



# **Challenges of COVID-19 on the e-commerce processes of a major retailer**

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<p>Abstract:</p> <p>The COVID-19 pandemic altered consumer behaviour and accelerated the expansion of e-commerce. It has made a broad spectrum of products available to customers from their homes and allowed firms to keep operating despite restrictions. Although e-commerce and digitalization are a key area of business for most companies today, the impacts of COVID-19 were unexpected, and happened virtually overnight. The objective of this study was to investigate the impacts of the pandemic on online consumer behaviour and, consequently, the effects on the e-commerce processes of a major Finnish retailer. In addition, the research aims to get an understanding of the post-COVID prospects of e-commerce and online consumer behaviour. The aim of the empirical research is to answer the following research questions: How has the pandemic affected online consumer behaviour and the e-commerce processes of the company? What has changed? What measures have been taken? What are the post-pandemic expectations?</p> <p>The empirical research was conducted as a qualitative case study. The data was collected through online semi-structured expert interviews with e-commerce specialists employed by the company, between February and May 2021. The data analysis was done using a thematic analysis method.</p> <p>The results of this research indicate that, as a result of the surge in demand, e-commerce took a leap of several years and became the new normal. Many customers who had previously shied away from online shopping became acquainted with it and found new consuming habits. In addition, the general understanding of the importance of e-commerce and online shopping increased. Although it involved a considerable amount of work and strict schedules, solutions were implemented, and the development of processes was accelerated.</p>	
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# 1 INTRODUCTION

The choice of research topic for this thesis was based on current and recent events, starting in March 2020, when restrictions were first applied due to COVID-19. As the virus started to spread rapidly around the globe, strict actions had to be taken in an attempt to restrict transmissions. Lockdowns were applied and residents were encouraged to keep a safe distance from other people. As a result, even conventional grocery shopping was considered risky. Following this, the popularity of online shopping reached new heights, as people changed their shopping habits from visiting physical stores to shopping from the comfort and safety of their own homes. To respond to the new levels of demand, retailers have had to re-evaluate their e-commerce processes and capacity.

## 1.1 Research problem and purpose of the study

The COVID-19 pandemic greatly altered consumer behaviour and shopping at a record pace. Although e-commerce and digitalization are a key area of business for most companies today, the impacts of COVID-19 were unexpected. This thesis aims to investigate how the pandemic changed online consumer behaviour and as a result, some of the e-commerce processes of a major Finnish retail company, and what actions the company has taken to meet the new level of demand. In addition, the research aims to get an understanding of what e-commerce and online consumer behaviour will look like post-COVID-19.

The aim of the empirical research is to answer to the following research questions:

- How has the pandemic affected online consumer behaviour and the e-commerce processes of the company?
- What has changed?
- What measures have been taken?
- What are the post-pandemic expectations?

## **1.2 Structure of the thesis**

Chapter 2 consists of the theoretical framework, which provides background information on the topic. The research method used is presented in chapter 3, and the findings are presented and discussed in chapters 4 and 5.

## **1.3 Limitations**

The study is a case study limited to one retail company and its online operations within the hypermarket and grocery business. The research is focused on specialists working with tasks related to e-commerce for the company and a co-operative of the company, whose offices are based in Helsinki, Finland.

# **2 THEORETICAL FRAMEWORK**

## **2.1 COVID-19**

COVID-19 is “an infectious disease caused by a newly discovered coronavirus” (World Health Organization, 2021). Most patients experience mild or moderate respiratory symptoms and recover without special medical attention. Senior citizens, and people with underlying medical problems, such as cardiovascular disease, diabetes, or cancer, have a higher risk of developing serious illness. According to WHO, the risk of the virus spreading is higher in crowded spaces with inadequate ventilation, where potentially infected people spend time in close proximity, especially indoor settings where people talk loudly, sing, or breathe heavily. In these settings, the virus appears to spread more effectively, by respiratory droplets or aerosols. WHO recommends avoiding 3C: s; closed or crowded spaces, and those that involve close contact. If crowded or indoor environment cannot be avoided, precautions such as wearing a mask, and practicing good hygiene, should be taken. (World Health Organization 2021)

