain structure and hence, the click and drive alternative is used to a large extent by multi-channel actors (Saskia et al., 2016). Moreover, on the countryside where the population is not so dense, the click and drive solution is also frequently used (Dhandel, 2016).

Generally, it is the larger cities in Sweden that contributes the most to the quick growth of food e-commerce (Dhandel, 2016). According to Dhandel (2016), it is the home delivery alternative, which more frequently is offered in dense cities, that drives this growth. If the customers choose home delivery instead of driving their own cars to the store it will result in lower emissions of CO<sub>2</sub>, due to that the home deliveries can be consolidated in one van instead of into many cars (Matseholding, 2016). However, home deliveries are the most complex delivery alternative because of the last mile issues involved in combination with perishability aspects (Tadei et al., 2016). For e-commerce in general, most people expect deliveries in 3-5 days while for e-commerce of food people want to have it the same day or the day after (PostNord, 2016a). The profitability issues are also larger with home deliveries because of costs that occurs for both picking and delivery, activities that the customers traditionally have done themselves (Colla and Lapoule, 2012). To offer click and collect solutions can be more cost generating than letting customers pick from the aisles in stores themselves, but the cost is lower compared to home delivery solutions (Colla and Lapoule, 2012). Colla and Lapoule (2012) argue that the difference in cost must be represented by the price customers pay, but because of the low willingness to pay for the services this have shown to be difficult to achieve.

To manage the home deliveries, a company can either do it by their own or work together with external providers (Saskia et al., 2016). Making the deliveries by their own implies a need of more personnel and higher maintenance costs. Because of the high costs connected to make the deliveries by themselves, many companies within e-commerce of food cooperate with coordination service providers (Saskia et al., 2016). An advantage with the use of external providers is that they generally handle a larger volume of goods and hence, the delivery cost per order becomes lower (Vanelslander et al., 2013). On the other hand, the home deliveries are tightly connected to customer satisfaction which increases the importance

to make sure that the external provider offer all services that the customers want (Vanelslander et al., 2013). However, independent on if home delivery or click and drive is offered, Saskia et al. (2016) stress the need to adopt the offered delivery solution to the context and thereby differentiate from competitors.

### **3.1.4. Risk factors**

A major obstacle to purchase food online is old habits, which according to Dhandel (2016) are hard to change. According to Goethals et al. (2012), the time and effort it takes to change customers' habits is a factor that involves high risks. There is also a general lack of trust in e-commerce actors, which is hindering the development (Ahrholdt, 2011). For the actors who were first on the market for e-commerce of food products this was especially clear. Customers were not used to shop groceries online and it was not an easy task to introduce the new way of shopping (Goethals et al., 2012). However, Dhandel (2016) sees a trend showing that about 66 % of the people shopping groceries in a physical store have browsed through internet websites first, which indicates a minor behavioral change. Moreover, Saskia et al. (2016) state that the use of smartphones has contributed to an increase of buying online activities, which also indicates a minor behavioral change. Salehi et al. (2010) highlight the risk involved related to website performance, since customers can very easily switch to another actor's website or go to a physical store instead, if the shopping experience is unsatisfactory. One risk related to customer experience on the web site is the navigation structure used. Benn et al. (2015) have shown that customers can find it hard to use a website if they are not used to the structure of the website, especially when it comes to the use of categories. This implies a risk that customers who are not comfortable with the navigation structure exit the purchasing process.

Another risk with the online channel is, according to Dhandel (2016), that customers prefer to look at the products and decide which one to pick themselves. Moreover, the delivery options can be quite limited, or the cost for it can be perceived as too high, which are other reasons why some customers choose to continue shop groceries in physical stores (Dhandel, 2016). Even though customers perceive it as time consuming to purchase food in a physical store, not only to pick their food products but also to travel the distance between the store and their home, customers' willingness to pay for delivery services is very limited (e.g. Goethals et al., 2012; Tadei et al., 2016; Colla and Lapoule, 2012; Vanelslander et al., 2013).

Generally, Tadei et al. (2016) and Dhandel (2016) stress that in the current situation it is very rare to gain profitability from selling groceries online. Vanelslander et al. (2013) agree and argues that even though the e-commerce has grown fast in many years, it is still difficult for the companies to reach profit in the segment of online sales. Most reasons for failure are related to economic factors, both historically and in today's environment (Tadei et al, 2016; Saskia et al., 2016). According to Goethals et al. (2012), many supply chains fail because of the huge investments involved in establishing e-commerce. The generally low margins for food products is another major contributing factor to the profitability issues (Vanelslander et al., 2013; Saskia et al., 2016). Moreover, high costs for storage, picking, dedicated distribution centers and transportation are common reasons for failure because of the limited possibility to cover those costs by for example delivery fees to customers (Goethals et al.,

2012; Saskia et al., 2016; Vanelslander et al., 2013). Even though it does not generate profit yet, most actors on the Swedish market offer e-commerce. According to Dhandel (2016), one reason is that they do not want to lose customers to competitors because of not offering e-commerce as an alternative. Since implementation, or expansion, of e-commerce requires significant investments, the limited profitability is a major issue (Dhandel, 2016).

The home delivery has a high impact on the total logistics cost, and does therefore imply high risk, but by having a good route planning the costs can be reduced (Vanelslander et al., 2013). It is important to keep delivery failure rate as low as possible because it also has a significant impact on the total logistics cost. Colla and Lapoule (2012) means that around 30% of the attended home deliveries fail just because nobody is at home at the delivery time. Other solutions than attended home deliveries are therefore tried to be found (Cagliano et al., 2017).

According to Vanelslander et al. (2013), the cost factor that is most important is the cost of last-mile, that factor is the largest and in some cases, up to 50% of the total supply chain cost. The factor that is on the second place is related to the picking and storage activities at the retailer.

In traditional stores the layout and location of the products are designed from a selling perspective. The shelves should look good and be organized so it is easy to find the products that customers are looking for. The layout is not designed for efficient picking, which dedicated warehouses for food sold through e-commerce can be (Hübner et al., 2016a). If a grocery company has a traditional store and e-commerce, Hübner et al., (2016a) argue that picking is often performed in the existing store. Picking in store results in a risk of shortage since from the time customers place orders online until the products are picked, the inventory might have changed because of customers shopping in the physical store meanwhile (Hübner et al., 2016a). Hence, Hübner et al. (2016a) argues that a higher safety stock is required if picking is performed in physical stores to mitigate the risks involved.

Cagliano et al. (2017) argue that a significant share of failed e-commerce approaches for food products is related to poor logistics. The nature of food products implies special requirements on handling and transportation throughout the supply chain which increases the logistic complexity compared to other product categories (Saskia et al., 2016). Especially the home delivery process becomes extra critical because of the perishability aspect and the temperature requirement and hence, the strategy for home deliveries may lead to failure if not managed properly (Saskia et al., 2016; Tadei et al., 2016). Several authors (e.g. Vanelslander et al., 2013; Hübner et al., 2016a; Goethals et al., 2012) highlight home delivery solutions as the most cost generating delivery setup and a common reason for failure because of poor profitability. In addition, customers' low willingness to pay for the home delivery service contributes to the profitability problem (Colla and Lapoule, 2012; Hübner et al., 2016a). In addition, Colla and Lapoule (2012) argue that customers are not motivated to pay for the click and collect service either. The delivery aspect is not only critical because of the high costs involved but also because of the great impact on customer satisfaction. Customers who are dissatisfied with the deliveries tend to not order online again and hence, the logistic aspects of e-commerce of food product solutions is essential to avoid failure (Goethals et al, 2012).

### 3.2. Definition of success factors during the different phases of the product lifecycle

There is no consistent definition of a success factor in the existing research related to e-commerce strategies. Some researchers highlight profitability as success (e.g. Hübner et al., 2016; Saskia et al., 2016) while some argues that increased sales volume characterizes success (e.g. Maras, 2014; Salehi et al., 2010). How success is measured varies over time and can be described by the product lifecycle. The product life cycle is a well-established management theory describing four different phases that products on the market goes through during their life cycle (Yoo, 2010; Klepper, 1996; Shankar et al., 1999; Levitt, 1965). According to Yoo (2010), most markets follow the pattern predicted by product life cycle theory. The different phases, and the connection between sales volume and time, are illustrated in Figure 3 below. However, Levitt (1965) underlines that for different actors in the same industry, the product position in the life cycle may differ. Hence, also how success is measured might differ between different companies offering the same type of product. E-commerce of food products can be regarded as a product offering, since food products can be purchased and delivered to either a pick-up point or to the customers' homes. On the other hand, the e-commerce channel differs from the traditional food supply chain when it comes to the surrounding services. The e-commerce website and the deliveries constitutes services not present traditionally and hence it can be argued that the e-commerce is rather a service than a product offering. However, as Marcu and Gherman (2012) mention, the product life cycle can be viewed in the same way for a service as for a product. Therefore, the relationship between sales volume and time is applicable for e-commerce independently on if it is regarded as a product offering, a service, or a combination of them. Hence, the development phases are applicable for the context of e-commerce.

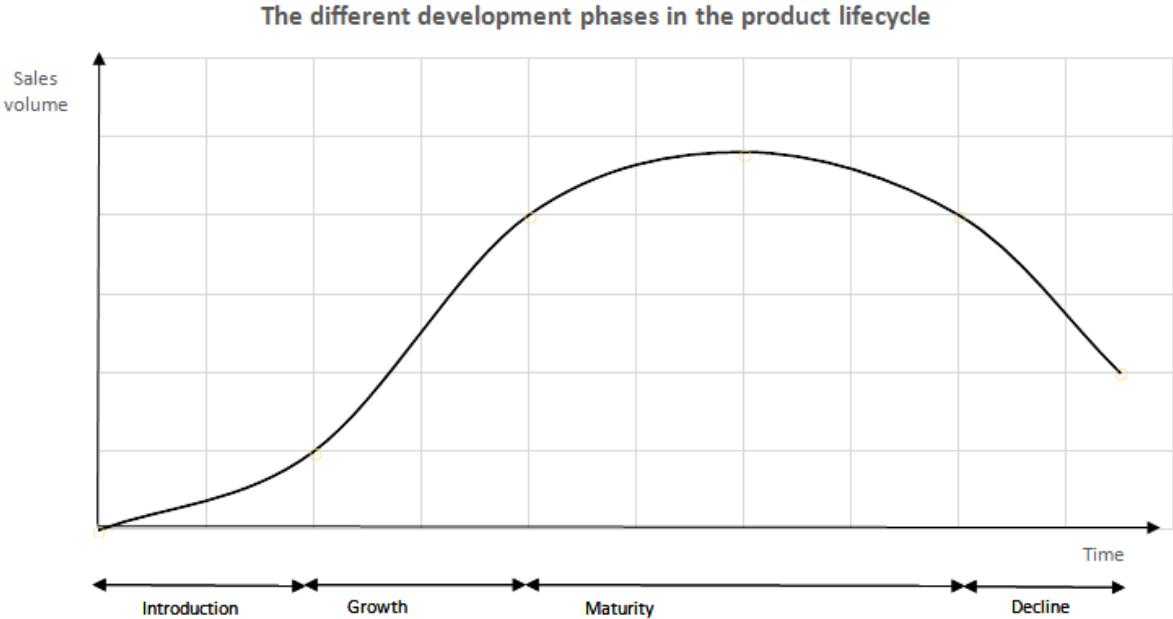


Figure 3. Product life cycle (interpreted by Yoo, 2010).



### **3.2.1. The introduction phase and the growth phase**

The introduction phase is characterized by low sales volumes and slow sales growth (Yoo, 2010; Levitt 1965). Actors on the new market are not sure what the customer preferences are and how to satisfy them (Klepper, 1996). There is not even a proven demand for the product innovation (Levitt, 1965). Hence, there are often alternative innovations developed in parallel, competing for success (Klepper, 1996). The risk exposure during an introduction phase is generally higher if the product is complex and more distinctly new, if the associated costs are high and if the product requires changes in customer behavior (Levitt, 1965).

If the introduction phase turns out to be successful, the sales volumes will start to grow extensively and the market will expand rapidly, meaning that the product have moves on to the growth phase (Yoo, 2010). According to Saskia et al. (2016), most actors on the market for B2C e-commerce of food products are currently focusing on getting strengthened customer loyalty and increased market share since that is viewed as successful. Salehi et al. (2012) do also mention customer loyalty as key to growth and success since loyal customers will generate sales over time and attract new customers. Moreover, increased sales do also characterize success during the growth phase (Saskia et al., 2016; Maras, 2014).

A relatively broad range of customers are aware of the product during the growth phase (Yoo, 2010). Because of the increased sales volume, new actors, and competitors who have been watching the development usually see the growth potential and enter the market (Klepper, 1996; Levitt 1965). Increased competition can result in a positive joint marketing effect. Hence, on the one hand the pioneers might get a smaller market share from increased competition, but on the other hand the total sales and profit may rise more rapidly because of increased customer awareness (Levitt, 1965). The market shares change frequently and the innovation rate is high (Klepper, 1996). Shankar et al. (1999) argue that there are some benefits for those actors who enter the market during the growth phase since they will have the possibility to reach a high sales volume quickly, compared to the pioneers. However, pioneers get better response on their marketing spending (Shankar et al., 1999). Anyhow, the competition becomes intensified during the growth phase and actors are focusing on attracting new customers to the market at the same time as the competition for the customers already at the market is sharpened (Yoo, 2010). According to Yoo (2010), actors are for example focusing on quality improvements, additional services, and specialization towards certain markets segments to gain competitive advantage. Levitt (1965) argues that brand differentiation becomes truly critical during this phase. One reason is that a strong brand reputation established during this phase may insulate the brand from price competition which often arises during the maturity phase (Levitt, 1965). According to Colla and Lapoule (2012), success is closely related to strengthened competitive advantage. Hence, those strategic factors which improve an actor's competitive positions is regarded as successful. To gain competitive advantage, Colla and Lapoule (2012) argues that the customers' perception of value must be in focus. During the growth phase focus have not shifted towards only economic gains yet (Saskia et al., 2016).

### **3.2.2. The maturity phase and the decline phase**

The product enters the maturity phase when the market becomes saturated (Yoo, 2010) and market shares have become relatively stabilized (Klepper, 1996). In the maturity phase, a limited number of new customers are being interested in the product. Instead, sales are driven by already existing customers (Yoo, 2010). In this phase, products are becoming more standardized, leading to higher competition based on price (Yoo, 2010; Levitt, 1965). Klepper (1996) argues that actors put increased effort in process standardization, to reduce the costs, during the maturity phase. In the beginning of the maturity phase, Klepper (1996) states that there often is a radical change in number of producers. Those actors who are not efficient enough will be forced to exit the market (Klepper, 1996).

Profitability of e-commerce depends highly on economies of scale. If a retailer of e-commerce can have a fast inventory turnover, they will faster get return on investments and higher profitability (Maras, 2014). Zhu et al. (2014) explain that it is important to know how to use the company's advantages and try to maximize them to survive and make profit in the highly competitive environment e-commerce exists in. New solutions must become profitable to become successful in a longer time perspective (Hübner et al., 2016a; Saskia et al., 2016; Salehi et al, 2012). Hence, e-commerce success is measured in terms of profit during the maturity phase (Maras, 2014). During the decline phase, sales will decrease (Levitt, 1965). Yoo (2010) argues that a common reason for decreased sales is new technologies emerging on the market which are substitutes to the studied product.

### **3.2.3. Summarized definition of success factors**

To summarize, during the introduction phase, success is characterized by creating or finding a demand for the product innovation (Levitt, 1965; Klepper, 1996). In the growth phase, success is measured in terms of increased sales volume, large market share and loyal customers (e.g. Saskia et al., 2016; Yoo, 2010). In addition, strengthened competitive advantage is successful (Levitt, 1965; Colla and Lapoule, 2012; Yoo, 2010). During the maturity phase, success is measured in terms of profitability (e.g. Hübner et al., 2016a; Maras, 2014) and in the decline phase, the sales volumes will decrease (Yoo, 2010).

## **3.3. Factors that leads to success**

In the following section, identified success factors which are applicable for e-commerce of food products are presented. The success factors are presented in three different categories: Market related activities, Operations related activities and Digital infrastructure.

### **3.3.1. Market related activities**

Maras (2014) argues that the key success factor is to understand customer needs. Moreover, actors on the market should identify what information customers are looking for, and how they prefer to receive that information (Benn et al., 2015). Since convenience has shown to be a main driver for customers to buy food products online (e.g. Maras, 2014; Salehi et al., 2012), actors on the market need to provide services that fulfill the convenience requirement. One factor which contributes to convenience is to offer services that are easy to understand

and simple to use (Goethals et al, 2012). Moreover, when selecting market to enter, it can be beneficial to analyze the price sensitivity among customers and the possibilities of reaching economies of scale in the geographical area considered to enter (Hübner et al., 2016a). Customer groups which enables the best possibility for growth should be targeted (Zwiebach, 2015). Bodini and Zanolli (2011) discuss the importance of collecting and analyzing customer information, since the information provides valuable input to the e-commerce development.

According to Maadi et al. (2016), Colla and Lapoule (2012) and Goethals et al, (2012), trust is essential for e-commerce growth and hence success. Trust is also tightly connected to the data privacy policy of the company (Arholdt, 2011; Choshin and Ghaffari, 2017; Mubarak et al., 2013). Hence, it is beneficial to continuously work with those issues and to inform customers about the data privacy policy applied and the secure data transfer occurring (Ahrholdt, 2011). Another aspect contributing to creating customer trust is fulfillment and that the customer sees the delivery as convenient (Colla and Lapoule, 2012). Customers who trust their suppliers have shown to be more loyal, and hence generate long term revenue to the supplier (Salehi et al., 2012; Choshin and Ghaffari, 2017).

Another factor which, according to Dhandel (2016) and Zwiebach (2015), can lead to success is to have both physical stores and e-commerce as sales channels. The reason is that one third of Swedish consumers shop from the same actor online as in physical stores (Dhandel, 2016). Hence, the loyalty factor is critical to consider. Furthermore, Dhandel (2016) argues that it is not enough to simply offer the different sales channels and then the customers will be loyal. How the omni-channel concept is managed is a critical factor, since the customers prefer to seamlessly use the different sales channels and get the same experience (Dhandel, 2016; Colla and Lapoule, 2012; Zwiebach, 2015). Moreover, the actors' CRM system must merge customer information across all channels to enable proper customer relations and to enhance loyalty. The company should have a clear strategy regarding how to manage different distribution and promotion channels (Bodini and Zanolli, 2011). According to Colla and Lapoule (2012) and Maras (2014) one success factor for e-commerce actors is to offer a wide assortment of products. Otherwise, there is a big risk that the customers choose another web shop or visits the physical store if some of the products that they are looking for is not offered.

It is important for e-commerce success to offer same day deliveries to customers' homes, and click and collect solutions as a complement (Zwiebach, 2015). Goebel et al. (2012) highlights the tradeoff between delivery quality and sales volume and argues that increased profitability and economies of scale will be gained if the quality is in focus. Customers demand fast and reliable delivery of their groceries shopped online, and hence those requirements must be met for the e-commerce to be successful (Saskia et al., 2016). Moreover, Colla and Lapoule (2012) mention that a transparent traceability system, where customers can follow the progress of their order, contributes to success of e-commerce.

### **3.3.2. Operations related activities**

On the B2C market for food products it is very hard to compete on product price. Customers can easily compare prices between stores and web shops. Therefore, it is a more successful strategy to reduce the cost for the logistic processes and for incoming material (Dhandel, 2016). The logistics are one of the main challenges related to e-commerce of food products since it generates relatively high costs. Hence, it is truly critical for the success of the e-commerce to implement an efficient logistics model (e.g. Goethals et al, 2012; Cagliano et al., 2014; Colla and Lapoule, 2012). The delivery process should be as efficient as possible to contribute to a profitable e-commerce strategy (Tadei et al., 2016).

Colla and Lapoule (2012) suggest including a centralized distribution hub in the logistic model, since the costs for storing can be shared between the different flows. Regarding the picking process, Dhandel (2016) state that the picking can only be done in an efficient manner if a dedicated picking center is used, not by picking in existing physical stores. Keeping the cost for picking as low as possible is especially important for food products because of the low gross margins compared to other industries (Tadei et al., 2016). Hence, an efficient picking process will contribute to the success of the e-commerce approach since the profitability will increase (Tadei et al., 2016; Colla and Lapoule, 2012). The operating and investment costs in a warehouse are highly affected by the degree of automation: automated, semi-automated or manual (Hübner et al., 2016a). With higher degree of automation, the speed of picking increases, the cost per pick decrease with the decrease of operating costs, as well as less picking technologies are needed (Maras, 2014; Hübner et al., 2016a).

When home deliveries are offered to the customer, Hübner et al. (2016a), Dhandel (2016) and Bodini and Zanoli (2011) stress the importance of delivery time accuracy since it is tightly connected to customer satisfaction. According to Dhandel (2016) the competitive advantage increases for those actors who can offer on-time deliveries, within a given timeframe specified by the customer. Moreover, product availability is a critical factor contributing to e-commerce success (Bodini and Zanoli, 2011). Products that are offered at the website should also be available to order and if not, customers should be informed about the stock out. Another success factor is to deliver products that are in the same quality as it stated to be on the website (Salehi et al., 2012; Dhandel, 2016). This factor is important since Salehi et al. (2012) have shown that customers are often unsure if they will receive the expected product quality or not and if customers are not sure about the product quality, they might not order products online. Moreover, Dhandel (2016) state that the risk of losing customers is high if customers receive products that do not match the customers' quality expectations. Storage shortages should be avoided since incomplete deliveries affects the customer experience negatively and customers can easily choose another web shop to buy from (Colla and Lapoule, 2012).

To attract new customers and to increase the turnover are goals that are shared among most actors on the B2C market for e-commerce of food product. According to Colla and Lapoule (2012), those goals are more likely to be met by actors focusing on the quality of the customer reception. The authors conclude that how the customers perceive the attitude and the service

approach of the staff is determinant for the customer satisfaction. Maadi et al. (2016) agree that the reception is an important factor since it contributes to customer trust.

It is not enough to simply look at the profit generated by the e-commerce strategy. A balance between the cost generated and the service offered through the delivery solutions must be reached to secure long term success (Tadei et al., 2016). One of the main problems with logistic services, especially when it comes to home deliveries, is the associated costs in combination with customers who are not willing to pay for the service provided (Goethals et al., 2012). Goethals et al. (2012) and Goebel et al. (2012) argue that true success of the e-commerce approach will be reached if an increased willingness to pay for the service is created among customers. Another success factor, closely related to product quality, is product price. Colla and Lapoule (2012) highlight the need for a proper price/quality ratio and both Bodini and Zanolli (2011) and Zwiebach (2015) argue that the price when ordering online should not be higher than in physical stores.

### **3.3.3. Digital infrastructure**

Several authors argue that the design of the web site contributes to the success of e-commerce (e.g. Colla and Lapoule, 2012; Salehi et al, 2012; Maadi et al., 2016). The visual design and the information design must be thoroughly thought through (Salehi et al, 2012), as well as the general layout (Ahrholdt, 2011). Bodini and Zanolli (2011) agree that the web site design has some impact on the e-commerce success, but argue that the structure of the web site is more crucial. The authors argue that the structure has a larger impact on purchasing decisions compared to the design of the web site. According to Bodini and Zanolli (2011), the structure should be as easy as possible to create a successful web site. This is in line with Goethals et al.'s (2012), and Colla and Lapoule's (2012) reasoning regarding how sales are generated by functions that are useful and easy to use because of the convenience and time saving. It is not only the structure of the web site that should be easy in its nature, also the navigation process should be simple and effective (Colla and Lapoule, 2012; Bodini and Zanolli, 2011; Salehi et al, 2012). Colla and Lapoule (2012) argue that the simplicity of a web site is essential since it contributes to the success of e-commerce. Hence, also the interface should be designed to facilitate easy usage of the web site.

There are two alternative ways of navigation that can be offered on a web site. Either navigation by categories or by a search field. Benn et al. (2015) argue that if the navigation process can be personalized the customers prefer to navigate instead of using a search field, even though the searching strategy is a more flexible way of finding items. The personalization aspect is important since the preferred navigation process differs between the customers. Moreover, most the participants in Benn et al.'s (2015) observation navigated through the special offer pages, a feature that Ahrholdt (2011) also highlights as critical for success. According to the Benn et al. (2015), the observed customer behavior can be explained by their recognition of the structure in physical grocery stores. Wilson (2016), on the other hand, argues that the search bar is a critical function for the e-commerce of food products. A key success factor is to develop a search algorithm that delivers exactly what the customers are looking for when using the search function (Wilson, 2016). Also, the checkout process should be as simple as possible, facilitating convenient shopping (PostNord, 2016a).

In the checkout process, PostNord (2016a) mention that the offered payment solutions should be thoroughly considered. PostNord (2016a) underline the need for analyzing customer preferences on each market since the preferred payment solution differs between countries and customer segments. It is always good to offer several alternative payment solutions (PostNord, 2016a). Overall, the ordering process should be as simple as possible to facilitate sales (Colla and Lapoule, 2012; Cagliano et al., 2014)

The information presented on a web site is another aspect related to digital infrastructure that several authors highlight as contributing to the success of e-commerce (e.g. Salehi et al, 2012; Bodini and Zanoli, 2011; PostNord, 2016a). The information provided on the web page should be accurate and up to date (Bodini and Zanoli, 2011). The information should also be complemented with product pictures since Benn et al. (2015) have shown that customers tend to look more at the product picture compared to the product information when deciding which product to purchase. Furthermore, PostNord (2016b) argue that it is essential for the success that all information on the website is presented in the local language. Customer service should also speak the local language fluently and be reached through a national phone number (PostNord, 2016b). Moreover, since the customers seek for convenience, the information should be presented in a way that makes it easy for the customers to find what they search for (Salehi et al, 2012). Moreover, Colla and Lapoule (2012) argue that the amount of information available should be enough for the customers to make an informed purchasing decision regarding what product to purchase based on the product quality. To enable proper presentation of information to customers, appropriate IT systems must be used. Cagliano et al. (2014) highlight the necessity of using software tools that are updated, to support the logistic model. Software tools should also be used to share real time information between supply chain members, and thereby re-engineer the logistics process (Cagliano et al., 2014).

Another success factor is to create a website interface which is as interactive as possible to make sure that customer expectations are met and to secure success of the e-commerce (Colla and Lapoule, 2012). The level of interaction can be increased by including possibilities for customer feedback, providing real time stock level information, to personalize the buying experience, and enabling customers to track their orders and follow the progress (Colla and Lapoule, 2012). Another way of increasing the level of interaction, and to increase sales, is to work with association product offerings (Wilson, 2016). Based on the products that the customer has already purchased; the underlying IT system should be able to suggest other products which may be of interest for the customer. For example, complementary products or products that other customers have bought in combination with the already selected ones (Wilson, 2016). Ahrholdt (2011) and Dhandel (2016) highlight special offers as a great potential to reach e-commerce success since it generates new customers, who have not tried to order online before.

**3.3.4. Identified success factors from previous research**

In Table 2 below, a summary of the identified success factors according to previous research is presented. The factors are grouped in the three areas, market related activities, operations related activities and digital infrastructure. How these factors are grouped together based on previous research is presented in Appendix 1.

*Table 2. Identified success factors based on previous research.*

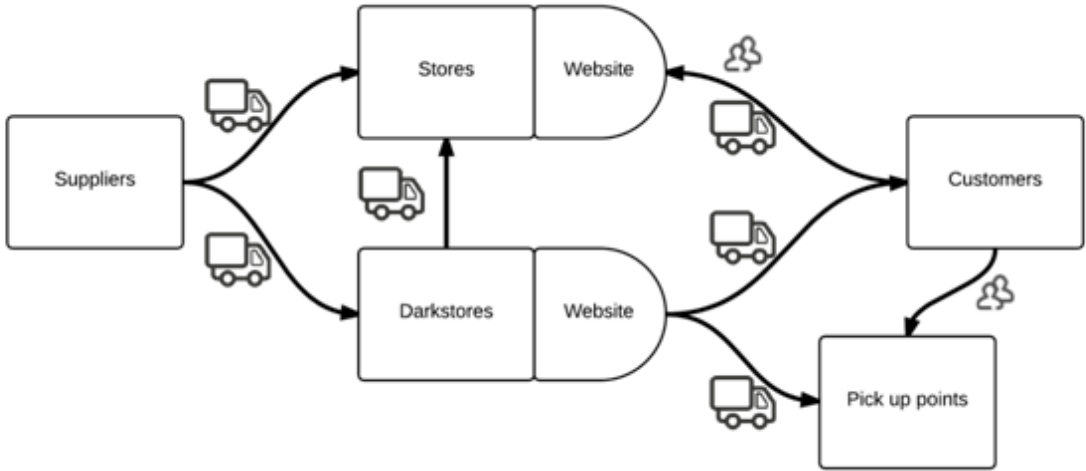
<b>Market related activities</b>	<b>Operations related activities</b>	<b>Digital infrastructure</b>
Customer impact delivery time	Efficient logistics	Website design
Transparent delivery information	Dark store	Easy order process
Customer behavior information	Several delivery solutions	Availability of information
Customer reception	Right quality, quantity, and time	Specially developed IT systems
Wide assortment	Fee for delivery	Personalized website
Create trust		

# 4. Empirical data

In the following chapter the empirical data collected for this study is presented. Interviews are conducted with representatives from ten different companies and in the first second each company’s view on successful e-commerce strategies are presented. In the second section, the success factors highlighted in the interviews are summarized and presented. The third and last section includes a presentation of a survey result showing which factors to prioritize among the identified ones.

## 4.1. Success factors according to e-commerce actors

In this section, the different companies and their views on a successful e-commerce approach are presented. The companies’ views are based on the interviewed individuals reasoning regarding context and success factors for e-commerce. Hence, the opinions of the individuals influence the presented success factors for each company but since the individuals are carefully chosen, see *section 2.1.2 Interviews*, the information is considered relevant and trustworthy. Two e-commerce experts are interviewed and an exception is made regarding the presentation of the success factors discussed. Since the companies the e-commerce experts represent are not present in the supply chain for food products, the experts’ views on successful e-commerce strategies will be presented from their own perspective and not from a company perspective, as in the other cases.



*Figure 4. General illustration of an e-commerce supply chain.*

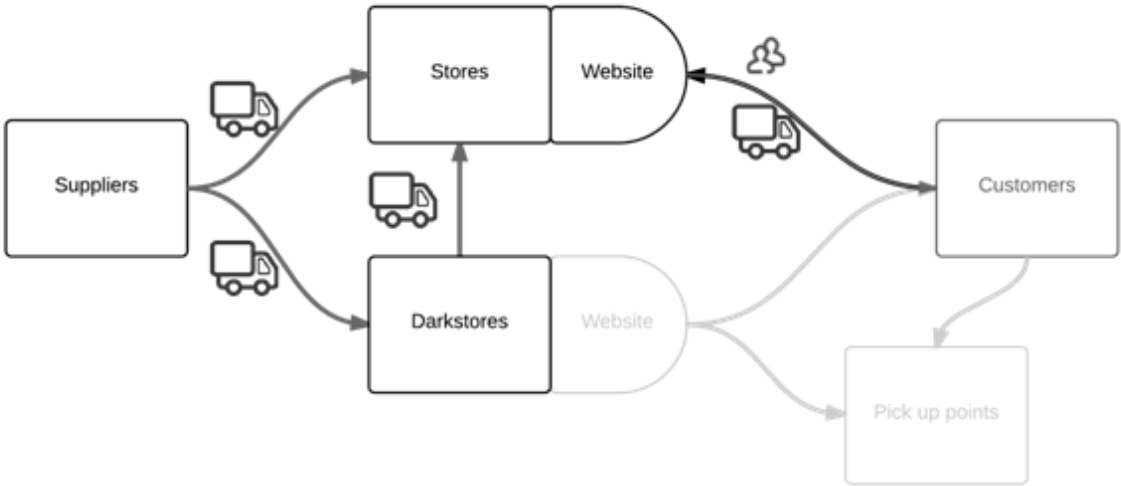
For each company, their supply chain structure is illustrated to give a deeper understanding of the context. A general supply chain illustration can be seen in Figure 4. The figure shows the different stages that can be included in the Swedish food actors’ supply chain. The website is included in the illustration to clarify whether the companies have internal development of the websites and underlying digital infrastructure or not, since it contributes to the understanding of their reasoning. Since all companies do not have the same supply chain structure, this will be shown by corresponding modifications in the supply chain illustration for each company. The lines that in each picture are black implies in that the operations are made internally in the



company. Grey means that the operation is in the company’s supply chain but is outsourced. If some operations are in a light color it means that they are not included in the company’s supply chain.

**4.1.1. ICA Group**

In this chapter, ICA Group is presented. Peter Muld is working as Chief Digital Officer at ICA Group and the information in this chapter is based on his reasoning. ICA Group started 100 years ago as a food retailer. In 2008, the first efforts were made to open an e-commerce but it failed since it was too early for the customers. Five years later, in 2013, new e-commerce investments were made and more retailers opened e-commerce as a complement to their physical stores. ICA offer Dinner Solutions, that is picked in a central warehouse, and Own Choice that is controlled in each store offering that service. ICA Group’s supply chain is illustrated in Figure 5.



*Figure 5. The supply chain of ICA Group.*

ICA Group mean that success can be measured through profit, and if they find something that generates profit they invest in it. To have the customer in focus and how relevant they are for the customers are also important measures of success.

**Market related activities**

Today, ICA Group’s local assortment is offered through the online channel as well. It is possible to offer local products since customers choose which store to shop online from. If the customer recognizes the e-commerce assortment from the assortment offered in their traditional store, there is a higher chance of buying online. ICA Group cover today both the countryside and bigger cities to give all their customers the possibility to use the e-commerce channel.

ICA Group stress that they must be aware of changes in customer behavior, how it is developed and transformed. Therefore, it is of essence to collect and analyze customer information. People are getting more used to use electronic devices, and the trend is that people socialize through mobile devices. This may have an impact on how people will eat in the future. Information regarding customer behavior is also important for ICA Group to make

sure that customers get the same experience through all channels. Independent of which delivery alternative the customers choose to use, ICA Group stress that it is essential to have fast deliveries. The deliveries should be performed the next day, at the latest, to stay competitive compared to shopping in a physical store.

ICA Group have recently tried a new collaboration to reach the ultimate convenience for the customers who purchase online. The collaboration partners are Glue and PostNord and the idea is to give customers the possibility to order food to their homes even if they are not there when it is delivered. Instead, the chauffeur has a digital key and can deliver the food bags all the way into the fridge.

*Success factors: Same local assortment online, Access to customer information, Awareness of changes in customer behavior, Fast deliveries*

### **Operational related activities**

For ICA Group, it is important to offer several delivery alternatives to meet all different customer needs. ICA Group argue that some customers prefer to pick up their food by themselves in a store while other customers prefer home deliveries. They have also implemented drive through at some stores to increase the convenience for customers who use the click and collect solution. According to Peter, it might not be convenient for customers if all their deliveries, of both food and other product categories, are delivered to their homes. He says that: “What happens if everything will be ordered online and delivered home, do we want that? Then we would need revolving doors”.

The food supply chain in Sweden is generally designed for retail and hence there are additional costs involved for e-commerce. The orders consist of 20-50 products and in addition there are temperature restrictions which implies in complexity. ICA Group stress that the last mile always involves high costs, but argue that the costs are extra high for food products compared to other product categories. It is necessary to cover the additional costs involved for the home delivery service. Hence, ICA Group argue that a delivery fee should be used. The logistics can be tightly connected with profitability for a company and a success factor is therefore to be efficient in this logistics area.

*Success factors: Offer several delivery options, Delivery fee, Efficient logistics*

### **Digital infrastructure**

ICA Group say that it is important to adjust the company’s website to the specific customer. However, ICA Group mean that they can improve how to use the information about the customer behavior and frequently purchased products. They have the information but do not know how to use it. One success factor mentioned by ICA Group is that everything on the website must feel relevant for the customers. Today, the company has the service that the customers’ favorite products are saved and it is therefore important that these products are relevant for the customer. Campaigns must also feel relevant and adjusted to the individual customer. A challenge ICA Group emphasize is that customers can easily change to a competitor’s website if they are dissatisfied and find it hard to navigate on the website. It is much easier to change to another website than leave all the food in a store and go to another.

There are therefore high requirements on the website. The order process should be fast and easy to use.

Success factors: *Promotions and recommendations that are relevant for the customer, Relevant to the customers, Fast and easy to order online*

#### 4.1.2. ICA Maxi Kungsbacka

In this chapter, another view of ICA will be presented. Joacim Lövgren is owner of ICA Maxi in Kungsbacka and the information is based on his reasoning. ICA Maxi Kungsbacka (ICA Maxi) opened their e-commerce during fall 2016. Today 53 of 80 ICA Maxi's have open e-commerce as a sales channel. Joacim sees the e-commerce as one way the customer can choose to buy their groceries. It is the same as the customers can choose to use scanning or the counter in the store, and sometimes the customers want to purchase online because there is lack of time to do it in the store. The Own Choice are picked in the store today and the Dinner Solutions are picked in a central warehouse and delivered to ICA. ICA Maxi Kungsbacka's supply chain is illustrated in Figure 6.



**Figure 6.** The supply chain of ICA Maxi Kungsbacka.

ICA Maxi is in an initial stage with their e-commerce and therefore the highest focus is to increase the volume and get as high efficiency as possible. They use different measurement for success such as share of sales, picked articles per hour, sales per working hour and profitability.

#### Market related activities

ICA Maxi highlight that proper marketing is essential for success during the current growth phase of the e-commerce. Marketing campaigns which have been performed have generated a lot of new customers to the e-commerce channel. Hence, internal marketing competence is a valuable asset.

One of ICA Maxi's biggest strengths is that they have the possibility to offer the same large and local assortment of products online as in the store. They have a system which makes it possible to have the local assortment online. Customer satisfaction is according to ICA Maxi

an important factor for success. If the customers have the possibility to buy the same products online as in the store they will be satisfied with the assortment. The assortment differs between different ICA Maxi stores since the assortment is adopted to local needs. Hence, it is also important for success to know the customers' needs. ICA Maxi should be aware that customers who purchase online may not have the same need as customers who prefer to shop in the physical store. To succeed with e-commerce, it is of high importance to listen to the customer needs and adapt the service to the identified needs. ICA Maxi say that they rather see that the customers purchase in the store than online because of the higher profits in the traditional channel. However, they see the need to offer e-commerce to meet the customer demand. Moreover, the quality of the products is very important. ICA Maxi mean that they should work a lot with all the requirements that exists for food products. There must be frequent controls and it is also important that the food purchased online is not old when it is delivered to the customer.

ICA Maxi argue that it is essential for success to let the customers decide the delivery time. However, ICA Maxi admit that they have some improvement possibilities in that area. For example, the time windows need to be shorter for the home deliveries to enable customers to choose a time that is suitable for them. In addition, it happens that the offered time windows for pick up in store gets overbooked and the customers are forced to choose another time slot. ICA Maxi would like to see a change in this area and find a solution where the customers can decide more freely when to pick up the bags.

*Success factors: Marketing competence, Large product assortment, Local products included, Customer satisfaction, Quality of products, Listen to the customer needs, Let customers decide the delivery time, Be aware of and adapt to changes, Know the different customers need*

### **Operations related activities**

Today all picking of Own Choice is made in the store. ICA Maxi mean that they can manage to handle the picking in store if the e-commerce is less than 10% of the sales, even if it is not the most profitable way. E-commerce implies in increased costs for ICA Maxi and hence, it is necessary to strive towards an efficient supply chain. ICA Maxi charge 69 SEK as a picking cost but it does not cover the real cost since a good picker can only pick two orders per hour.

According to ICA Maxi, the picking personnel must be specialized in picking online orders. The time it takes varies a lot between different pickers, and a major reason is that a picker must be very familiar with the store to find the right articles quickly. ICA Maxi discuss that the most optimal solution for picking would be to have a warehouse, that covers for example all stores in Gothenburg, designed for online orders.