## 2.2 S Group

S Group is a network of companies, owned by customers, operating in the retail and service areas. The company consists of SOK, the Central Finnish Cooperative Society, its subsidiaries, and cooperatives, with more than 1800 outlets in Finland, and additional outlets in Russia and Estonia. The outlets consist of supermarkets, department stores, speciality stores, service stations and fuel sales, travel and hospitality, and hardware. Additionally, some cooperative regions include car dealerships and agricultural outlets. S Group comprises 19 independent regional cooperatives, SOK, and 6 local cooperatives. SOK is owned by the cooperatives and serves as the central company. It provides the cooperatives with procurement, and expert and support services. In addition, SOK oversees strategic guidance, and developing various chains. SOK Corporation comprises SOK and its regional and national subsidiaries. S Group's business operations consist of 900 retail outlets throughout Finland, including Prisma hypermarkets, S-market supermarkets, Sale and Alepa convenience stores, and ABC service stations, some of which house Sale, Alepa, S-market, or ABC-markets. The department store operations consist of SOKOS department stores and Emotion speciality beauty stores. The hardware business comprises the Kodin Terra and S-Rauta chains. The travel and hospitality business includes Sokos Hotels and Radisson Blu chains, as well as S Group's individual and chain restaurants. The S Group also includes the Finnish bank S-Bank. In addition, operations include Prisma hypermarkets and Sokos Hotels in Russia and Estonia. (S-ryhmä 2021b, 2021c, 2021d)

### 2.2.1 S Group's e-commerce process in brief

Grocery orders are placed online at [www.foodie.fi](http://www.foodie.fi) or [www.s-kaupat.fi](http://www.s-kaupat.fi), the new platform for online groceries, which is due to replace Foodie. Orders can be picked up from a brick & mortar store or a distance pick-up location, or delivered to the address of choice, which determines the store where the order will be picked. Next, a delivery slot is selected. If the customer has signed into the system, they may start by placing an order for a single item and edit the order later. This reserves the selected delivery slot, even if the customer cannot add all desired items to the shopping basket at once. At Foodie.fi, orders can be placed for the following 7 days at a time, for stores that only accept online payments. For stores that accept payment upon pick-up, the

orders can be placed further. New order slots open 7 days prior to, in the early hours, or exactly 7 days in advance when the selected slot begins, depending on the channel used (online, iOS, or Android.) The final price of the order is determined by product replacements done according to the customer's consent, and specified prices for weighed items. A larger covering of funds (+15%) is done at the time of ordering, and rectified once the order is picked and the final amount is known. At s-kaupat.fi, orders can be placed up to 30 days in advance, payment is done upon ordering, and the final order price is charged once the order has been picked. A smart shopping list helps find items that a customer normally buys in the brick & mortar stores. Instructions can be given to order pickers and drivers, as well as permission to replace an unavailable item. Comments can be added per product, to inform which products can be used as replacements. As a rule, in order to guarantee freshness, orders are picked on the day of delivery, starting at 6 AM. In some stores, picking may start at night, and customers are requested to complete their orders by 8 PM. (Foodie 2021, S-Kaupat 2021)

### Ensitalaajan ohjeet



Figure 1. Order process of S-kaupat.fi (S-kaupat.fi 2021)

For Prisma.fi consumer goods orders, the store picking functions use the store picking data system on an iPad, a store picking trolley, a scanner, and boxes labelled with codes. Several different orders can be picked on the same round, which increases the effectiveness of the process. Once the items have been collected, the paperwork for delivery is handled, and the orders packed. Consumer goods orders can be picked up in-store, or delivered to an address of choice or a Posti pick-up location. (Prisma 2016, S-ryhmä 2020)

## 2.3 E-commerce

Mourya & Gupta (2014 p. 23) describe electronic commerce, also known as e-comm or e-commerce, as the process of buying, selling, or exchanging products, information, and services, using computer networks such as the internet. Chaffey et al. (2019) define e-commerce as “all electronically mediated information exchanges between an organisation and its external stakeholders” (Chaffey et al. 2019 p. 11). From the customer, or buy side, perspective “the purpose of e-commerce is to enable customers to locate, choose and purchase a desired good or service without visiting a host of shops. E-commerce is a cheap and quick means to do home shopping by accessing virtual shops worldwide” (Briffaut 2015 pp. 118-119).