ICA Maxi offer two types of delivery alternatives. Click and collect and home deliveries. The click and collect solution is the most successful choice for ICA Maxi. Around 98% of all online customers choose to pick up their bags at the store. The main reason most people choose click and collect may depend on the currently long-time windows offered for the home delivery alternative. Hence, the customers may find it more convenient to pick up the bags themselves. The home deliveries are today used by just a few customers per day and ICA

Maxi have a contract with a distributor that delivers the food bags. Even if this small volume makes it expensive for ICA Maxi, they highlight the importance of offering home delivery as an option to meet all customers need. Sometimes one alternative is suitable and sometimes another option is better, the delivery solution should be designed to be as convenient as possible for the customers. Having more than one option is something ICA Maxi mean is successful for e-commerce. Independent of which delivery alternative the customer chooses to use, it is critical for success to deliver on time. ICA Maxi mention that if a customer has chosen to pick up their bags in the store at 5 pm, then the picking must be done before 4 pm to inform the customer by a text message that the bags are ready for delivery.

ICA Maxi highlight another factor that is important for the success of e-commerce, which is that the price must be good in relation to the customer value. It does not have to be cheap, but the price must be good compared with what you get. ICA Maxi take the same price for their products online as in the store but add a fee for picking and home delivery, then the customer can value if it is worth it or not. Sometimes it may be worth it, sometimes not.

Success factors: *Specialized picking personnel, Click and collect, Home delivery as an option, Offer several delivery options, On time deliveries, Efficient dark store for online channel, Good price in relation to the customer value*

### **Digital infrastructure**

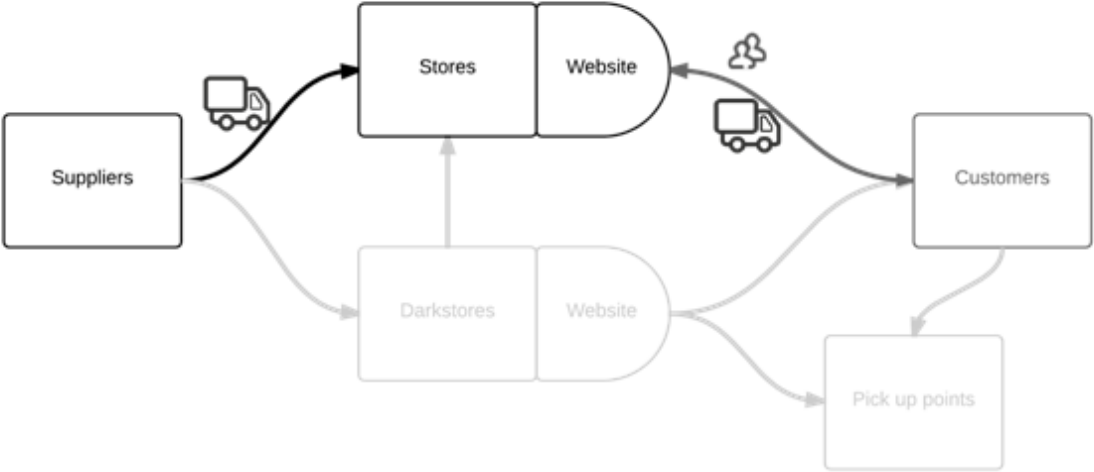
When a customer enters a store, the store is designed for enabling inspiration. The website must be developed to enable inspiration through that channel as well. The navigation should be clear and easy to understand and the products easy to find. ICA Maxi mention an idea to create a virtual environment on their website which is a copy of the physical store. The idea is that customers purchasing online would be able to navigate in the same manner as in the physical store and thereby strengthen the integration between the sales channels and make it easy for their customers to find what they are looking for. ICA have a common platform at a central level that was launched one year ago. All ICA retailers use the same platform and pay a fee for a subscription and for every customer. Hence, ICA Maxi do not have the possibility to make major changes in the digital infrastructure but to give suggestions to ICA Group.

Success factors: *Easy to find products, Website designed for enabling inspiration*

### **4.1.3. Axfood**

In this chapter, the company Axfood is presented. The information is based on an interview with Anders Agerberg, who has been working with logistic issues at Dagab for more than 40 years, including 5 years as CEO. Dagab is a food wholesaler owned by Axfood which deliver food to Willys, Hemköp and Tempo. Willys are owned by Axfood, and Hemköp are partly owned as well, which is very beneficial for the supply chain according to Axfood. The wide supply chain control gives good possibilities to adopt the business to the increased e-commerce. Axfood have recently bought the online actor of food products Mat.se, an acquisition which will boost the expansion of e-commerce for Axfood. Axfood mean that it is critical to be aware of what has happened in the past when designing an e-commerce approach for a company. The e-commerce effort Axfood did in 1999 lasted for only one year since the

logistics generated too high costs. Hence, Axfood argue that major difficulties for e-commerce are related to logistics costs. The current supply chain of Axfood, excluding the acquisition of Mat.se, is seen in Figure 7.



**Figure 7.** The supply chain of Axfood.

Axfood do not measure the success for the e-commerce channel separately, but the overall success of the company. Because of shared costs between the traditional channel and the e-commerce channel, it is not easy to know the e-commerce performance. For example, fixed costs for buildings and costs for waste are shared between the channels. However, the goal is to reach a profitable solution for e-commerce of food.

**Market related activities**

Marketing is critical for success, and Axfood see great possibilities in this area because of the different brands within the company. The brand of Willys, Hemköp and Mat.se can be used to target different customer segments. Even though it is more effective to keep separate brands in the current situation, Axfood mention that alternative strategies are analyzed. Since marketing is a success factor, they would like to improve in this area. Axfood mean that Mat.se have a very successful way of marketing their business which will be a good complement to Axfood’s current marketing competence. Axfood do also discuss the importance of innovatively. The customer needs must be met at the same time as profit is generated to the company. Hence, the company needs to continuously search for new innovative solutions to improve their e-commerce business. Another factor which is critical for success is to offer high quality products to the customer. This is especially important when selling through the online channel since the customers do not choose what products to pick themselves. Moreover, the customers should be able to find real time information regarding their deliveries.

Success factors: *Marketing, Innovatively, Real time information, High quality products*

## **Operations related activities**

Today, Axfood perform picking of online orders in existing stores. However, they argue that if only low volumes of online orders are included in the traditional operations, very low costs will be generated. There will be almost no additional fixed costs and in addition, the waste from the store will be reduced. Hence, it is a cost-efficient solution to perform picking in stores for low volumes, but not even possible if the volumes are too high. Axfood understand the need of a new strategy for picking already today, because of the increasing volumes. The company sees several benefits with the dark store concept. Picking in a dark store, which is a separate warehouse dedicated for the online channel, will not disturb customers' shopping in physical stores. In addition, it is possible to get deliveries from suppliers with exactly what has been ordered by the customers which reduces the waste significantly.

Axfood see greatest potential in offering home deliveries to their customers. They argue that more customer value is generated with home deliveries compared to letting customers pick up their groceries in a store. However, they underline that there are better possibilities to reach profitability with pick up in stores and hence it is of interest to develop both solutions. There are a lot of requirements to fulfil when performing home deliveries of food products, and Axfood stress the criticality to deliver as promised. Axfood point out that there are several actors on the market who can fulfill the requirements needed to deliver food products but the costs involved can be relatively high. The high costs for outsourcing this service is a major reason some food actors have chosen to invest in an own fleet of delivery vans. Since the chauffeurs are the only contact point with customers when the groceries are delivered to customer's home, Axfood mention that service minded chauffeurs contribute to success. Unfortunately, Axfood do not have the volumes enough to put such requirements on their external providers in the current situation. To gain high density in home deliveries, and hence high fill rate in the delivery vans, Axfood discuss the criticality to be able to steer deliveries towards certain time windows. The even more critical aspect is that the volumes must increase to make it possible to utilize the delivery vans to a higher extent. In the current situation, the vans are unutilized several hours per day or drives with a lot of excess capacity. If Axfood could steer deliveries to certain time windows, they could get more efficient route planning and a more cost-efficient logistics. Axfood discuss that it might be necessary to change customer behavior to make that possible.

Axfood highlight covering costs as a critical success factor. It is necessary to make the e-commerce profitable and therefore the customers must pay for the additional service provided. There are alternative ways to make sure that the additional costs for distribution are covered. Axfood argue that it makes sense to offer free deliveries after a certain order volume of for example 1000-1500 SEK. If the food online has the same price as in store, there must be a fee for picking and for delivery. Another alternative is to include other product categories with higher margins in the online sales, like Amazon have done. While food products commonly have a margin around 18-30 %, other product categories can have margins up to around 70-80%. By including such products, there might be better possibilities to gain profitability.

Success factors: *Dark store, High utilization of the delivery vans, Steer deliveries towards certain time windows, Service minded chauffeurs, Home deliveries, The company offers several delivery alternatives, Cover distribution costs, Route planning, Pick in store up to a certain volume, Deliver as promised.*

### **Digital infrastructure**

The IT systems used for the e-commerce channel are determinant for the success according to Axfood. Moreover, Axfood say that Mat.se are very good in this aspect, which is another reason behind the recent acquisition. To have own IT development, enabling quick updates, is essential for success. The IT development process is much faster at Mat.se compared to Axfood, and therefore Axfood see a great potential in utilizing Mat.se's knowledge and processes in this area. There are also critical success factors related to the website. It should be easy for the customers to navigate on the website. The whole order process should be smooth, fast, and easy for the customers. Moreover, Axfood highlight the importance of personalizing the website, for example through suggesting products based on previous orders, or suggesting complementary products.

Success factors: *Own IT platform, Easy to navigate on the website, Personalized offerings on the website, Suggestions on complementary products, Update IT systems quickly*

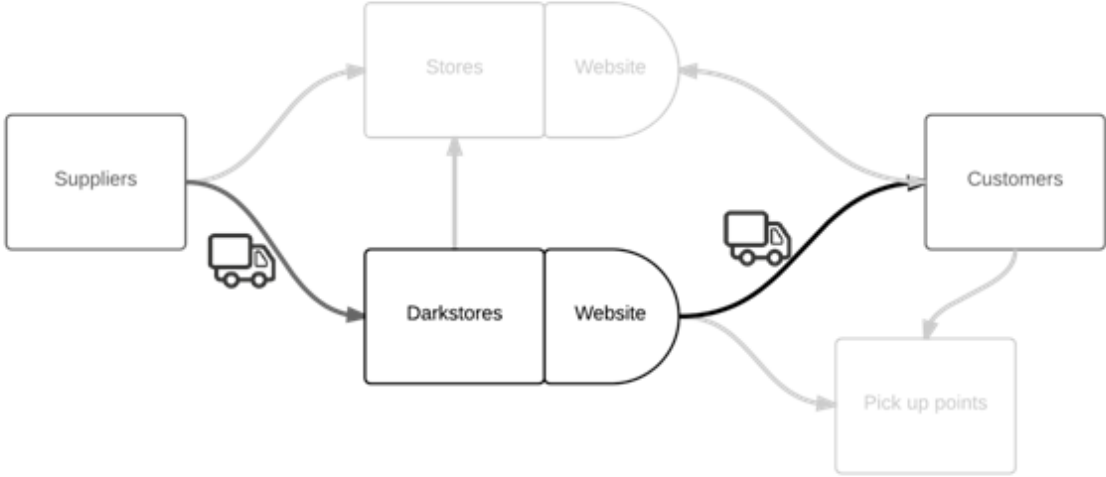
#### **4.1.4. Mat.se**

In this chapter, the e-commerce company Mat.se is presented. The information presented in this chapter is gained from an interview with the CEO of Mat.se, Måns Danielsson. Mat.se were founded in 2011 and the first year was spent on building the digital infrastructures internally and looking for a suitable location for the warehouse in Gothenburg. In august 2012 Mat.se welcomed their first customers. Since then, the company has grown bigger, both in Gothenburg and in Stockholm and Malmö where they have established businesses as well. Mat.se's supply chain can be seen in Figure 8. In 2017, the company was acquired by Axfood. It is not easy for Axfood to change business model, but Måns mentions that Mat.se will have a positive effect on their e-commerce development. Axfood have the right supply chain structure to facilitate such development, but it could have been hard for them to revolutionize without external input.

Mat.se is focusing solely on e-commerce of food products, so no physical stores are used in their sales channel. Customers can buy Own Choice or Dinner solutions, but in difference to other companies offering Dinner Solutions, customers can switch recipes if they like to. Mat.se has a collaboration with Kokaihop.se and Spisa.nu, which makes it possible for customers to choose between many recipes. All orders are delivered to customer's home or into their cars. The total driving distance becomes shorter for Mat.se compared to if their customers would drive to the store individually, which is good from a sustainability perspective. Mat.se highlight that their concept is sustainable in several other aspects as well. For example, their customers experience that they get less waste since it is easier to plan their meals when shopping online. Moreover, less food waste, around 0,5% of the turnover, is generated from Mat.se's operations compared to the average waste from physical stores which is at least 3 % of the turnover. One reason Mat.se can have such low volume of waste is that



they only purchase fresh food in quantities which they plan to sell the next day. The waste from Mat.se is sent to Stadsmissionen since the food is sorted out even before it is too old to use because Mat.se want to offer only very fresh products to their customers.



**Figure 8.** The supply chain of Mat.se.

Mat.se use several KPI’s to measure the success of the company. Mat.se are striving to reach profitability and keep track of the development continuously. Currently, a lot of focus is on growth and the company is therefore investing in a lot of marketing to get new customers even though it might harm the profitability in a short-term perspective.

**Market related activities**

Mat.se aim at being recognized as a leading company for e-commerce of food products. The company highlights that to reach that goal, it is necessary to offer deliveries the next day or even the same day as customers place their orders. Customers demand the deliveries to be as fast as possible. The customers should not experience any obstacles of purchasing from Mat.se, and hence Mat.se do not want to affect or even influence the delivery time the customers choose. Even though the delivery times chosen may imply that a delivery van only has one order to deliver, it is worth it according to Mat.se, since the customer requirement is met.

The assortment is also a critical factor for success. Mat.se have great opportunities to offer a wide product assortment, with relatively low associated costs, since they only order what they have already sold. However, Mat.se argue that customers do not want to have too many choices either, so it is important to find the right balance. One advantage with the e-commerce approach compared to traditional stores is that customers more easily can find special assortments online through for example sorting out products which do not contain gluten. Mat.se discuss the problem most actors offering e-commerce of food products are facing, which is too low average order value. The average order value today is 900 SEK for Mat.se, but if it would have been around 1500 SEK the company would have been profitable. The reason is that there are many fixed costs per order such as order cost and cost for delivery and invoicing. Mat.se mention that it might be of interest to include other product categories to

enable such increase in average order value. Mat.se argue that the product quality is another factor closely related to success. The tricky part is that while the product quality is better when purchasing through the online channel, the product quality is also a major reason customers are hesitant to use e-commerce. Since the customers are generally worried to get unsatisfactory product quality it is critical for Mat.se to always deliver high quality products that are fresh, otherwise they might risk getting fewer customers.

For Mat.se, innovatively has always been critical for success. New solutions are continuously tested and evaluated. For example, Mat.se were the first company in the world delivering products to the trunk of a car. Customers can order food from Mat.se and get the food delivered into their car the next day, to a specified area where the car is parked, within a period of 2 hours chosen by the customers. The food is specially packed to remain cold for several hours. Another innovative solution Mat.se have recently tested is to deliver the food into customers' homes, or even the fridge, when they were not at home. The doors were opened by digital keys and the result of the test was very good according to Mat.se. The 50-60 customers who participated in the pilot project were 100 % satisfied and hence, this is a solution which Mat.se will implement in the future. Måns comments the importance of innovatively as follows: "The reality is unpredictable and not possible to affect. Therefore, it is important to adopt truly quickly."

*Success factors: Product quality, Balance between wide assortment and not too many choices, Test innovative solutions, Free choice between time slots for delivery, At latest next day deliveries.*

### **Operations related activities**

In current situation, Mat.se have manual processes for picking in their central warehouses. The effectivity can be considered high according to Mat.se, but automation would lead to increased efficiency. However, Mat.se do not have the volumes it takes to motivate an investment in automation. Mat.se highlight that the investments related to automation is very high and even Ocado, which is a leading e-commerce actor for food products in United Kingdom have invested too much in automation without generating the effectivity aimed at. Mat.se discuss the rapid technology development and mention that if it would become profitable even with a relatively small volume, they will invest in automation.

Regarding deliveries, Mat.se are focusing on home deliveries to their customers. Mat.se argue that it is critical for success to always deliver on time. If there is a risk for delay, extra delivery vans can be added to make sure that the products are delivered within the given period. In addition, the right quality and quantity of products must be delivered to reach success. Mat.se are continuously striving to minimize the errors generated in the picking process since every order often consists of 30 rows and hence customers easily get affected by those errors even though the frequency is low.

Another success factor related to the deliveries is to have service minded chauffeurs, since they are the ones who meet the customers in person. The criticality of the customers' reception is one major reason Mat.se have chosen to have an own fleet of delivery vans. Another reason for establishing an own fleet was that the costs for having such flexible fleet

was expected to be lower if it was made in-house. However, that was not the case according to Mat.se since the deliveries have turned out to be relatively levelled out during the week.

Success factors: *Home deliveries, Automation, Efficient picking in dark store, Service minded chauffeurs, Deliver on-time, Deliver right quality.*

### **Digital infrastructure**

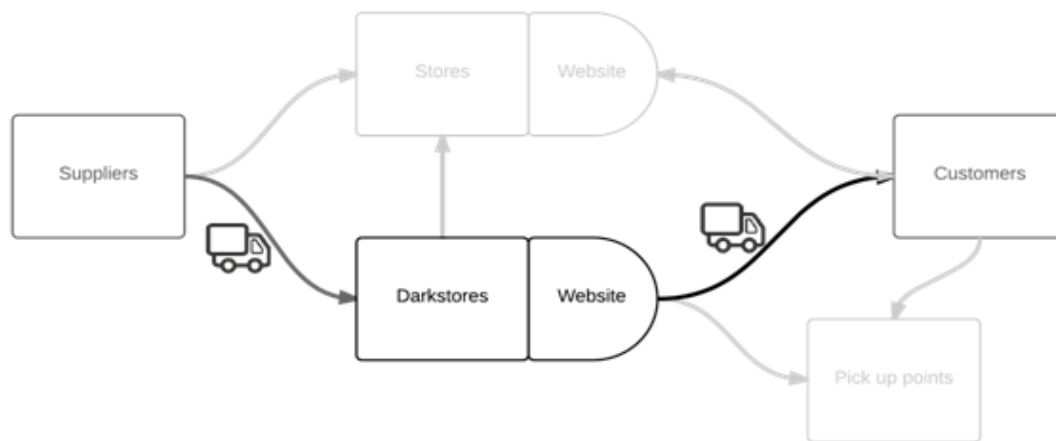
Mat.se have always been focusing a lot on the development of their digital infrastructure. Their internal IT development has contributed to their success, since they are able to change their processes at the same time as the system is updated. Mat.se would like to help their customers to purchase better. Hence, the IT system is critical for them and the aim is that the system should know exactly what each individual customer need to buy without any new input from the customer. Currently, the system handles and suggests some products which can be identified to be purchased on regular basis for each individual customer.

Mat.se are striving to offer an easy and smooth order process including for example an easy payment solution and access to several relevant navigation and sorting possibilities. Customers can for example choose to only show the ecological assortment, to show the cheapest products first, to choose recipes and get the required ingredients or to show the CO<sub>2</sub> emissions caused by each product. The key is to offer a website which is personalized for each customer. Hence, Mat.se are striving to only show sorting and navigation possibilities that are relevant for the customers. So, if the customer is interested in training, Mat.se could calculate calories for that person. But on the other hand, if the customer is not interested in such things, that information should not be presented. Each customer should have its unique and personalized version of the website.