Schneider (2007) describes the history of electronic commerce, starting in the mid-1990s, followed by a rapid growth, also known as the “dot-com boom”, until 2000, when a major decline, or the “dot-bomb”, occurred. In 2003, e-commerce began to resurrect, also known as the second wave of e-commerce. Schneider states that “although the rapid expansion and high levels of investment of the boom years are not likely to be repeated, the second wave of electronic commerce is well under way” (Schneider 2007 p. 4). Further, Schneider explains the different categories of e-commerce, determined by participating entities. The most commonly used categories are business-to-consumer (B2C), business-to-business (B2B), and transactions and processes between organizations, companies, and governments, that use internet technologies to support activities involving selling and purchasing. (Schneider 2007 pp. 4-5)

Mourya & Gupta describe B2C or business-to-consumer e-commerce, which involves a business organization as a seller, and a consumer as buyer (see Fig. 2). This type of e-commerce mimics traditional, physical retailing, and is therefore commonly known as electronic retailing. B2C e-commerce is typically done exclusively through the internet, where an electronic store can be found. (Mourya & Gupta 2014 p. 44)

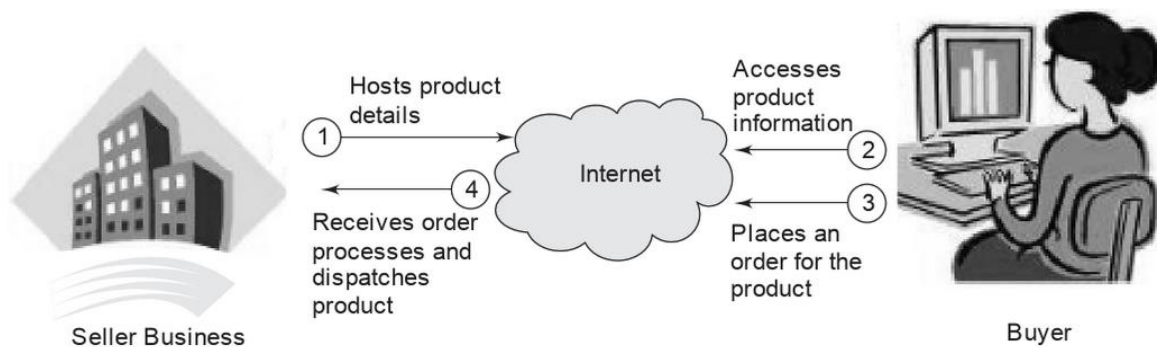


Figure 2. B2C Model (Mourya & Gupta 2014 p. 44)

The elements of e-commerce are presented in Fig. 3. The goal of *marketing* is to engage potential buyers to enter a website. This is done for instance by internet advertising or email. *Customers* are crucial for e-retailers. There are two types of purchases; those between businesses, where the buyer is a business, and those between a business and a customer. A business site is downloaded when a *customer enters a website*, and the retailer can track them, and create profiles, which can be used for suggesting products that the customer has most interest in. Next, the customer finds and *views the product*. There is a *shopping cart* or basket in the webstore, essentially a list of items that the buyer *has added to the basket*, which provides convenience and ease for the customer while shopping. There are usually options for deleting items, altering quantities, and clearing the basket altogether. Once the customer has selected their items, they start the billing process, also known as *the checkout*. Usually, when customers buy from businesses, they will enter their shipping addresses, and billing details. Next, *shipping charges* are applied, and may be linked to a provider for tracking the goods during transit. Once the total value of the items, including tax and shipping have been calculated, *payment methods* are presented to customers. There are different options depending on the transaction. Between

customers and businesses, payment is commonly done by credit card, or after delivery. Credit cards can be processed offline, or online, which is provided by reputable companies. Once the order has been completed, a receipt, such as a reprint of the order, may be sent to customers. In addition, customers can be provided with options on information about order status, inventory, or supply status of items. *Order processing* includes picking and packing orders in a warehouse or brick & mortar store. Order fulfilment entails that valid orders need to be done as soon as they appear. According to Roger, this may be the most challenging stage of business, and challenges may appear with making an inventory. Lastly comes the shipping of goods to customers. This may include providing order status to customers, which involves different carriers for tracking shipments. (Roger 2019, Weatherwax 2021)

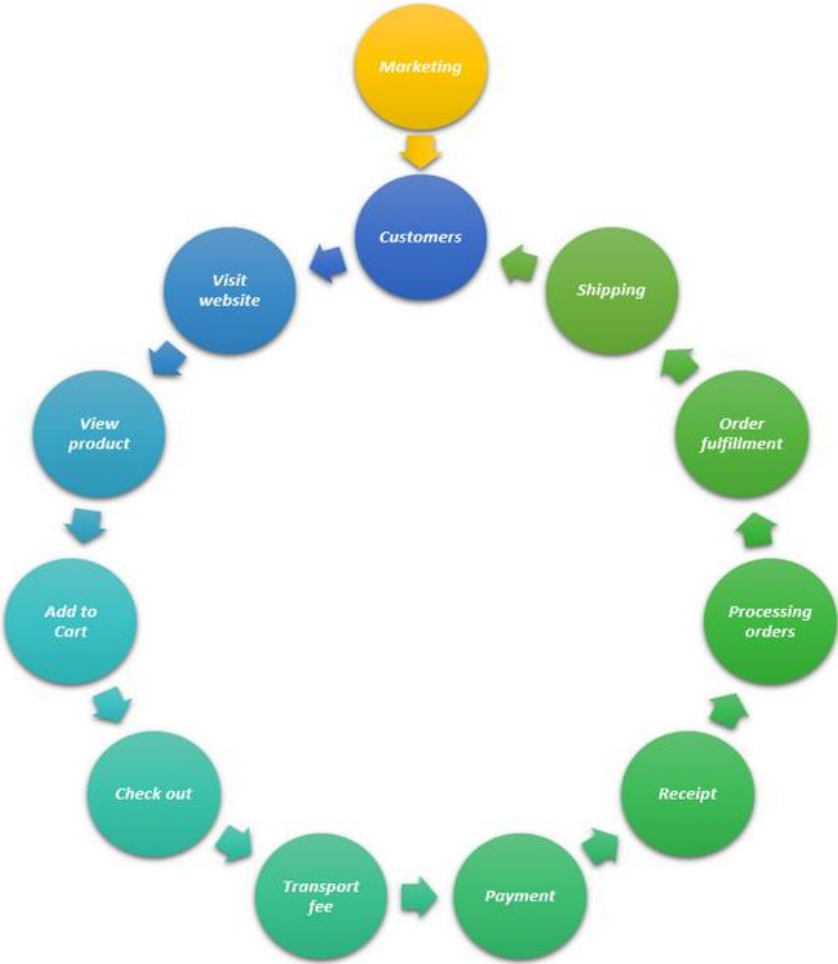


Figure 3. The process of e-commerce business (Roger 2019)

In addition, Weatherwax describes the six steps included in the order management process (Fig 4.). Once an order is placed by a customer, it is received by the retailer’s fulfilment team, who locates the products in a warehouse. Once the products have been collected, they are packed in a manner that keeps them safe during transit. The packaged order is sent and delivered to the customer. (Weatherwax 2021)



Figure 4. Order processing steps (Weatherwax 2021)

### 2.3.1 Value chain

Laudon & Traver (2015) describe the concept of value chain as the activities a business performs to create final products and services out of raw input. Each of the activities add economic value to the product. An industry value chain consists of six generic players: suppliers, manufacturers, transporters, distributors, retailers, and customers. The positions of each player may be maximized by lowering costs, raising prices, or by doing both, e.g. retailers can improve their customer service by developing efficient customer relationship management systems, and customers can reduce transaction costs and the prices paid for final goods, by searching for the highest quality, quickest delivery, and lowest price. Additionally, the operational efficiency of the industry may increase, which lowers prices and provides customers with added value, and