Success factors: *IT system forecasting individual customer needs, Filtering and sorting of the website content, Personalization of the website, Own IT system development, Easy to find, Easy to pay.*

### **4.1.5. MatHem**

In this chapter, the online based company MatHem will be presented. The information is based on an interview with Sandra Pucar, CEO Assistant at MatHem. MatHem were founded 2006 with the idea to give customers more free time in their daily life. They provide only e-commerce, so no physical stores, and offer Own Choice and Dinner Solutions to the customers. Less food waste is produced, compared to the waste generated by actors having physical stores, since MatHem often order products from their suppliers based on existing customer orders. MatHem use a lot of channels for communication, such as their website, app, newspaper, YouTube channel and Facebook. MatHem are marketing themselves as the biggest online store in Sweden. MatHem's supply chain structure is illustrated in Figure 9.



**Figure 9.** The supply chain of MatHem.

The company sees themselves as being in the growth phase today and means that they should focus on generating profit to further improve the business and become successful in a long-time perspective. Success is therefore today measured through different KPIs. Some examples of KPIs for MatHem are conversion, new customers, new memberships, churn, how many times the customers purchase from MatHem, how much the customers purchase for and the feedback MatHem receives from the customers.

### **Market related activities**

MatHem mean that one reason they are successful is because of their genuine focus on the customers and care about them. They want their customers to feel that the quality is high and that MatHem are a safe company the customers can trust. MatHem believe that they have become the biggest actor of e-commerce for food products because of their devotion to their customers and high quality of their products. It is important to listen to the customers and adapt the service after them. Therefore, MatHem offer as wide assortment of ecological products as possible. In the current situation, the customers purchase 25 % ecological products.

To be flexible in the deliveries is very important, and it is regarded as a success factor to let the customers choose when and how they want to receive their orders. MatHem mean that many customers choose to purchase from them since the company stands for quality, in everything from their products to the deliveries. One challenge for MatHem is the initial skepticism from people that have not tried to buy food online yet. The people often want to see and touch the food they buy, especially the fruit, and therefore the quality of the fruit is even more important. Marketing has a high priority for MatHem, even if it is very costly. If they would stop put resources into the marketing they would generate profit. However, it is not an option to quit with marketing today since they are in the growth phase and needs to attract new customers. MatHem are not afraid of trying new things and make changes. Sandra says that “nothing ventured, nothing gained”, which is a gnome that MatHem follow. MatHem observe what other actors do and how the other actors develop their businesses, but they rather focus on how they can improve their own service in an innovative manner.

Success factors: *Customer focus, Quality, Marketing, Innovatively, Delivery flexibility*

### **Operations related activities**

MatHem offer home delivery in 20 cities in Sweden today for a fee of 0-29 SEK. They have an additional fee of 80 SEK if an order must be picked during Sundays. The time fence, and if other customers in the nearby has the same delivery time, have an impact on the fee charged for the delivery. The customers in Stockholm and Gothenburg have also the opportunity to pick up their food at pick-up points, in a van that is parked at a certain place one hour every week. MatHem mean that home delivery is what the customers want. It is most convenient for the customers with home delivery, they do not have to drive to pick up the food. MatHem use pick-up points as an alternative if the customers experience the home delivery as too costly. According to MatHem, it is an environmentally friendly option to purchase food products from them and get the bags delivered to the home. Every delivery truck loads 20-30 orders and hence, one delivery truck is equivalent with 25 households driving from their homes to the store and back again.

Delivery accuracy is very important for MatHem, the customers need to trust that they will receive the food when they expect it. MatHem could not find a suitable external provider that could meet their requirements, therefore have they invest in own vans used for the deliveries. They do also perform the picking operation internally. They have three warehouses designed for e-commerce of food products, located in Gothenburg, Stockholm, and Malmö. MatHem stress that the complexity for picking food products is higher compared to other e-commerce products. The reason is that e-commerce of other product categories often results in orders of 2-3 products, while orders of food products commonly consists of 40-60 products. The high complexity requires relatively high investments in systems and personnel for picking.

Success factors: *Home deliveries, Delivery accuracy, Warehouse designed for picking.*

### **Digital infrastructure**

It is regarded as a success factor to have internal competence developing the digital infrastructure. Currently, Mathem have 20 employees on full time working with IT development to constantly improve their website and underlying systems. The website must be user friendly, because the website is the tool the customers use to order their food. It is the only contact the customers have with MatHem except the moment of delivery, which is usually quite short. Since convenience is the major reason customers purchase online, MatHem highlight that it is of high importance to have a user friendly website. If the website would not be user friendly it can be experienced as more complicated to purchase online than in a store, and the customers will continue to purchase their food in physical stores. Hence, it is critical to continuously improve the user friendliness of the website to facilitate a change in customer behavior.

Success factor: *Internal IT system development, User friendly website*

#### 4.1.6. Middagsfrid

In this chapter, the company Middagsfrid is presented. The information presented is based on an interview with Kicki Theander, who founded Middagsfrid in year 2007. Middagsfrid offer e-commerce of Dinner Solutions and have no physical stores. The differentiation strategy is to offer high quality products with focus on ecological food. The company uses several communication channels, for example social networks such as Facebook, Twitter, and Instagram. Middagsfrid's supply chain is illustrated in Figure 10.



*Figure 10. The supply chain of Middagsfrid.*

Middagsfrid measure success in terms of increased growth with sustained, or improved, profitability. Increased market share is also highly connected to success. In addition, Net Promotion Score and customer satisfaction are important KPI's to use to keep track of the development.

#### **Market related activities**

Middagsfrid offer Dinner Solutions and highlight product quality as a critical success factor. It is important that the food tastes good, is ecological and fresh. Middagsfrid aim at surprising the customers with new and inspiring Dinner Solutions in each delivery. It is important for Middagsfrid to always develop their service to the customers. To constantly surprise the customers with new changes in the service is a success factor according to Middagsfrid. The changes could be to have new knowledge, new products, the quality of the photos in the recipes and so on. The company adds value through helping customers decide what to cook for dinner and by giving them inspiration, variation, and new knowledge. According to Middagsfrid, the product quality is essential since if the customers like the taste of the food, customers will be loyal and contribute to the growth of Middagsfrid. For Middagsfrid, loyal customers who buy their products over a long period of time are truly valuable.

Another success factor for Middagsfrid is to collect and analyze information about customer behavior. The company continuously tries new solutions on their website and analyze the impact on customer behavior. For example, changes in the texts and buttons are made to improve the design of the website and the navigation possibilities based on conversion rate. Moreover, feedback gained from social media such as Facebook and Twitter is used as a

valuable input to adopt the services offered, and the presentation of those, according to customer needs. As a continuous feedback system, Middagsfrid collect customer rates on all Dinner Solutions they deliver. To have good marketing competence is a success factor. To be able to reach the customers, the company should have short message, right choice of pictures, use videos for marketing etc. Which channel for marketing that is the best is hard to say because it is changing all the time, being updated with how the customers prefer to receive information is therefore important.

Middagsfrid offer home deliveries to their customers. When designing the home deliveries, Middagsfrid are focusing on offering frequent deliveries. To be able to increase the frequency, it is necessary to get more customers in areas where Middagsfrid are already operating in. Middagsfrid are striving to meet customer requirements regarding delivery time. However, there must be a balance between cost and customer service and hence it is currently not possible to meet all customer requirements regarding preferred delivery time.

*Success factors: The food must taste good, Every delivery must be a surprise and feel fresh, Ecological food, Fresh food, Analyze information about customer behavior, Frequent deliveries, Develop the offering to the customer, Marketing.*

### **Operations related activities**

One basic factor that is needed for success according to Middagsfrid is to deliver the right quantity and right quality. If a company are not able to do it, it will be hard to keep the customers. The home deliveries offered to the customers, see Middagsfrid as a success factor. Middagsfrid see several benefits with home deliveries as delivery solution and do not aim at using pick up points. Pick up points imply complexity and risks according to Middagsfrid, since some customers may not pick up the Dinner Solutions ordered. Then it will be problematic to handle the return flow, a flow which do not exist for home deliveries. Hence, Middagsfrid see it as a success factor to only offer home deliveries for their customers. However, they have chosen to outsource the home deliveries to focus on their core competences.

*Success factors: Deliver right quantity and quality, Home deliveries.*

### **Digital infrastructure**

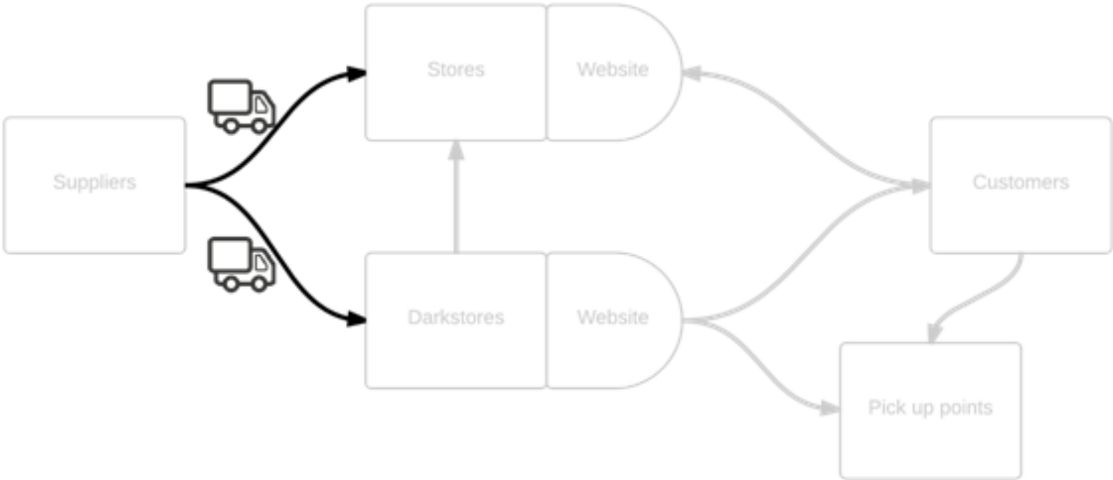
To make it possible to offer the right type of campaigns, Middagsfrid highlight the importance of having a good IT system. Having a good IT system developed for e-commerce is also required to be able to operate different kinds of customer segments in different ways. The IT system should be tailored for each business that it is used in.

*Success factors: Specially developed IT systems*

**4.1.7. DB Schenker**

The information presented in this chapter is based on an interview with Magnus Markgård and Andreas Anderzon who have been working for Schenker, in various positions, for more than 10 years. Magnus has experience from digital infrastructure, business development, e-commerce and is currently working with business intelligence and marketing. Anders has been focusing on the network of pick up points, market related aspects, e-commerce and most recently larger projects related to logistics. Andreas current position at DB Schenker is as a Customer Solution and Product Manager.

Within the e-commerce segment, DB Schenker offer total solutions to their customers including everything from the purchasing process to distribution. However, since it is much focus on price, customers can pick modules of their total offering which suits them the best. Generally, Schenker have most B2B customers, but their B2C segment is growing as well. The biggest difference between the two segments is the last mile to consumers. DB Schenker offer home deliveries to consumers but their largest focus is on pick up points. DB Schenker have a large network of pick up points in Sweden and daily deliveries to almost all locations. Hence, it is quite a small additional cost, and a very limited environmental impact, to add new goods to the existing flow. DB Schenker perform transportation of food products, but only B2B, which can be seen in Figure 11 where DB Schenker’s involvement in the food supply chain is illustrated. They have not accepted any request of handling e-commerce of food products for the B2C market. The reason is the extra requirements for handling food regarding for example temperature and packaging. Currently, DB Schenker do not have delivery vans which fulfill those requirements for such small volumes which exists on the B2C market. Traditionally, DB Schenker invest in markets where they see potentials to gain large volumes, and become profitable. The B2C market for food product is not there yet. DB Schenker argue that if the volumes go up, it might be of interest for DB Schenker to enter that market. One reason DB Schenker do not invest in markets before there is a proven demand is because of the price pressure, and hence the risk of generating bad result because of innovative solutions which are not profitable.



*Figure 11. DB Schenker’s involvement in the supply chain for food products.*



For DB Schenker, economic result is in focus. Hence, profitability is the major measure of success. Because of the price pressure in the branch DB Schenker are operating in, the customer relationship is very much valued. Hence, generating profit with loyal customers characterizes success.

### **Market related activities**

Customer purchase online since it is convenient and then it is of high importance that the deliveries are convenient as well. According to DB Schenker they have improvement possibilities in this area. Since DB Schenker's major customers segment is B2B customers, the processes are adopted to deliveries during day time. For consumers on the other hand, it is often more suitable with deliveries during evenings, which comes at higher costs with DB Schenker's current processes. Hence, DB Schenker are considering rethinking in this area and move volumes from daytime to evenings. By doing so, high volumes during a limited period should be delivered and hence, the costs might not be higher compared to the current solution because of high fill rate in the delivery vans.

Another trend DB Schenker have spotted is that there is an increasing demand for insight in the delivery process among consumers. Consumers would like to be able to track and trace their goods and know exactly when it will be delivered, preferably already at the point of ordering. To be able to provide that information, DB Schenker need additional information from the e-commerce actors. Because often, the e-commerce actors do not share information regarding how long time it will take until the product is packed and ready for delivery. Therefore, DB Schenker do not know when they will be allowed to pick up the goods, and hence it becomes tricky to predict delivery time to the consumer. There are IT related challenges as well, since the IT systems must communicate with each other to present the forecasted delivery time already at the point of ordering.

Success factors: *Evening deliveries as standard, Transparency regarding delivery date when ordering, Track and trace online.*

### **Operations related activities**

The large network of pick up point has contributed to DB Schenker's success. Pick up points are also what DB Schenker believe in the most to be successful in the future, but they see a need of complementary delivery alternatives. Home deliveries are becoming increasingly interesting for consumers, and hence DB Schenker would like to be active in that market as well. DB Schenker stress the need to make sure that the additional costs that arises from the home delivery solution must be covered if that delivery alternative should be offered. They argue that it should be possible to take a delivery fee for some delivery alternatives, to cover the costs, as long as one free alternative is offered to the consumers. It is important that the business model is economically sustainable in a long-term perspective.

For food products, DB Schenker argue that it is critical to offer several delivery alternatives as well. Customers should be given the possibility to choose a solution that suit them. Actors on the market for B2C e-commerce of food products must also realize that the logistics aspects are determinant for the long-term success. Moreover, the actors should avoid picking in stores, since that generates too high costs. DB Schenker also discuss the possibility to

consolidate deliveries from several e-commerce actors and deliver all packages at once to the customer's home. However, they highlight that such consolidation must be performed on request by the customer, since it most likely will imply that some of the packages will be kept on hold at a cross docking point to be consolidated with the other packages.

Traditionally, quality in terms of on time deliveries and no damaged packages have been viewed as a success factor. DB Schenker underline that quality is still an important factor, since it is tightly connected with customer satisfaction, but discusses that it is more of a hygiene factor today. It is more important to give customers a feeling of flexibility and to offer the right alternatives of delivery solutions. Moreover, since customer satisfaction is prioritized by DB Schenker, a lot of effort have been focused on educating the chauffeurs. The chauffeurs need to be service minded and a good at customer reception since they are often the only physical interface with the customers.

*Success factors: Pick up points, Home deliveries as an option, Coordinated deliveries requested by the customers, Flexible delivery solutions, Several delivery options, Avoid picking in store, On time deliveries, Service minded chauffeurs, Cover cost for deliveries.*

### **Digital infrastructure**

Two success factors related two digital infrastructures were highlighted by DB Schenker. The first success factor is to have a clear website interface where customers easily can get an overview of the offered services, delivery alternatives etc. The second success factor is to make the deliveries personalized, in the same manner as e-commerce actors are focusing on suggesting personalized product offerings to individual customers. Customers should be given 2-3 alternative delivery solutions which matches their individual profile. For example, historical data can be used to identify which delivery alternatives that are most relevant. It is important to not suggest too many alternatives since it becomes harder for the customers to get an overview and hence to decide.

*Success factors: Clear website interface, Personalized alternatives.*

### **4.1.8. DB Schenker Logistics**

DB Schenker Logistics is a 3PL and offer total solutions for logistics. In this chapter material from an interview with Mikael Eisner will be presented. Mikael is Managing Director at DB Schenker Logistics and has a lot of knowledge about e-commerce due to the increasing volumes from e-commerce the company needs to handle. DB Schenker Logistics have today no e-commerce of food products, but about 7-8 years ago Schenker AB had refrigerated warehouses called Coldsped, which were sold it to Bring. They do not want to have their own refrigerated warehouse anymore due to the high costs and high investments needed. They have been into that business area and know what it costs, so today they have no plans to go back into that market again. Today, DB Schenker Logistics handle food but not refrigerated and frozen. That supply chain flow is illustrated in Figure 12. Mikael has seen a transformation in how they need to work due to the increasing e-commerce. E-commerce requires more packaging, compared to sending big boxes to the stores. The products connected to e-commerce must be packed in a special way, it must look good and must be

clean. This packaging process requires a lot of time. According to DB Schenker Logistics, if they cannot see that an investment will generate in profit they will not invest in it. Profitability is therefore in focus for success.



**Figure 12.** DB Schenker Logistics’s involvement in the supply chain for food products.

### Market related activities

Pick up points are a good alternative to home deliveries because the customers may not want to adapt to the time the deliveries are expected to come. The time windows are crucial for home deliveries. DB Schenker Logistics see that a time window of maximum 2 hours as reasonable, it should not be hard to solve. The customers are according to DB Schenker Logistics sensitive to get the delivery fast. DB Schenker Logistics mean that the food actors are good at this and actors within other businesses need to adapt. The customers need to have the possibility of following their orders online and hence, good traceability is a factor that according to DB Schenker Logistics is needed for success. If something happens, if the package will arrive earlier or later, the deviations need to be reported to the customer. To have active deviation notices is another factor DB Schenker Logistics highlight as crucial.

Success factors: *Maximum 2 hours’ time slots, Fast deliveries, Track and trace online, Real time deviation notices*

### Operations related activities

According to DB Schenker Logistics, if pick up points are used, the customers do not need to be at home during a certain period and is therefore a success factor. However, home deliveries can be good as an option if the transportation companies are good at keep the time promised. Several actors offer free delivery but DB Schenker Logistics do not see this as sustainable. The problem is that the customers do not want to pay for the deliveries so ways of rationalizing away the transportations costs are therefore needed.

In the distribution center in Gothenburg, DB Schenker Logistics have combined automated and manual processes, while the processes in the warehouse located in Stockholm is fully automated. To use automation for some processes is successful according to DB Schenker Logistics. Then some operations can be eliminated to increase the efficiency but it does not generate as high costs as a fully automated warehouse would require. Moreover, the competence of the picking personnel is critical for the efficiency of the picking process. DB Schenker Logistics discuss problems related to extra personnel used to handle volume peaks. It takes time to learn the picking process properly and hence, the learning curve has negative impact on the performance of temporary personnel. To deliver the right quantity and quality is of highest importance and represent the most critical factors for success according to DB Schenker Logistics. The end customers are sensitive and therefore the deliveries must go fast and be right.

*Success factors: Pick up points, Home deliveries as an option, Delivery fee, IT automation in combination with manual processes, Deliver right quality and quantity.*

### **Digital infrastructure**

Regarding the digital infrastructure, DB Schenker Logistics highlight IT integration as a success factor. It is very effective to connect DB Schenker Logistics' IT system with external actors' IT systems. So, for example the most important customers and the distributors have connected their systems connected to DB Schenker Logistics' digital infrastructure.

*Success factor: External IT system connection.*

### **4.1.9. ÅF and Transportnytt**

In this chapter, two experts' view on e-commerce will be presented and the text is based on the answers from both. Alexander Kristofersson is an editor at Transportnytt, which is a magazine focus on logistics, material handling and transportation. Alexander monitor especially e-commerce and IT-questions. Jens Sandström is head of digital businesses at ÅF. He is focusing on all areas that will be digitized.

For success focus is on profitability. Even though only a few, or no, companies are active on the B2C market for e-commerce of food products generate profit today the development might be according to the plan. It takes time to build a business, some parts of the business may become profitable and some not. Jens stresses that in the current situation, the focus is not solely on profitability. Success is also measured in terms of increased volume, since an increased volume will give possibilities for a profitable business in a longer time perspective.

### **Market related activities**

Jens highlights marketing competence as critical for e-commerce success. Hence, it is important to have knowledge and expertise within marketing and customer relationships internally. With effective marketing, new customers can be gained to the online channel. Moreover, Jens argues that the different sales channels must support each other to facilitate growth. They also mean that an online channel can be successfully promoted through marketing in stores, or by opening temporary show rooms.

To be aware of the customer needs is another critical factor for success according to Jens. He discusses the actors that are active on the market for e-commerce of food products must act on that information and adopt their services. Alexander do also discuss the need to match the service offering with customer needs. For example, the delivery times should be adopted to customer behavior and hence, deliveries to pick up point or customers' homes should be performed during weekends as well. For food actors, Alexander highlights innovative thinking as an essential ingredient for success and argues that new technology should be continuously evaluated to search for new alternative ways of distribution.

*Success factors: Act on customer information and customer needs, Marketing competence, Market related activities, Reach new customers through marketing in stores, deliveries during weekends, Be innovative and use new technology for distribution.*

### **Operations related activities**

Jens stresses the need for efficient logistics to reach a successful e-commerce business. Since the logistics typically generate high costs, the logistics efficiency can be determinant for the e-commerce profitability. Hence, the logistics competence should be kept internally. Regarding delivery alternatives, Jens argues that a reasonable amount of delivery alternatives should be offered. Furthermore, he believes that customers are prepared to pay for the service and hence a delivery fee should be used to cover the high costs. Some different alternatives can be given to the customers such as pick up in store for free, or pay a delivery fee and get the food delivered to your home. The major reason customers purchase food online is because it is convenient and Jens underlines that customers value the additional service they get. Alexander agrees that additional logistics costs must be covered but argues that it is more successful to increase the product prices instead of taking a fee for home deliveries, since customers tend to avoid purchasing products online when delivery fees are involved.

According to Alexander, home deliveries are the most successful delivery alternative for food products. Since it is mostly the home deliveries that generates high costs, Jens stresses the need to consolidate the deliveries as much as possible. Hence, efficient route planning is critical for success which Alexander also agrees with. In addition, Jens sees a great possibility for success if food actors would consolidate their volumes through using the same partner company for distribution. By doing so, the delivery cost per order would decrease. However, as mentioned by Alexander, some food actors do not see it as an option to use an external partner for distribution since the high requirements may not be met then. Alexander means that already established distribution companies are locked into existing processes which is hindering them to explore new business opportunities. For example, for 5-6 years ago few was talking about home deliveries, or even the B2C market.

*Success factors: Home deliveries, Effective route planning, Efficient logistics, Reasonable number of alternatives for distribution, Consolidate volumes from different food actors for home deliveries, Increase the product prices to cover distribution costs, Delivery fee.*

## **Digital infrastructure**

The digital infrastructure is determinant for reaching e-commerce success. Hence, Jens stresses that it is of great importance to have a lot of knowledge regarding IT system development internally, at least in the early development phases. Jens has spotted a trend showing that when e-commerce market becomes more mature, actors often chose to implement a standard system, but the e-commerce of food is not there yet.

Personalization of the website is also highlighted as a success factor by Jens. The personalization should be based on customer information and insights regarding their behavior. By including possibilities to easily navigate to favorite products, earlier purchases or to enable shopping lists online in an effective manner, actors can differentiate from their competitors. The shopping experience should be as convenient as possible for the customers. Hence, it is also critical for success to make it easy for customer to find what they are looking for and to continuously improve the website design. The checkout process should be kept as simple as possible as well. There should be a couple of alternative payment solutions, but not too many. Focus should be on minimizing the time it takes to finish the purchasing process.

*Success factors: Internal IT development, Personalization, Website design, Easy to find, Easy checkout process, Shopping lists, Use information regarding earlier purchases, Possibility to save favorite products.*

## 4.2. Identified success factors from the interviews

From the interviews, the factors presented in Table 3 have been identified that contributes to e-commerce success. The success factors are divided into the three areas: market related activities, operations related activities and digital infrastructure. In Appendix 3, the coding to identify these factors is presented.

*Table 3. Identified success factors based on the interviews.*

Market related activities	Operations related activities	Digital infrastructure
Innovation	Cost efficient distribution	Specially developed IT systems
Marketing competence	Right quality, quantity, and time	User friendly website
Customer behavior information	Consolidated deliveries	Personalized website
High quality products	Service minded chauffeurs	
Wide assortment	Home deliveries	
Customer impact delivery time	Pick up points	
Transparent delivery information	Several delivery solutions	
	Cover cost for distribution	
	Dark store	
	Educated picking personnel	
	Automated warehouses	

## 4.3. Results from the survey

A survey is performed with the interviewed individuals to investigate how they prioritize among the mentioned success factors. See section 2.1.4 *Survey* for detailed description of the performed survey. The result from the survey generated from the question regarding which six factors that are most critical to invest in if starting up a new e-commerce business today, is presented in Table 4. The success factors to choose between in the survey are based on the identified factors from the interviews. Only the result of the answers from the six actors who are working with e-commerce of food is included in Table 4 since those answers are more valid for e-commerce success. The actors who owns the customer relationships are considered to have the best knowledge regarding how to reach success in this specific branch. The results from the question about which factors that are most critical to invest in today are presented in Appendix 4. Moreover, the answers from the question if the actors think that some of the factors do not contribute to success are presented in Appendix 5.

**Table 4.** *The result from the survey if starting a new e-commerce business.*

<b>Success factor</b>	<b>Answers</b>
The company is innovative and develop new solutions	83%
The company offers a wide assortment of products	67%
The company has specially developed IT systems	67%
The company delivers right quality, quantity, and time	50%
The company has a user friendly website	50%
The company offers high quality products	50%
The company has good marketing competence	33%
The company let customers have impact in delivery time	33%
The company performs picking in a dark store	33%
The company has transparent delivery information	33%
The company collects and uses information about customer behavior	17%
The company has cost efficient distribution	17%
The company has service minded chauffeurs	17%
The company has specially educated picking personnel	17%
The company has a personalized website	17%
The company offers several alternative delivery solutions	0%
The company uses distribution fees to cover costs for picking and delivery	0%
The company consolidates food deliveries to increase the fill rate in distribution vans	0%
The company offers home deliveries as major delivery solution	0%
The company offers pick up points as major delivery solution	0%
The company has automated warehouses	0%



# 5. Analysis and discussion

This chapter is divided into two sections, to answer both research questions. Hence, the success factors are identified in the first section, followed by a section where the criticality of the factors is discussed both from the interviewed actors’ perspective and from different time perspectives to see if the criticality changes as the market develops.

## 5.1. Identification of success factors

In the following section, the identified success factors will be analyzed. The structure is based upon the analysis model identified in the theoretical framework in section 2.3. *Factors that leads to success*. Hence, the identified success factors which are connected to market related activities are analyzed first, followed by an analysis of success factors for operations related activities, and finally the success factors related to digital infrastructure. The factors identified in the empirical data are discussed and compared with the factors identified from previous research that is studied. The result of the analysis regarding which success factors that can be identified is presented in Table 5. Each factor presented in the table is analyzed and discussed in the following section. To create a common understanding, the section is introduced by an analysis of the definition of a success factor.

*Table 5. The identified factors based on previous research and interviews.*

Market related activities	Operations related activities	Digital infrastructure
Innovation	Cost efficient distribution	Specially developed IT systems
Marketing competence	Right quality, quantity, and time	User friendly website
Customer behavior information	Consolidated deliveries	Personalized website
High quality products	Service minded chauffeurs	
Wide assortment	Convenient delivery solutions	
Customer impact delivery time	Cover cost for distribution	
Transparent delivery information	Dark store	
	Educated picking personnel	
	Automated warehouses	

### **5.1.1. The definition of a success factor for e-commerce**

As Yoo (2010) mentions, when the volumes of sold products expand rapidly the industry is in the growth phase. The industry for e-commerce of food products are according to Tadei et al. (2016) growing rapidly, but from a low level. It is a signal that the market for e-commerce of food products is in the growth phase. Dhandel (2017) expects the growth trend to continue and through a market research they show that 10% of the customers who are not purchasing food online today are planning to do so the coming year. The e-commerce as a whole has reached a mature level in comparison to e-commerce of food products (PostNord, 2016). So, the e-commerce for food products can get benefits from that people are getting increasingly used to purchasing online. As previous researcher stress (eg. Dhandel, 2016; Saskia et al., 2016; Colla and Lapoule, 2012), convenience and possibility to save time is driving the e-commerce development.

When analyzing the success factors highlighted by previous researchers and in the empirical data different measures of success are referred to. The definition of reaching success differs between where in the product life cycle the company is in and between companies that offer the same product (Levitt, 1965). All the interviewed actors mention profit as a measure for success. It is not possible to run a business without generate profit in a long term. Economies of scale and profit are highly correlated and together with that the company knows how to get competitive advantage, helps to generate profit (Maras, 2014; Zhu et al., 2014). Some of the interviewed actors also mention increased sales, volume and market share and being relevant for the customers as a measure for success. This is also a signal that the industry is in the growth phase but strives to reach the next phase where the focus is on generating profit.

### **5.1.2. Market related activities**

Without meeting the customers' needs a company is not be able to sell anything. As Saskia et al. (2016) mention it is especially important in the growth phase to attract new customers. The seven identified factors that contribute to success of market activities is explained in this section.

#### **The company is innovative and develop new solutions**

One identified success factor is to be innovative and to continuously develop new solutions. MatHem, Mat.se, Middagsfrid, Axfood and ICA Maxi highlight innovatively as a key success factor. In accordance with the statement by Sandra at MatHem "nothing ventured, nothing gained", the food actors invest in solutions which they believe will strengthen their competitiveness and contribute to their growth. Mat.se are looking for new delivery opportunities such as the already implemented solution to deliver into customers' cars or the successful pilot project where food is delivered into customers' fridges. ICA Group have conducted a similar pilot project, where food bags have been delivered to customers' homes even if they were not at home. So even though ICA Group do not mention innovatively as a success factor, they are investing in innovative solutions which indicates that it is essential for growth to develop new solutions. Middagsfrid always try to surprise their customers with changes so the customers feel that they always get something new, which is their way of being innovative.

To search for alternative delivery options and expand the logistics network, is something Dhandel (2016) and Alexander highlight as a trend, and food actors need to be innovative in this area to reach success. Both Mat.se and ICA Maxi stress the need to adapt to changes on the market. The market expands quickly (Tadei et al., 2016; Dhandel, 2016) and hence, the food actors must be reactive and change their business in an innovative manner to match the new context. The United Kingdom is today the leading market for e-commerce and they always develop new innovative solutions that their customers are willing to try (Dhandel, 2016). The market for e-commerce of food products is in its growth phase, and as Klepper (1996) argues, the innovation rate is high during this phase. To develop new solutions with for example improved quality, additional services is something Yoo (2010) mentions as typical for the growth phase. Those actions can also be identified among the interviewed food actors, such as Mat.se and Mathem. The best solution has not been reached yet but a lot of things are happening and new innovative solutions are coming up to find the most successful strategy. However, even though current research discusses innovatively, it is not highlighted as a success factor. Hence, there is a gap between the theory and the practice in this area. It can therefore be of interest to conduct further research in this area to investigate the influence of innovatively on the successfulness of e-commerce.

### **The company has good marketing competence**

Marketing competence is a success factor, based on the interviews conducted in this study. Axfood, ICA Maxi, Mathem, Middagsfrid and Jens highlight marketing as critical for success. Axfood discuss the opportunity to utilize the different company brands and perform targeted marketing activities towards different customer segments. Brand differentiation is also something Levitt (1965) find truly critical during the growth phase and Colla and Lapoule (2012) argue that differentiation is tightly connected with success. Moreover, Axfood see possibilities for success through getting access to the marketing competence of Mat.se. In accordance with Shankar et al.'s (1999) reasoning, pioneers get better response on their marketing efforts which is another reason it might be beneficial for Axfood to include one of the pioneers of modern e-commerce of food in their business.

Jens, Middagsfrid and ICA Maxi discuss that internal marketing competence is essential since it contributes to growth. New customers can be attracted and the different sales channels can support each other, and the routes customers take between the sales channel can vary over time. There is no support in the reviewed existing research indicating that marketing is a key success factor, but there is support showing that marketing is an activity which is typical for the growth phase (Saskia et al., 2016; Maras, 2014; Yoo, 2010). The marketing activities do not only contribute to growth of specific companies, also to the growth of the market as a whole. The different marketing activities performed will form a joint marketing effect leading to higher awareness among current and potential customers interested in food online (Klepper, 1996; Levitt 1965).

### **The company collects and uses information about customer behavior**

To collect and use information about customer behavior is a success factor, both according to the previous research and according to four of the interviewees. Maras (2014) underlines that it is critical to understand the customer needs, and Bodini and Zanolini (2011) describe the necessity to use that understanding as valuable input to the e-commerce development. MatHem, ICA Maxi, Middagsfrid and Jens agree and stress the importance of identifying and analyzing customer needs. In accordance with Jens' reasoning, it is beneficial for success to adopt the services based on the analysis of the customer needs.

As Dhandel (2016) mentions, most traditional Swedish food actors are offering e-commerce in addition to their existing network of physical stores even though the business implies in profitability issues. ICA Maxi refer to a behavioral change among their customers and therefore they want to offer e-commerce to their customers even though the traditional sales channel is significantly better from an economical point of view. Dhandel (2016) does also underline that shift in customer behavior and stresses that the risk of losing customers is high if e-commerce of food products is not offered as a complement. However, according to Dhandel (2016) it is more beneficial to have both e-commerce and stores since the customer behavior indicates that customers become more loyal if they can shop groceries through both physical and online channels. In addition, the customers would sometimes like to seamlessly mix the two sales channels and perform some part of the purchasing process through the traditional channel and the other part online (Dhandel, 2016; Colla and Lapoule, 2012; Zwiebach, 2015; Bodini and Zanolini, 2011; PostNord, 2016). It is therefore essential to collect and analyze customer behavior to be able to facilitate different combinations of the services offered through the different sales channels. The customers should be able to perform some activities through the e-commerce channel and some through the traditional channel if they like to, but still get the same shopping experience (Hübner et al., 2014; Picot-Coupey et al., 2016; Balaraman and Chandrasekar, 2016).

MatHem would like their customers to feel that the company cares about them, and to achieve that they need to focus on using customer information. According to ICA Maxi, the customer needs may differ between the physical channel and the online channel. Hence, one should be aware of this while analyzing collected customer information. Moreover, as ICA Maxi discuss, the assortment is an essential factor closely connected to customer needs. Therefore, it can be of interest to analyze information regarding preferred assortment. One of Middagsfrid's arguments why customer information is critical for success is that they can adopt their offering based on that information. If they know what customers prefer, by for example collecting feedback from social media, they can surprise their customers with fresh and inspiring food which is a competitive advantage by Middagsfrid.

Middagsfrid argue that it is essential for reaching success to analyze information regarding how customers behave on their website. For example, Middagsfrid collect information regarding how the navigation path and the conversion rate is affected by design changes on the website. Benn et al. (2015) do also argue that companies should be aware of how those types of changes affects the customers and argue that the presentation of information on a website should be carefully considered, based on customer insights. Moreover, ICA Group do

also highlight the importance of being aware of customer behavior, especially to realize when changes in behavior occur. As ICA Group discuss, customers use mobile devices to an increasing extent in their daily lives, and it can be determinant for future success to be aware of, and adopt to, such a change. Goethals et al. (2012) argue that the services offered by an e-commerce actor must be easy to understand and easy to use, to enable convenience for the customer, and hence it is critical to know the customer behavior. So, if customers prefer to use mobile devices, the website should be well working on that platform as well.

### **The company offers high quality products**

ICA Maxi, Axfood, MatHem, Mat.se and Middagsfrid see high product quality as a success factor. While ICA Maxi discuss that the products delivered to e-commerce customers should be fresh, and have long time left until they pass the expiry dates, the actors who are only active on the e-commerce market discuss the importance of extraordinary high quality. As MatHem highlight, the quality of the fruit and other fresh products can be very determinant for customer satisfaction. Moreover, MatHem state that customers are used to feel and touch food products and select the products themselves. This aspect Dhandel (2016) highlights as a risk with e-commerce of food products. Axfood have also spotted the risk and do therefore see high quality products as a success factor. Both MatHem and Mat.se see it as extra critical to deliver high quality products because of the skepticism among potential customers. If the product quality is higher in the physical stores, the online actors will not become successful. Mat.se see big risks related to product quality and hence it is essential to perform well in this area to continue to grow. For Middagsfrid, the term high product quality means not only perfectly fresh products, but also a high share of ecological products.

It is interesting that high product quality is not highlighted as a success factor in previous research even though several actors on the market see product quality as determinant for success. Hence it might be that either the actors on the market are focusing too much on product quality, or it is the previous researchers who have overlooked an important success factor. One interesting comparison can be made with the e-commerce of food market in the United Kingdom, where small specialized physical stores have become a popular complement to the e-commerce (Dhandel, 2016). Hence, the e-commerce actors in general do not focus on extra high product quality to become successful, but leaves that to a niche market.

### **The company offers a wide assortment of products**

To offer a wide assortment of products is a success factor for the online channel of food products, both according to previous research and by some of the studied food actors. Colla and Lapoule (2012), Dhandel (2016) and Maras (2014) argue that the product assortment can be the determining factor whether the customer choose to order online or visit the physical store. Hence, the assortment is truly essential for success. The e-commerce of food products is currently in its growth phase in Sweden, and hence the actors need to gain new customers and maintain existing ones, and hence the product assortment must be carefully chosen. Both ICA Group and ICA Maxi argue that locally adopted assortment is a huge strength when it comes to product assortment. The ICA actors mean that customers have different demand in different geographical areas and hence, it is important to match those different needs and be relevant for the customers. Moreover, they argue that the physical sales channel and the e-commerce

have a great possibility to support each other. By offering the same wide assortment, including the local products, through both sales channels the customers will be more likely to buy from ICA since they will get a feeling of recognition.

Mat.se do also see wide product assortment as critical for success, but underline the need for a balance. Customers need to have options, and possibility to find the type of product they are looking for, without hindering them by offering too many alternatives. A wide product assortment is good not only for customer satisfaction, but also from an economical point of view, according to Mat.se. The e-commerce of food products is struggling with poor profitability and the relatively low average order value is one reason. Mat.se see a possibility to increase the average order value by widening the product assortment, for example through including additional product categories. Furthermore, as Mat.se underline, the e-commerce actors have great possibilities to offer a wide assortment without too high costs since they often order from their suppliers based on firm customer orders. In addition, Mat.se's customers can easily navigate through the wide assortment by using different sorting possibilities on the website.

### **The company lets the customers have impact in delivery time**

Most the interviewed actors stress that a success factor is to let the customers have impact in the delivery time. There are different strategies to enable such possibility for the customers. ICA Maxi are striving to let customers choose freely between different time slots for pick up in store, and hence eliminating the risk of getting full time slots. Mat.se have the same reasoning, since they let customers choose time slot without influence them based on efficiency reasons. Moreover, as ICA Maxi mention, the time windows need to be as short as possible. DB Schenker Logistics agree and argue that short time windows results in an even more convenient shopping experience for the customers since they do not need to adopt as much to the food deliveries. In addition, as MatHem state, it can be critical for success to be flexible in the delivery times, since that gives larger possibilities for the customers to steer the deliveries towards a time that is convenient for them.

To give the customers impact further truly on the delivery time, the deliveries should be possible to perform as fast as possible. The requirements for fast deliveries are especially high for food products (PostNord, 2016). ICA Group, Mat.se and DB Schenker Logistics see fast deliveries as essential for success. As both ICA Group and Mat.se mention, fast deliveries are determinant for the competitiveness, and for e-commerce of food products the deliveries should be performed the same day or at latest the day after received customer order. Otherwise customers may choose to go to a physical store, or another e-commerce shop, instead. According to Liebe and Capshaw (2015) the trend is that the customers expect to get the deliveries faster than before. Saskia et al. (2016) agree that fast deliveries contributes to success and Zwiebach (2015) highlights the connection between same day deliveries and success, and hence there is support for this reasoning in the literature as well.

To let the customers have impact in the delivery time, is stressed as a success factor by Middagsfrid as well. To achieve that, Middagsfrid are focusing on frequent deliveries. However, the frequency offered must be economically justifiable and hence, the number of customers is determinant for the frequency in deliveries. As Middagsfrid mention, there must be a balance between service and cost even though they are striving to let the customers decide the delivery time to as large extent as possible. DB Schenker have the same reasoning and do always make sure that their offered services are beneficial for themselves as well, from an economical point of view. But at the same time, the customer needs should of course be met and hence it might be necessary to redesign the logistics model sometimes to find a good balance between service and cost. For DB Schenker, it might be more effective to deliver e-commerce orders in the evenings instead of during day time which currently is the standard solution for DB Schenker. By changing the standard, customer requirements can be met at the same time as the cost per delivery order remains low if the volumes delivered is high. Alexander also highlights that deliveries during weekends should be offered to match the consumer's behavior.

### **The company has transparent delivery information**

Transparent delivery information is another factor which is mentioned as contributing to success in both previous research and during the interviews. PostNord (2016) can see a trend that the customers demand higher information sharing, to have a higher possibility to follow and control the deliveries. The researchers Colla and Lapoule (2012) underline the need to provide customers with the possibility to follow their orders. Customers tend to use mobile devices not only to purchase the food whenever it is convenient for them, but also to get frequent updates regarding their deliveries (Maras, 2014). Axfood mention the possibility of getting transparent delivery information as a success factor. This is also in line with DB Schenker's reasoning, the customers should be able to track and trace their food bags and see the progress already from the point of ordering until it is delivered. Since DB Schenker see the transparent delivery information as a success factor, they are continuously trying to improve in this area. DB Schenker is considering the possibility to state the exact delivery date for their e-commerce orders already when customers order the transportation service. It is interesting that this issue, to state the exact delivery date and time already at the point of ordering, has already been managed by most of the actors offering e-commerce of food.

Hence, the market for e-commerce of food products is well developed in this area compared to e-commerce of other product categories. One reason might be the characteristics, such as temperature requirement and perishability aspect involved with food products, which requires the customers to be aware of when to pick up or when to receive the bags. Moreover, DB Schenker Logistics discuss the importance of real time deviation notices. DB Schenker Logistics argue that the criticality for success lies in providing updates to the customers if something does not proceed according to the plan, if there might be a delay for example. Hence, this might be extra important for the food deliveries just because it requires the customers to be at home during the delivery, or to arrive later to the pick-up point.

### **5.1.3 Operations related activities**

To be able to deliver what the customers want, the internal processes in a company needs to be controlled. The nine identified factors in this section are related to how to manage the operations activities within a company for reaching e-commerce success.

#### **The company has cost efficient distribution**

To have an efficient logistics is one success factor that is identified. Jens, Axfood, ICA Group and Alexander mention the importance of developing an efficient logistics to reach e-commerce success. Jens mean that the logistics generates high costs for a company within the e-commerce business. Both Jens and ICA Group argue that the logistics can have a great impact on profitability if it is managed in an efficient manner. As Tadei et al. (2016) and Saskia et al. (2016) discuss, most reasons for failure with e-commerce of food products are related to economic factors, which also indicates that the cost efficiency for distribution is critical. Moreover, as Goethals et al. (2012) point out, the investments for establishing e-commerce can also be determinant for the e-commerce development. The authors argue that too big investments may lead to failure because of economic reasons and hence, this is something to take into consideration when designing the distribution of food purchased online. The distribution needs to be cost efficient, but at a reasonable level of investment.

The route planning is one important part of reaching an efficient logistics when home deliveries are offered to the customers (Vanelslander et al., 2013). Driving with half full vans and not the optimal routes generates high costs, which Axfood, Jens and Alexander highlight. Axfood discuss that if it would be possible to steer deliveries towards certain time windows it would imply in higher fill rates in the vans. As Goethals et al. (2012), Cagliano et al. (2014) and Colla and Lapoule (2012) also state, an efficient logistics model is critical for success of e-commerce of food products. One of the difference between selling through retail and online is the cost for logistics. Customers are usually not prepared to pay more when purchasing online and therefore the costs, for example associated with additional logistics activities, must be reduced (Colla and Lapoule, 2012; Dhandel, 2016).

#### **The company delivers right quality, quantity, and time**

To be able to deliver the right quality, quantity and time has been identified as a success factor. This is according to Middagsfrid a basic factor for success of e-commerce. DB Schenker Logistics also discuss that the most important factor for success is to deliver the right product, because the customers are very sensitive and want the products they ordered in right time and right quality. DB Schenker also stress that customer satisfaction is connected to the quality of the product. Based on the reasoning by Bodini and Zanoli (2011), Salehi et al. (2012), Dhandel (2016) and Colla and Lapoule (2012), it is important to deliver the same quality as is stated in the information about the product. If the customers are not sure that they will receive what they ordered there is a high risk that they will not purchase online (Salehi et al., 2012). Axfood do also stress the importance of being able to deliver as promised. Another aspect closely related to being able to deliver as promised is to make sure that products offered through the e-commerce channel is in stock when the customer wants to purchase. Otherwise, if the products are not available within the required period, there is a risk that the customer easily switch to a competitor's website (Bodini and Zanoli, 2011).



MatHem discuss the importance of delivery accuracy for customer trust. Trust leads to loyal customers and hence long-term revenue (Salehi et al., 2012; Choshin and Ghaffari, 2017). MatHem have their own vans for delivery because they find it so important to deliver what they have promised their customers. This is in line with what Hübner et al. (2016), Dhandel (2016) and Bodini and Zanolli (2011) also mention, customer satisfaction is connected to the accuracy of the deliveries. As Ahrholdt (2011), Maadi et al. (2016), Colla and Lapoule (2012) and Goethals et al. (2012) stress, it is essential for the e-commerce actors to create a feeling of trust among their customers to facilitate the growth of the e-commerce channel. To purchase food online, instead of in a physical store, is very much a behavioral change (Goethals et al., 2012; Dhandel, 2016), and hence it is essential to meet the customer needs and requirements when delivering the food bags. What can be noticed is that customer trust is mentioned as a separate success factor in the theoretical framework, but is included in the success factor to deliver the right quality, quantity, and time in the empirical data. Hence, a strong connection is identified between creating trust among customers and delivering the right quality, quantity and time as promised. Therefore, the reasoning is presented as one single success factor, involving both aspects.

To deliver on time is truly important for Mat.se as well. If Mat.se see that there is a risk for delay, they can send out extra vans to help the van that is delayed. ICA Maxi are also focusing on delivering on time and the customers are informed one hour in advance that the bags are ready for delivery. Dhandel (2016) sees on time deliveries as a competitive advantage. However, DB Schenker view on time deliveries more as a hygiene factor instead of a factor that leads to success. One reason might be that DB Schenker usually delivers to pick up points, or have relatively large time windows for home deliveries, and hence it is not that hard for them to be on time. Another explanation could be that they are focused on transportation services and hence perform very good in this area. Moreover, as Saskia et al. (2016) argue, the complexity is high for deliveries of food products. The product characteristics may be the major reason delivery accuracy is considered a success factor by the food actors but not by DB Schenker. The perishability aspect and temperature requirements are characteristic for food products and makes on time deliveries to customers' homes extra critical (Saskia et al., 2016; Tadei et al., 2016).

### **The company consolidates food deliveries to increase the fill rate in distribution vans**

The business for e-commerce of food products is usually not profitable today (Tadei et al., 2016; Dhandel, 2016). One major reason is the high costs for distribution (Colla and Lapoule, 2012). The high distribution costs together with low volumes generates difficulties to reach high utilization in the delivery vans. Jens, Axfood and DB Schenker mention one success factor that has been identified, to consolidate food deliveries to increase the fill rate in the distribution vans. The home deliveries generate high costs and Jens means that it is possible to decrease the cost per order if the deliveries can be more consolidated. Vanelslander et al. (2013) and Saskia et al. (2016) say that food products usually have low margins, which also contributes to the profitability issues. DB Schenker also discuss that it could be possible to consolidate other products with food products to increase the fill rate. This will also imply in benefits for the customers, since they would get the possibility to receive deliveries from

different companies at the same time. However, the consolidation strategy discussed by DB Schenker must be requested by the customers since some packages must wait longer to be delivered.

Jens highlight that consolidation could easily be solved if the companies can use the same distributor for their deliveries. Vanelslander et al. (2013) also mention the use of an external provider to consolidate volumes and hence decrease the cost for distribution. By using an external provider, the costs for personnel and maintenance is lower compared to performing the deliveries with an own fleet (Saskia et al., 2016). However, it is essential to find an external collaboration partner for the deliveries who can perform according to the high requirements for deliveries of food products, since the deliveries are tightly connected to customer satisfaction (Vanelslander et al., 2013). For example, MatHem have chosen to have their own fleet for deliveries with the major motivation that they need to be completely sure that the performance is as good as it needs to be. Alexander does also discuss the criticality that such external partner must fulfill the requirements for the distribution. As is stressed by Alexander, traditional distributors are considered existing processes which makes it hard for them to adapt to new flows and requirements. Axfood on the other hand argue that several distributors can meet the requirements but at a relatively high cost. The costs for using an external partner for deliveries, compared to performing the deliveries with an own fleet of delivery vans, is an additional consideration regarding outsourcing the deliveries or not. Both Axfood and Mat.se mention the total costs as a parameter to consider when taking the decision.

### **The company has service minded chauffeurs**

Service minded chauffeurs has been identified as a factor contributing to success. Axfood, Mat.se and DB Schenker argue that it can lead to success because the chauffeurs are the only physical contact point the customers have with the company they purchase from. One reason Mat.se have choose to have their own fleet of delivery vans is because of the importance of the meeting with the customers, they want to be sure that the experience from the meeting is good. DB Schenker have also put a lot of effort in educating their chauffeurs so they know how to act in the reception with the customer.

Service minded chauffeurs is not explicitly identified as a success factor in the theoretical framework. What is identified as a factor that contributes to success is to focus on customer reception (Colla and Lapoule, 2012; Maadi et al., 2016). Colla and Lapoule (2012) argue that the customer reception from the staff has a great impact on the customer satisfaction. This factor is a broader view of reception than service minded chauffeurs, but in the case of e-commerce the reception with the chauffeurs is the only physical reception the customers have with the company. All kind of reception with the customers are therefore important for success.

### **The company offers delivery solutions that are convenient for the customers**

A factor that has been identified as successful for e-commerce of food products is to offer delivery solutions that are convenient for the customers. Convenience and accessibility for the customers highly important for e-commerce according to PostNord (2016). The company needs to meet all customers' needs, so each customer can find a solution that suits them. In accordance with Goethals et al. (2012) reasoning, if customers are dissatisfied with the deliveries there is a significant risk that they abandon the e-commerce channel. To secure customer satisfaction, the delivery alternatives should also be adopted to local needs (PostNord, 2016). From the empirical data, there are three different success factors related to deliveries presented; home delivery, pick up points and offer several delivery solutions. There are different views on what is the most successful choice, what all the opinions had in common is to offer the most convenience to the customers. Hence, the conclusion is that there are no delivery solution which is generally better than the other, but that the deliveries should be as convenient as possible for the customers.

As Saskia et al. (2016) argue, the delivery alternatives are an effective way to differentiate from competitors by adopting to contextual factors. As can be seen at ICA Maxi, they offer home delivery even if just a small number of customers choose that service, and despite that the service implies in high costs for them. Both according to ICA Maxi, ICA Group and DB Schenker, it is important that the customer does not only has one choice of delivery. Some customers may see it as most convenient to pick up the food in the store and some prefer home delivery. Sometimes a customer wants to pick up the food in the store and sometimes it is more convenient to get the food delivered home. Zwiebach (2015) also highlights the importance of offer click and collect as a complement to home delivery.

DB Schenker argue that it is important to give the customer flexibility. This is something PostNord (2016) also agrees with. Since different alternatives can be optimal for a customer in different situations, they stress the need for offering several delivery alternatives. Jens highlights that the delivery alternatives presented for the customer should not be too many, since the delivery choice must be an easy process and the customer should easily find the alternative that suits best. ICA Maxi, DB Schenker and DB Schenker Logistics highlight that home delivery should be offered as an option for delivery, to make it as convenient for the customers as possible. As a complement to the home deliveries, Axfood mean that it is easier to reach profit by using pick up in the stores and therefore both alternatives should be offered.

To offer home delivery as a dominant delivery solution is a factor the interviewed actors have identified but is not identified in the research as a factor that leads to success. This can depend on the reasoning by Saskia et al. (2016), who say that the successful delivery concept depends highly on who the customers are, so it can be hard to say which solution that is most successful on a general level. All the interviewed companies that only offer products online have highlighted home deliveries as successful. MatHem and Mat.se mean that home deliveries are most convenient for the customers and is the delivery solution the customers want. This is something Axfood agree with, more customer value is generated when the food is delivered to the customers' homes. Middagsfrid see the alternative of using pick up points as a more complex solution and therefore focusing on only offer home deliveries to their

customers. Alexander also argues that home delivery is the most successful delivery alternative when delivering food. The online companies do not have a physical store where the natural pick up point would be and therefore home delivery is more successful. It could therefore be possible to lose customers if home delivery is not offered as an alternative.

Benefits of offering home deliveries are for example that the customers do not have to drive to the store, which will reduce the emissions from the cars (Matseholding, 2016). According to MatHem and Mat.se it is more environmental friendly if one truck can load many customers orders instead of each of them must drive to a store or a pick-up point. Goethals et al. (2012) mean that to get the food delivered home is an important factor the customers consider when buying food online. However, the most complex delivery alternative is to offer home delivery (Tadei et al., 2016). The last mile problems are involved as well as the extra costs for both picking and delivering (Tadei et al., 2016; Colla and Lapoule, 2012). If home deliveries should be offered, it is essential to have a good overview of the costs generated, since those tend to be very high especially for the home delivery solution and have led to many failures (e.g. Vanelslander et al., 2013; Hübner et al., 2016; Goethals et al, 2012).

The home delivery can be either attended or unattended (Hübner et al., 2016). If it will be possible to have unattended home deliveries it will be even more convenient for the customers, they do not have to be at home for a certain time to get the delivery. This is something ICA Group discuss as well, that “What happens if everything will be ordered online and delivered home, do we want that? Then we would need revolving doors”. In addition, Colla and Lapoule (2012) highlight that 30 % of the performed attended home deliveries are not able to deliver the food bags since nobody are at home to receive the bags. A development of the unattended home deliveries is therefore needed (Cagliano et al., 2017). There are pros and cons with offering home delivery, but what can be seen is that if the company only have an online store the home delivery solution could be the most beneficial due to that there are no natural pick up point, but it is important to have in mind that the home delivery must suit the customers.

To use pick up points as the dominant delivery solution is one factor that some of the interviewed actors mention as a successful choice of delivery. A pattern can be seen that the actors who have both physical stores and an online store prefer to use pick up points to use the existing supply chain (Saskia et al., 2016). The supply chain structure can also be a reason why 50 %, see Appendix 5, of the interviewed actors do not see pick-up points as a success factor. The actors who do not have natural pick up point in their supply chain have higher investments involve with establishing pick up points in convenient spots for their customers. ICA Maxi is one of the actors who see pick up points as a success factor. The reason according to ICA Maxi to use pick up points is that it is more convenience for the customers, they do not have to wait at home during a certain time for a delivery. DB Schenker and DB Schenker Logistics have the same argument about the convenience for the customers. DB Schenker also see that they have succeeded because of the large network of pick up points, the customers always have a pick-up point nearby. However, in the case of DB Schenker, it is not food product, but other product categories which are successfully distributed to pick up points. According to Dhandel (2016) pick up points are more widely used where the

population is not so dense. The alternative of using home delivery is more expensive if the delivery van must drive longer between each customer (Colla and Lapoule, 2012). Dhandel (2016) agrees that it is costly to offer home deliveries in rural areas but stresses the need to offer alternative delivery solutions for customers in rural areas as well. Customers need alternatives to choose between to find a solution that matches the individual needs and by applying this thinking in the less dense areas of Sweden as well the consumer market becomes much larger compared to only the biggest cities. This is something MatHem have adapted to, they offer a solution of pick up the bags in a van. Which of the alternatives pick up points or home delivery that is used may not be the most important, it is more to offer the solution that suits the customers the company has, to make the most convenience for them. The markets to enter, and what services to offer in each geographical area, should be thoroughly considered from an economical point of view (Hübner et al., 2016; Zwiebach, 2015).

### **The company uses distribution fees to cover costs for picking and delivery**

E-commerce of food products is not profitable today and different ways of solving it can be done. One success factor that is identified is therefore to use fees to cover the extra costs for picking and delivery. As Goethals et al. (2012), Saskia et al. (2016) and Vanelslander et al. (2013) stress, e-commerce of food products often generates relatively high costs for storage, picking, dedicated distribution centers and transportation in combination with issues to cover those costs. The costs associated with last-mile distribution represents up to 50 % of the total supply chain costs (Vanelslander et al., 2013). Axfood and DB Schenker argue that the customers must pay for the extra services e-commerce implies in. As ICA Group argue, the Swedish food supply chain is generally designed for retail and the online selling therefore results in extra costs that must be covered. An alternative could be to include the extra costs in the product prices. Alexander means that to increase the product price would be the best way to cover the extra costs, because people do not want to purchase online if there is an extra fee to get the products delivered.

On the other hand, Bodini and Zanoli (2011) and Zwiebach (2015) argue that the product price should be kept at the same level in store as online. This is something ICA Maxi also highlight the customers must feel that the price for the products are good in relation to the value the customers get. If the prices are the same online as in the store, the customers can more easily compare the prices and understand what they pay for. So instead of increasing the price for the products, an extra fee for the distribution costs could be added. Axfood mean that the company can offer free deliveries over an order volume but add a fee for orders below that limit if the products have the same price in store and online. DB Schenker has a similar argument where they mean that one free choice of delivery must be offered but means that the company must use a fee for some of the delivery alternatives, this is something Jens also agrees with.

The customers are usually not willing to pay for the extra costs the e-commerce results in (e.g. Goethals et al., 2012; Tadei et al., 2016; Colla and Lapoule, 2012; Vanelslander et al., 2013). Create willingness to pay for the extra costs or finding ways of rationalizing away these costs have therefore to be found (Goethals et al., 2012; Goebel et al., 2012). DB Schenker Logistics mean that focusing on rationalize the transportations costs could be a good way of solving it.

Axfood stress that if food could be delivered together with products with higher margins it could be easier to gain profit. Jens means though that the customers can be willing to pay for the extra service that online purchasing implies in as long as they are aware of the additional service and experience purchasing online as more convenient. This is something PostNord (2016) also highlights, the trend is that customers are getting less price sensitive if the whole experience of the purchasing is good. Dhandel (2016) argue that it is important to communicate the time saved by purchasing online to get the customers pay for the extra costs. Hence, the conclusion can be drawn that e-commerce actors should strive to cover the additional distribution costs generated. By making sure that customers who purchase food products through the e-commerce channel gets a convenient experience, the customers will realize the value added by the offered service and be prepared to pay a delivery fee.

### **The company performs picking in a dark store**

Axfood and ICA Maxi mention that it is only possible to manage the picking in a store up to a certain volume, even if it is not profitable. Saskia et al. (2016) and Vanelslander et al. (2013) add that less investments will be needed if picking is performed in existing stores, but agree that it is only manageable if the volume of e-commerce orders is low. All actors strive to reach an increased volume and therefore the picking could not be made in stores to reach success. One success factor that is identified is therefore to perform the picking in a dark store, designed for e-commerce. Picking has a great impact on the profitability and if the picking can be made efficient it will generate higher profit (Tadei et al., 2016; Colla and Lapoule, 2012; Hübner et al., 2016). ICA Maxi mean that the optimal solution for picking would be to have a dark store. DB Schenker also agree that the picking must be made in a warehouse designed for picking online orders because picking in stores is inefficient and generates high costs. Picking can only be made in an efficient way if it is performed in a dark store (Dhandel, 2016; Goethals et al., 2012). Axfood say though that it is only when a company already have an existing store, in combination with very low volumes of orders from the e-commerce channel, a dark store is not needed. Vanelslander et al. (2013) and Hübner et al., (2016) also add that a dark store generates other benefits such as lower risk for stock outs.

Mat.se see the importance of delivering the right products to the customer and it is more easily managed if the picking is made in a warehouse designed for picking orders. The processes can be optimized for minimizing errors. This is something Mathem also highlight as important. According to MatHem it is more complex to pick food products than other products sold through e-commerce due to typical characteristics of food orders, an order for food products usually consist of 40-60 products while another e-commerce company may have 2-3 products per order. Therefore, the place where the products are picked must be designed for efficient picking to become successful with e-commerce of food products. A benefit Axfood and Mat.se highlight is that, when having a dark store, the waste will be reduced due to that the company can order the same amount from their suppliers as the customers have already ordered. Colla and Lapoule (2012) and Liås (2016) argue that the waste will also be reduced for the customers because people tend to only buy what they really need when ordering online.

### **The company has specially educated picking personnel**

A factor that from the interviews is identified to contribute to success is to have specially educated picking personnel. The factor is not highlighted as a success factor in the research, but is tightly connected to picking in a dark store. The picking must be managed in an efficient way (Tadei et al., 2016; Colla and Lapoule, 2012), but without having personnel that knows how to pick, the picking will not be efficiently performed. As ICA Maxi mention, the e-commerce generates higher costs for ICA Maxi, and therefore they must strive towards an efficient supply chain. ICA Maxi and DB Schenker Logistics are the actors who argue about the importance of having competent picking personnel. ICA Maxi have seen that there is a difference in the time it takes to pick an order if the picker is used to pick online orders or not, which affect the costs a lot. The difference in required time is experienced by DB Schenker Logistics as well, when there are volume peaks and they must hire new personnel the time to pick each order increases. To have educated picking personnel is therefore of high importance to get an efficient picking and for success for e-commerce of food products.

### **The company has automated warehouses**

Automated warehouse is a factor that is identified as successful. Mat.se and DB Schenker Logistics highlight that the warehouses for picking e-commerce orders must be automated, as one factor for success of e-commerce of food products. By having an automated warehouse the company will gain benefits such as higher speed of picking and thereby the cost per pick will decrease (Maras, 2014; Hübner et al., 2016). The high investments are a drawback with automation though (Hübner et al., 2016). According to Mat.se is it not profitable today to invest in automation due to the low volumes, but automation is what will be needed to succeed in the future. Automation will increase the efficiency in the warehouses. The technology is continuously developing and if it will be cheaper to invest in automation, Mat.se will invest in it. DB Schenker Logistics stress that it could be a good start to combine automation with manual processes for picking, since the automation makes it more efficient and can have an impact in the profitability, but the high costs for a full automation do not have to be paid.

## **5.1.4. Digital infrastructure**

In the following section, the three identified success factors related to digital infrastructure are presented and discussed.

### **The company has specially developed IT-systems**

Specially developed IT systems is highlighted as a success factor by several actors. Both MatHem and Mat.se underline that their internal IT development has contributed to their strong growth. The major benefit MatHem and Mat.se highlight is that their specially developed IT systems enables them to update their processes, website, and underlying systems simultaneously. Specially developed IT systems are stressed as a success factor by OcadoGroup (2015) as well. Axfood do also see a great potential of having an own IT platform since it enables quick updates. Since Axfood discuss the IT development as an important part of the acquisition of Mat.se, an actor with relatively big and slow-moving systems sees potentials in the less standardized and fast changing approach Mat.se applies. One explanation can be that the market for e-commerce of food products is in its growth

phase, in contrast to the more mature traditional sales channel for food products, it can be extra critical to react fast and do changes in the IT systems.

Jens indicates that it can be beneficial to have the IT development internally during the growth phase, but it might not be the optimal solution when the market becomes more mature. So, if a standard system which matches the e-commerce of food business is developed, it can be an option to rethink in this area. Middagsfrid also argue that it is important that the IT system is specially developed for the specific business, so different customers can be treated in different ways and that it is possible to offer the campaigns they want. However, Cagliano et al. (2014) argue that specially developed IT systems are contributing to success, no matter which development phase the product is in, and highlights that the systems should be updated continuously to support processes that are used in the logistic model. Hence, if a standard system should be used, it should have the ability to be adopted to specific business models.

DB Schenker Logistics do also see specially developed IT systems as an important success factor. The IT systems must be integrated both internally and externally. As discussed by DB Schenker Logistics, the company is striving to integrate their customers' systems with the internal digital infrastructure to support their operations in an efficient manner. However, this is not possible for the B2C market of e-commerce. Instead, the IT systems needs to be developed to facilitate efficient sales to a huge number of customers purchasing low volumes.

### **The company has a user friendly website**

A majority of the interviewed actors highlight a user friendly website as critical for success. As MatHem argue, the website is the customer's tool for purchasing food online, and one of a few customer touch points, and it is therefore essential to keep user friendliness in focus. Otherwise the convenience might be harmed and customers may shop their food in a physical store, or through a competitor's website instead (Salehi et al., 2010). It is especially important for e-commerce of food product that the purchasing process is convenient because purchasing of food products are necessary and repetitive and the customers are often in contact with the website (Goethals et al., 2012; Vanelslander et al., 2013). ICA Group agree that the user friendliness of a website is critical for success, since it can be determinant for the competitiveness both between e-commerce and the traditional sales channel, but also between different e-commerce actors. A user friendly website is discussed as a success factor in the previous research as well, but on a more detailed level in terms of design of the website (e.g. Salehi et al, 2012; Maadi et al., 2016), easy order process (e.g. Ahrholdt, 2011; Benn et al., 2015), and availability of information (e.g. Bodini and Zanolli, 2011; Colla and Lapoule, 2012). It is important to not forget to make the website suited for mobile phones as well, due to the increased ordering from mobile devices (Balaraman and Chandrasekar, 2016; Yu Ling, 2014).

Jens and DB Schenker do also mention the website design as contributing to a user friendly website, and hence success. As DB Schenker state, the website interface is important since it determines how convenient the customers find the website, and how easy it is to get an overview of the offered services. It is interesting to notice that even though the information design is mentioned during two of the interviews the focus was generally larger on the order



process, which Bodini and Zanoli (2011) also emphasize. The authors argue that an easy order process is a more important aspect for reaching success compared to the design of the website. The criticality of having an easy order process is highlighted by several actors. Axfood, ICA Maxi, Mat.se, Jens and ICA Group stress how important the order process is for the user friendliness and success of an e-commerce website. The navigation paths provided, the speed and simplicity of the process and the payment solutions are some of the aspects to consider to develop a user friendly website, which is also stressed in the studied research (e.g. Colla and Lapoule, 2012; Bodini and Zanoli, 2011; Salehi et al, 2012; PostNord, 2016). The discussion by Mat.se regarding the possibility to only show the ecological assortment, is another example of how to create a user friendly website. By having such filtering possible for the customers, it becomes easier for customers to find what they are looking for, in this case ecological products. In addition, it is a way for the food actors to steer the customers towards more sustainable food habits. Since Goethals et al.'s (2012) and Colla and Lapoule's (2012) state that functions such as filtering and sorting possibilities which customers perceive as useful and easy to use facilitate increased sales, investments in such initiatives should be considered.

The navigation aspect of an easy order process, and hence user friendly website, is discussed by Benn et al. (2015). The authors point out that the navigation structure is critical for success and argue that the customers must feel comfortable with the structure and preferably recognize it. This is in line with ICA Maxi's ideas regarding creating a website structure which is based upon the physical shopping experience in their physical store. A virtual environment which is a copy how customer navigates in the physical store would fulfil the requirement Benn et al. (2015) mention, and create loyalty among the customers since the shopping experience is very similar between the different sales channels. In addition, Dhandel (2016) mentions that 66 % of all customers browse through the company websites before visiting a physical store, which also underlines the need for integration between the different channels.

The availability of information has large focus in the studied literature but is not mentioned as a critical component for success by the interviewed actors. The authors discuss the importance of accurate information (Bodini and Zanoli, 2011), product pictures (Benn et al., 2015), language (PostNord), and amount and presentation of information (Colla and Lapoule, 2012). One explanation why the actors do not mention these aspects could be that these are seen more as hygiene factors. It is obvious for the actors to present the information in Swedish, to include both product pictures and text and so on. However, it might also be that the actors have not realized the importance of these areas. It would maybe contribute to their growth if they rethink the balance between pictures and texts, or if they make sure that the stock levels are perfectly updated in real time on the website to avoid stock outs of products ordered online.

The actors who are picking the e-commerce orders in stores have issues with stock outs since customers purchasing in the physical stores affects the inventory levels which makes it hard to update the stocks in real time. Moreover, the e-commerce actors who deliver the same day as customer orders face similar difficulties since they usually purchase products from their

supplier based on already existing customer order for the next day deliveries. That is not possible if orders should be delivered the same day with the current set up for deliveries from suppliers and hence, there is a risk for stock out for the online actors as well. The B2C market for food products has improvement possibilities in this area since there is a gap between recommendations in the research and the focus of actors on the market. The only actor who mentions information availability as contributing to success is Mat.se. The company discuss how figures for CO2 emissions caused by each product could be used to make it easier for their customers to take informed decisions and to promote more sustainable food habits.

### **The company has a personalized website**

To have a personalized website, adapted to individual customers, is an identified success factor. There are different successful ways to create a personalized website discussed by the interviewed actors. Jens underlines that the personalization features should promote a convenient shopping experience for the customers, and hence make the purchasing process as quick and smooth as possible. Colla and Lapoule (2012) agree and discuss the level of interaction between the customer and the website interface. Jens discusses shopping lists, favorite products or suggestions based on previous orders as examples of features to use. From the perspective of DB Schenker, even the delivery alternatives presented should be different for different customers, based on information regarding their individual behavior and preferences.

Axfood do also mention that a good feature for personalization is to give suggestions based on identified favorite products which are often ordered by the specific customer. Furthermore, Axfood discuss suggestions of products which complements the already ordered items as an effective feature leading to a more personalized shopping experience at the same time as the likelihood of additional sales increases. Wilson (2016) also highlights this connection. ICA Maxi have the same reasoning and see possibilities for increased sales through personalized inspiration on the website. The personalization features ICA Group discuss is to provide relevant campaigns or recommendations, as well as a possibility for every individual customer to save their favorite items so they are easily and quickly found. Campaigns are discussed as beneficial for success by Dhandel (2016) and Ahrholdt (2011) since it generates new customers, which is a major goal in the growth phase. However, ICA Group discuss that they would like to improve how they work with personalization of the website since it is so essential for success. They are continuously trying to come up with new ideas of how to make the websites more personalized by using all information they have about their customers.

Mat.se take this discussion regarding personalization features on the website to the next level. Since Mat.se aim at developing a digital infrastructure which knows exactly what the customers need and want, without any new input from them, they strive towards ultimate personalization. Hence, Mat.se believe that it could be possible for customers to get the food that they want from Mat.se, without even ordering themselves. The IT system should do it for them. However, Mat.se are not there yet but working in that direction. Currently, focus is on offering different sorting and navigation alternatives, so that the customers can size down the content to be exposed to only the products which are relevant for their individual needs.

## 5.2. Prioritization of the identified success factors

In this section, a prioritization of the identified success factors is presented. The success factors are also analyzed from a time perspective, dividing the factors into different groups based on if they are most critical in the growth phase, in the maturity phase or throughout both phases.

### 5.2.1. Criticality of the identified success factors

Since it is of interest to see if there are some factors that are more critical for success than the others, a survey is conducted which is described in detail in section 4.1.4 *Survey*. In the survey, the respondents are asked to choose the six factors they see as most critical for success. Their answers are merged with the success factors identified and presented in section 5.1 *Identification of success factors*, and the result presented in Table 6 is generated. The factors in the top box are most critical. What should be remembered is that all factors presented in Table 6 contributes to success for e-commerce of food products, even if there now is a prioritization between them.

**Table 6.** *Prioritization of the success factors.*

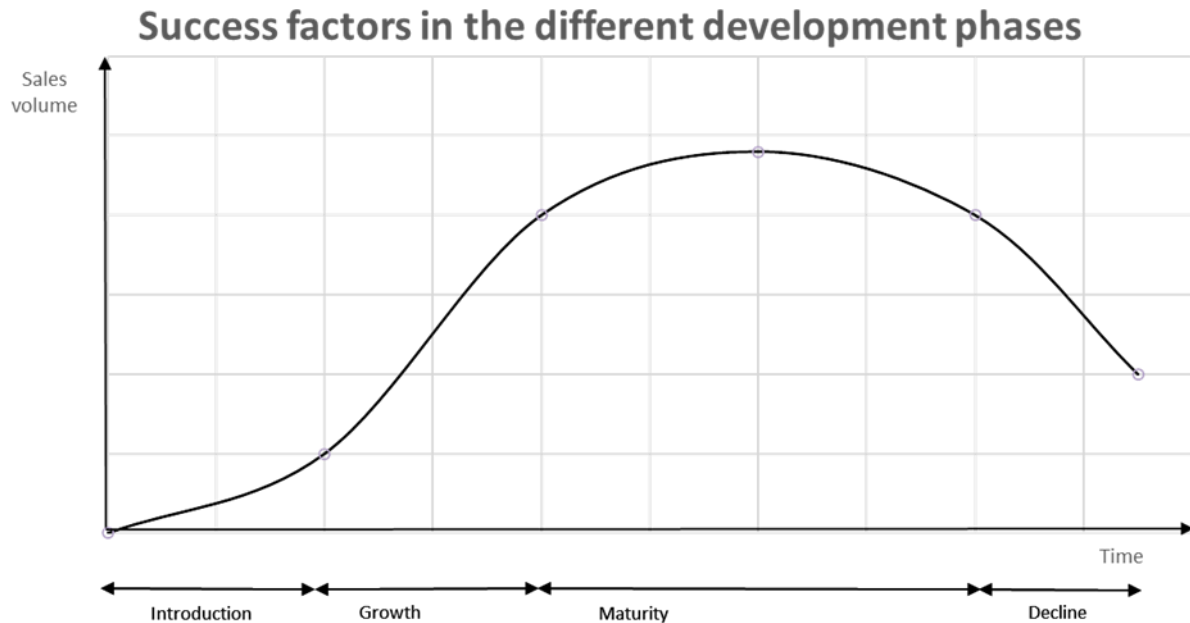
	Market related activities	Operations related activities	Digital infrastructure
1	Innovation Wide assortment	Right quality, quantity, and time	Specially developed IT systems User friendly website
2	Marketing competence High quality products Customer impact delivery time Transparent delivery information	Dark store	
3	Customer behavior information	Cost efficient distribution Consolidated deliveries Service minded chauffeurs Convenient delivery solutions Cover cost for distribution Educated picking personnel Automated warehouse	Personalized website

What can be seen in the result from the survey is that companies focus most on the market related activities and the digital infrastructure today. When being in the growth phase it is important to increase the volume, and attract new customers, that it probably why the market related activities are at the top. Almost all factors in the third level are operational related activities which means that the factors are important but not prioritized now. When being in the maturity phase, the profitability is more important and therefore, the operations related activities will most likely be more prioritized.

The prioritization of the identified success factors can be used as a checklist to support the identification of improvement possibilities among existing e-commerce actors, or when establishing a new e-commerce for food products. The factors in the top box are the first ones to be checked. If the customer has already implemented e-commerce but needs advice and support on how to improve the business, the list of success factors can be used as a tool to see if the e-commerce is designed in a successful manner or not. The customer may need to shift focus in some areas, to for example invest more in the factors identified as most critical for success. Moreover, since all factors identified contributes to success, if some of the factors are missing that is an indication on improvements needed. If the company wants help to start up a new e-commerce, the checklist can be used for knowing how to start and what to focus on. When being good at the factors in the top box, the factors on the next level can be implemented, and then the last level to reach success with the e-commerce.

### **5.2.2. Criticality of the identified success factors in the different development phases**

Since it is of interest to analyze if the criticality of the identified success factors changes as the market develops, an analysis based on the different development phases presented in section 2.2. *Definition of success factors during the different phases of the product lifecycle* is conducted. Only the growth phase and the maturity phase is discussed since the e-commerce of food products has already passed the introduction phase, and the decline phase can be considered too distant from the current market development phase. In Figure 13, the success factors which are the most critical in the growth phase, the maturity phase, or in both phases are presented. In the figure stands M for market related activities, O for operations related activities and D for digital infrastructure. The connection to the three categories market related activities, operations related activities and digital infrastructure are also illustrated.



Growth phase		Maturity phase	
<b>M</b>	Innovation Marketing competence Customers impact delivery time	<b>O</b>	Consolidated deliveries Cost efficient distribution Educated picking personnel
<b>D</b>	Specially developed IT systems User friendly website		Automated warehouses Cover costs for distribution Darkstore
Growth phase and maturity phase			
<b>M</b>	High quality products Wide assortment Transparent delivery information Customer behavior information Service minded chauffeurs		
<b>O</b>	Convenient delivery solutions Right quality, quantity, time		
<b>D</b>	Personalized website		

**Figure 13.** Success factors in the different development phases.

During the growth phase, the dominant measure of success is increased sales and gaining an increased customer base (Yoo, 2010; Saskia et al., 2016; Maras, 2014). Hence, marketing competence, customers impact delivery time, specially developed IT-systems and user friendly website are the identified success factors which are the most relevant during the growth phase. Marketing is critical since it increases the awareness of the company's offerings among potential and existing customers. As Levitt (1965) argues, increased awareness tends to lead to increased sales. In addition, it is beneficial if several e-commerce actors invest in marketing during the growth phase, since it can generate increased sales for

the market as a whole (Klepper, 1996; Levitt 1965). In accordance with Klepper's (1996) reasoning, the innovation rate is high during the growth phase. Hence, it is critical to search for new innovative solutions to stay competitive on the market and increase sales. Specially developed IT systems are closely related to the innovation rate and are therefore also most critical during the growth phase. Since the growth implies frequent changes and actors are striving to find the optimal solution, it is essential to be able to update the IT systems quickly and smoothly to support the business processes. The success factor regarding user friendly website is also identified as most critical during the growth phase. The reason is that new customers should easily be able to get an overview of the website, navigate and find what they are looking for. If the customers experience the website as user friendly they will be willing to learn the navigation processes and hence the company will increase their customer base. It is only success factors related to market activities and digital infrastructure which are critical for the growth phase. It can be explained by the general focus on sales volume, market share and customer base during this phase. Hence, the more cost and efficiency oriented factors are not prioritized when the business is growing.

In the maturity phase, the profitability is in focus (e.g. Hübner et al., 2016; Maras, 2014). The sales increases during the growth phase and when the volumes become high and begin to stabilize, the maturity phase have been reached. To reach the maturity phase it is critical for the business to be able to scale up accordingly and handle the volumes in a sustainable manner. Profit must be generated, otherwise the company will not survive in the long run. Hence, while the sales increases, it is of interest to make sure that the margin cost do not increase as much to secure economies of scale. As Yoo (2010) and Levitt (1965) argue, the price competition becomes more intense in the maturity phase because of increased standardization on the market and the cost efficiency becomes critical for the profitability. The identified success factors which are focused on cost reduction and efficiency are most important during the maturity phase. Consolidate deliveries, cover costs for distribution, cost efficient distribution, educated picking personnel, automated warehouses and dark store are therefore the most critical success factors in this development phase. This implies a total shift in focus compared to the success factors in the growth phase. Operations related activities are prioritized instead of the factors related to market activities and digital infrastructure. This also explains why the studied companies ranked the factors related to market activities and digital infrastructure higher than those related to operations. The companies are currently in the growth phase and are struggling with those issues regarding how to increase the sales volumes and develop a competitive solution for their customers. However, this connection should be thoroughly considered since it means that no company will be able to successfully enter the maturity phase without shifting focus towards more efficiency oriented aspects. The identified success factors related to operations activities must be prioritized to facilitate the development. Even though these factors are not the ones to prioritize today since the companies need to grow more, attract a larger customer base, and optimize the digital infrastructure first, strategies for how to approach the operations related factors that lead to success in the maturity phase should be developed soon to be prepared for entering the next phase.

There are some factors which are essential for success both in the growth phase and in the maturity phase. It is critical to make sure that the customers are satisfied over time and stay with the company. Hence, the companies need to offer high quality products and a wide assortment of products to their customers. Those success factors are important in the growth phase since customers will not purchase if they are not satisfied with the products offered. In the maturity phase, those factors are important as well, since customers will purchase from a competitor if the product quality or the width of the assortment decreases. Moreover, to make sure that customers are satisfied, the companies need to collect information regarding customer behavior to know the customer needs and how to improve the business. Customer behavior information is essential in both development phases to maintain the customer base. Customer satisfaction is also closely related to customer reception, and hence the chauffeurs need to be service minded both when the company is growing and when the market becomes more mature. Since the e-commerce is very much about creating convenience for the customers, the convenience should be in focus in both development phases. Convenient delivery solutions, transparent delivery information and deliveries performed in the right quality, quantity and time are therefore success factors which are always important to secure. The customers should be able to find a delivery alternative that matches their needs and is convenient for them. They should know when the food bags will arrive and where, and the deliveries should be performed as promised. Otherwise it will not be convenient for the customers and they will be dissatisfied no matter if the market is growing or is mature. A personalized website creates also a convenient shopping experience for the customers through for example personalized offerings, sorting and filtering options, and is therefore contributing to success in both development phases.

## 6. Conclusion

The aim of this Master's Thesis is to identify the success factors for B2C e-commerce of food products, and to give recommendations on which factors to prioritize for improving the e-commerce business. The 19 identified success factors are presented below. The success factors can be divided into three categories, market related activities, operations related activities and digital infrastructure.

There are seven success factors connected to market related activities identified. Those success factors are presented and described in Table 7.

*Table 7. Identified success factors connected to market related activities.*

Success factor	Description
<b>The company is innovative and develop new solutions</b>	To be innovative and develop new solutions is important since the e-commerce is in the growth phase and the best solutions have not come up yet. The actors need to attract new customers and find out what suits them best.
<b>The company has good marketing competence</b>	Marketing competence is essential to attract new customers and for the company's growth and success. It is important to know how to attract new customers in the best way and how to align different marketing activities towards different customer segments.
<b>The company collects and uses information about customer behavior</b>	Information regarding customer behavior should be collected and analyzed to understand the customer needs and develop services that matches those needs. The company must be aware of changes in customer behavior, to adopt their offerings and show the customers that they care about them. It is critical to know the customer behavior to enable convenience for the customers.
<b>The company offers high quality products</b>	The quality of the products is important for success of the e-commerce. When purchasing in a store the customers can feel and touch the food and to choose the one that looks best. When purchasing online it is not possible and all the food products that are delivered should be fresh when they arriving to the customers. This is especially important for fruit and vegetables.
<b>The company offers a wide assortment of products</b>	To have a wide assortment is critical for success due to that if the customer cannot find a specific product they are looking for, they will probably not buy the rest of the food products online either. It is easy to switch to another website online to purchase from if the product can be found there instead. The e-commerce actors have the possibility to offer a wide assortment without too high costs because they can order based on customer orders.



<b>The company lets the customers have impact in delivery time</b>	To let the customers have impact in delivery time is a success factor for e-commerce. The customers should freely choose the delivery time and the time slots should not have the possibility to be full. The time windows must be as short as possible, the deliveries should mainly be made during evenings and the deliveries should be able to be performed as soon as possible. This to create the most convenience for the customers.
<b>The company has transparent delivery information</b>	To have transparent delivery information is important for e-commerce success. Customers demand information sharing to have the possibility to control and follow their deliveries. If something happens so the delivery will not follow the stated delivery time, deviation notices must be send out. For food, this is especially important because of the temperature requirements, someone must pick up the delivery so the food will not the damaged.

In Table 8 below, the identified success factors connected to operations related activities are presented. There are nine success factors identified in this category and those factors are described in the table.

*Table 8. Identified success factors connected to operations related activities.*

<b>Success factor</b>	<b>Description</b>
<b>The company has cost efficient distribution</b>	The distribution generates high costs for the e-commerce channel. Hence, the distribution should be performed as cost efficient as possible and one important aspect is therefore to have as high fill rate in delivery vans as possible. The fill rate can be increased with efficient route planning or through steering the deliveries towards certain time windows to increase the number of orders to be delivered in a certain geographical area during a specific time window.
<b>The company delivers right quality, quantity, and time</b>	To be able to deliver what the company has promised the customer is highly important for e-commerce success. The customers need to receive what they ordered in the right quality, quantity, and in the stated time. If the customers do not get the right product when expected there will probably be no trust for the company and they will not purchase online again.
<b>The company consolidates food deliveries to increase the fill rate in distribution vans</b>	Consolidation of deliveries contributes to success since it increases the fill rate in the delivery vans and thereby decreases the cost per order which is essential because of the low margins for food products. If several actors use the same external partner for the deliveries, who fulfil the requirements for food deliveries and hence contributes to high customer satisfaction, the volumes to be delivered will increase and the associated costs will decrease.

<p><b>The company has service minded chauffeurs</b></p>	<p>The customer experience is of essence, and for home deliveries the chauffeurs are the only representatives from the company the customers meet. Hence, the chauffeurs must be service minded and facilitate customer satisfaction.</p>
<p><b>The company offers delivery solutions that are convenient for the customers</b></p>	<p>The delivery alternatives should be as convenient as possible for the customers. Hence, there is no delivery solution which is more successful on a general level, but the delivery solutions to offer should be developed based on information from the targeted customer segment. If the deliveries are not perceived as convenient by the customers there is a risk that they abandon the e-commerce channel.</p>
<p><b>The company uses distribution fees to cover costs for picking and delivery</b></p>	<p>Since e-commerce generates high distribution costs, it is critical for success to cover those costs. The distribution costs can be included in the product prices, or by adding a fee for picking and delivery. Another alternative is to find new, more efficient, ways to distribute the food products and hence being able to offer the products at the same prices as in physical stores. For example, through delivering products with higher margins together with the food products to cover the costs.</p>
<p><b>The company performs picking in a dark store</b></p>	<p>To perform picking in a dark store is critical for success since the picking process can be optimized and hence more efficient and less costly compared to picking in stores. E-commerce orders of food usually consists of 40-60 products which implies high complexity and hence it is of essence to perform picking in a warehouse designed for online orders. The risk for errors and stock outs can be minimized.</p>
<p><b>The company has specially educated picking personnel</b></p>	<p>Educated picking personnel is critical for success of e-commerce. If the pickers do not know how to pick the picking will be inefficient and there is a high risk of errors in picking the wrong product, which has a high effect at the costs.</p>
<p><b>The company has automated warehouses</b></p>	<p>Automated warehouse is a factor critical for success. If the warehouse is automated the picking will be more efficient since the speed of picking will increase and thereby the cost per pick will decrease. The high investments are a drawback though. A good start would be to combine automation with some of the processes still manually operated.</p>

In the third and last category, digital infrastructure, three success factors are identified. Those success factors are presented and discussed in Table 9.

*Table 9. Identified success factors related to the digital infrastructure.*

Success factor	Description
<b>The company has specially developed IT-systems</b>	To have a specially developed IT-system is of high importance for e-commerce success. It is especially important in the growth phase, for the companies to make sure that they can react fast to changes and thereby simultaneously update their processes, website, and underlying systems.
<b>The company has a user friendly website</b>	The website is one of few customer touchpoints an e-commerce actor has and it has therefore to be user friendly for success. For the food actors, it is especially important since the characteristics of purchasing of food is repetitive and necessary and the customers are often in contact with the ordering process. How the website interface is, how easy it is to get an overview, the order process, navigation paths and filtering are important factors to consider.
<b>The company has a personalized website</b>	A personalized website contributes to success of e-commerce since it makes the shopping experience fast and convenient for the customers. The website should for example contain a shopping list, saved favorite products, suggestions based on previous orders and campaigns that are relevant for the customer. The delivery alternatives presented must be suited for the specific customer.

To be innovative, offer a wide assortment of products, deliver right quality quantity and time, to have specially developed IT systems, and a user friendly website are the most critical success factors today. Hence, it is recommended that e-commerce actors prioritize the success factors which are related to market activities or the digital infrastructure. However, as the market develops, the focus must change towards success factors related to operations activities. Even though those factors are less critical for success in today's environment, those are determinant for long term success. The market for e-commerce of food products is currently in its growth phase. Hence, actors are striving to increase their sales volumes, customer base and market share. To achieve their goals, they are investing in attracting more customers and therefore the market related activities are of interest for improvement. Since the digital infrastructure is an essential part of the e-commerce offering, the actors are investing in their digital solution is the growth phase as well. Without a convenient digital interface, customers will not be attracted. Hence, the prioritization, showing that factors connected to market related activities and digital infrastructure is a result of the issues the actors are dealing with today and therefore the prioritization will change over time as the market develops.

To become successful in the long run, the business must generate profit. Hence, it is not enough to only have high sales volumes, the costs must be at a reasonable level as well. To become successful in the maturity phase, with relatively stable sales volumes and even more intense price competition, the actors must focus on cost efficiency. Consolidate deliveries, cover costs for distribution, cost efficient distribution, educated picking personnel, automated warehouses and dark stores are therefore the most critical success factors in the maturity phase. So even though the e-commerce actors currently are in the growth phase, and should prioritize to invest in the success factors related to market activities and digital infrastructure, it is beneficial to plan for the next development stage now already.

In addition, there are some factors which are critical for success both in the growth phase and the maturity phase. The factors are successful in both phases since they contribute to maintained customer satisfaction and a feeling of convenience which is the core of e-commerce. High quality products, a wide assortment of products, transparent delivery information, customer behavior information, service minded chauffeurs, convenient delivery solutions, deliver the right quality, quantity and time, and personalized website are the success factors which are important in both development phases.

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# Appendix 1 - Coding of success factors from previous research

In this appendix, the grouping of words and phrases is shown to show how the success factors presented in the theoretical framework were identified.

## **Market related activities**

Success factors related to market activities can be seen below.

### **The customers should have impact on the delivery time**

Same day deliveries

(Delivery) quality is in focus

Fast delivery

### **Transparent delivery information**

Transparent traceability system

### **Use information regarding customer behavior**

Understand customer needs

Identify what information customers are looking for

Services that are easy to understand and simple to use

Price sensitivity

Customer groups

Collect and analyze customer information

### **Good customer reception**

Quality of the customer reception

Reception

### **Wide assortment of products**

wide assortment of products

### **Create trust**

Trust

Data privacy policy

Fulfilment

Trust

## **Operations related activities**

The success factors related to operations are presented below.

### **Efficient logistics**

Reduce cost for the logistic processes and for incoming material

Efficient logistics model

Delivery process should be as efficient as possible

### **Perform picking in a dark store**

Centralized distribution hub

Picking can only be done in an efficient manner if a dedicated picking center is used

Efficient picking process

### **Offer several delivery solutions**

Click and collect solutions as a complement

### **Deliver the right quality, quantity, and time**

Delivery time accuracy

On-time deliveries

Timeframe specified by the customer

Reliable delivery

Product availability

Products that are in the same quality as it stated to be on the website

Match their quality expectations.

Storage shortages should be avoided

### **Use a fee for the delivery to cover additional costs**

Balance between the cost generated and the service offered

Willingness to pay for the service is created among customers.

Proper price/quality ratio

Price when ordering online should not be higher than in physical stores

## **Digital infrastructure**

Below, the success factors related to digital infrastructure are presented.

### **Website design**

Design of the web site

Visual design and the information design

General layout

Website design

Website design quality

### **Easy order process**

Structure of the web site

Structure

Easy to use

Navigation

Simplicity of a web site

Browse categories

The special offer pages  
Structure  
Search bar  
Simplicity and quality (order system)  
Checkout process  
Offer several alternative payment solutions

### **Availability of information**

The information presented  
Information provided on the web page should be accurate and up to date  
Local language.  
Customer service should also speak the local language  
Information should be presented in a way that makes it easy for the customers to find  
Amount of information available

### **Specially developed IT systems**

Software tools that are updated, to support the logistic model

### **Personalized website**

Website interface should also be as interactive  
Association product offerings  
Suggest other products which may be of interest for the customer  
Special offers

# Appendix 2- Interview guideline

To support the semi-structured interviews, an interview guide is prepared. The interview guide is slightly adopted to which company that is being interviewed and their position in the supply chain, but the themes are in common. The questions are formulated to support the answers to the first research question of this Master's Thesis. It is essential to first gain an understanding for how the company define a success factor. Moreover, the interviewee gets quite broad questions to start with to not influence in any certain direction when it comes to questions regarding success factors. Thereafter, some of the questions is formulated based on the factors identified as potential success factors from the literature to support a comparison.

## **Development of the e-commerce offering**

- How has the e-commerce developed over time?
- How do you differentiate from your competitors?
- Do you experience any competition between the e-commerce and the physical store, or do you see it more as the e-commerce compete with other e-commerce stores?

## **Success factors**

- How do you define success for your e-commerce?
- What factors are most successful for your e-commerce?
- Have you faced any failures in your e-commerce?

## **Economy**

- Does your e-commerce generate profit?
- If you offer free deliveries, how do you cover that costs?
- How are the margins for the e-commerce segment?
- Do you experience higher or lower logistics costs with the e-commerce?
- How big investments are needed for e-commerce?

## **Competence**

- What partners do you collaborate with?
- Are there any specific areas you need to improve in?
- What challenges are you facing now?

## **Remaining areas for discussion (if they have not been covered before in the interview)**

- Home delivery/ Pick up points
- Dinner Solutions/ Own Choice
- Cost for delivery/ Higher cost for the price of the food
- Customers demand / Efficient logistics
- Website design
- User friendly website
- Customer behavior
- Customer service
- Pick in the store / Dark store
- Marketing

# Appendix 3 - Coding of success factors from interviews

In the following chapter, the words and sentences indicating highlighted success factors from the different interviews are grouped into common themes. The headlines show the identified success factors from the empirical data and hence also how they have been identified. The identified success factors are structured based on the three categories Market related activities, Operations related activities and Digital infrastructure.

## Market related activities

Below, the grouping of themes connected to market related activities is presented.

### **The company is innovative and develop new solutions**

Be aware of and adapt to changes

Innovatively

Test innovative solutions

Be innovative and use new technology for distribution

Develop the offering to the customer

Innovatively

### **The company has good marketing competence**

Marketing

Marketing competence

Reach new customers through marketing in stores

Marketing

Marketing competence

Marketing

### **The company collects and uses information about customer behavior**

Customer focus

Customer satisfaction

Listen to the customer needs

Know the different customers need

Analyze information about customer behavior

Every delivery must be a surprise and feel fresh

Act on customer information and customer needs

Access to customer information

Awareness of changes in customer behavior

### **The company offers high quality products**

Quality

Quality of products

Product quality

The food must taste good

Ecological food

Fresh food

High quality products

**The company offers a wide assortment of products**

Product assortment adjusted on local level

Large product assortment

Balance between wide assortment and not too many choices

Same local assortment online

Local products included

**The company lets customers have impact in delivery time**

Free choice between time slots for delivery

Evening deliveries as standard

Deliveries during weekend

At latest next day deliveries

Max. 2 hours' time slots

Fast deliveries

Delivery flexibility

Frequent deliveries

Let customers decide the delivery time

Fast deliveries

**The company has transparent delivery information**

Transparency regarding delivery date when ordering

Track and trace online

Track and trace online

Real time deviation notices

**Operations related activities**

Below, the grouping of themes connected to operations related activities is presented.

**The company has cost efficient distribution**

Efficient logistics

Steer deliveries towards certain time windows

Effective route planning

Route planning

Efficient route planning

Efficient logistics

**The company delivers right quality, quantity, and time**

On time deliveries

Deliver on-time

Delivery accuracy

Deliver right quality

Deliver right quality and quantity

On time deliveries

Deliver right quantity and quality

Deliver as promised

**The company consolidates food deliveries to increase the fill rate in distribution vans**

Consolidate volumes from different food actors for home deliveries (3PL)

Coordinated deliveries requested by the customers

High utilization of the delivery vans

**The company has service minded chauffeurs**

Service minded chauffeurs

Service minded chauffeurs

Service minded chauffeurs

**The company offers home deliveries as major delivery solution**

Home deliveries

Home deliveries

Home deliveries

Home deliveries

Home deliveries

**The company offers pick up points as major delivery solution**

Pick up points

Pick up points

Click and collect

**The company offers several alternative delivery solutions**

Offer several delivery options

Several delivery options

Reasonable number of alternatives for distribution

Flexible delivery solutions

Home delivery as an option

Home deliveries as an option

Home deliveries as an option

Offer several delivery solutions

**The company uses distribution fees to cover costs for picking and delivery**

Cover distribution costs

Cover cost for deliveries

Delivery fee

Delivery fee

Good price in relation to the customer value

Increase the product prices to cover distribution costs

Delivery fee

**The company performs picking in a dark store**

Efficient dark store for online channel

Efficient picking in dark store

Dark store

Combine picking in dark store with store as pick up point

Avoid picking in store

Pick in store up to a certain volume

Warehouse designed for picking

### **The company has specially educated picking personnel**

Specialized picking personnel  
competent picking personnel

### **The company has automated warehouses**

Automation  
IT automation in combination with manual processes

## **Digital infrastructure**

Below, the grouping of themes connected to digital infrastructure is presented.

### **The company has specially developed IT systems**

Own IT platform  
Update IT systems quickly  
Own IT system development  
External IT system connection  
Internal IT development  
Internal IT system development  
Specially developed IT systems

### **The company has a user friendly website**

Easy to navigate on the website  
Easy to find products  
Easy to find  
Easy to find  
Filtering and sorting of the website content  
Easy to pay  
Easy check out process  
Website design  
Clear website interface  
Fast and easy to order online  
User friendly website

### **The company has a personalized website**

Personalized offerings on the website  
Personalization of the website  
Personalize delivery suggestions  
Personalization  
Promotions and recommendations that are relevant for the customer  
Relevant to the customers  
Suggestions on complementary products  
Shopping lists  
Use information regarding earlier purchases  
Possibility to save favorite products  
IT system forecasting individual customer needs  
Website designed for enabling inspiration



## Appendix 4- Result from the survey

The results from the survey is here presented (see Table 10) on the question about which factors are most important for success in the e-commerce business the actors have today. The answers are based on six respondents.

*Table 10. The result from the survey based on the company context.*

Success factor	Answers
The company is innovative and develop new solutions	83%
The company delivers right quality, quantity, and time	83%
The company has a user friendly website	67%
The company let customers have impact in delivery time	67%
The company has specially developed IT systems	50%
The company offers high quality products	33%
The company offers a wide assortment of products	33%
The company has good marketing competence	33%
The company performs picking in a dark store	33%
The company collects and uses information about customer behavior	33%
The company offers several alternative delivery solutions	17%
The company has cost efficient distribution	17%
The company has transparent delivery information	17%
The company has a personalized website	17%
The company has specially educated picking personnel	0%
The company has service minded chauffeurs	0%
The company uses distribution fees to cover costs for picking and delivery	0%
The company consolidates food deliveries to increase the fill rate in distribution vans	0%
The company offers home deliveries as major delivery solution	0%
The company offers pick up points as major delivery solution	0%
The company has automated warehouses	0%

# Appendix 5 - Factors that do not contribute to success

The respondent in the survey got the opportunity to give input if some of the defined factors stated in the survey that they see as not contributing to success. The answer is based on six respondents and is presented in Table 11.

*Table 11. The result from the survey with factors that do not contribute to success.*

Success factor	Answers
The company offers pick up points as major delivery solution	50%
The company has good marketing competence	17%
The company has specially developed IT systems	17%
The company offers high quality products	17%
The company offers a wide assortment of products	17%
The company collects and uses information about customer behavior	17%
The company has automated warehouses	17%
The company offers several alternative delivery solutions	17%
The company has specially educated picking personnel	17%
The company has cost efficient distribution	17%