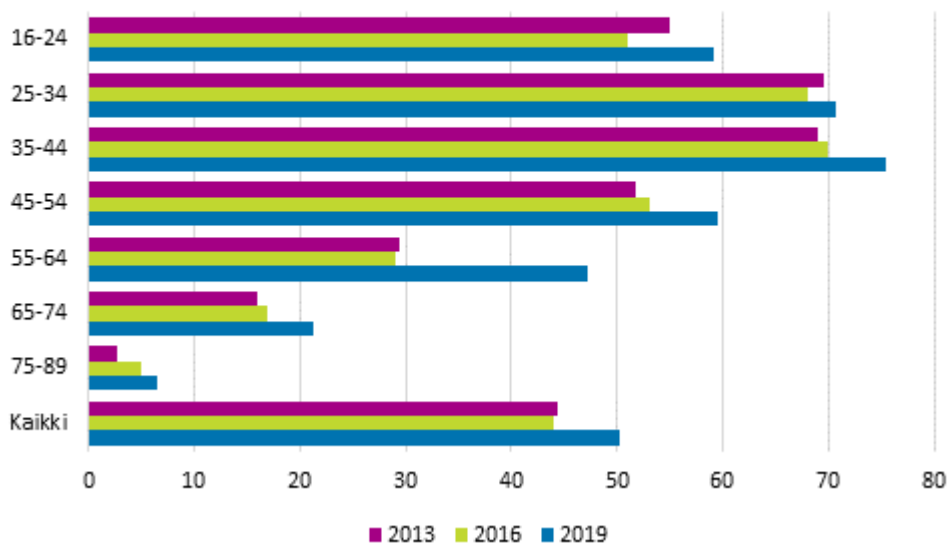
helps the industry to compete with other industries. In addition to industries, the value chain concept can be used for analysis of the operational efficiency of single businesses. Known as a firm value chain, the process includes the activities engaged in by a business, to turn raw input into final products, where each activity adds value to the final product. E-commerce provides businesses with several opportunities to increase operational efficiency and differentiate products. For example, some of the steps in a value chain can be coordinated more precisely and thus costs can be reduced. Moreover, users can be provided with high-value and more differentiated products, such as consumer reviews, or information such as other consumers' buying patterns. (Laudon & Traver 2015 pp. 348-349)

According to Jelassi & Enders (2005), value creation is central to what businesses do, because superior value creation versus rivals enables superior profitability. "Value created is the difference between the consumer's perceived benefit from a given product, and the firm's cost for providing that product" (Jelassi & Enders 2005 p. 96). Value creation depends on benefit, such as product and service, and speed of delivery, and cost positions, such as technology development, sales, and delivery. The benefit provided to customers must be higher than the costs, and higher than value created by competitors. Customer benefit varies for each individual, and depends on factors such as personal preferences, place, and time. In addition, consumer benefit comes from tangible and intangible sources. Tangible sources include product quality, convenience, service quality, product range, and speed of delivery. Intangible sources include brand and reputation. In addition, the benefit depends on what competitors have to offer. For this, two additional factors apply: threshold features, i.e. minimum requirements that must be fulfilled, and critical success factors, i.e. benefits crucial for a purchase decision. Both create customer benefit, but differentiation is achieved only by critical success factors. (Jelassi & Enders 2005 pp. 96–100)

### 2.3.2 Growth

According to Tilastokeskus (2019), the number of consumers in Finland who engaged in e-commerce more than tripled during the period of 2004-2013, and from 2013 onwards, growth has slowed down. In 2019, half of consumers aged 16-89 had made a purchase online within the past 3 months. Growth was strong only in older age groups (over 55-year-olds), on the other hand, growth was slow within the younger population, who already held a higher share. (Tilastokeskus, 2019)

**Kuvio 5. Jotain verkosta viimeisen 3 kk aikana ostaneet vuosina 2013, 2016 ja 2019**



*Figure 5. Share of Finnish online consumers who made a purchase within the past 3 months, in 2013, 2016, and 2019 (Tilastokeskus 2019)*

### 2.3.3 Online groceries

There are some unique features to grocery e-commerce. For instance, basket sizes tend to be much larger than in other categories, and shopping lists, in-store picking, and substituting create challenges for scaling. In essence, consumers have three requirements for shopping online. Firstly, fresh produce is expected to be fresh. The ability to select fresh produce in offline stores is a key reason to visit brick & mortar grocery stores, and when entering a store, shoppers are met with colours and smells that stimulate the senses. However, with online shopping, the experience is different, and customers expect grocers to deliver produce that they would pick themselves, and delivering stale, wilted, or unripe produce is unlikely to generate a repeated purchase. Secondly, product substitutions can cause dissatisfaction among customers. In offline stores, customers can find suitable substitutes for some, but not all products. Thus, with online groceries, grocers need to provide customers with choices. This applies overall, such as no substitutions allowed, and for specific products, such as do/do not substitute this product. In the case that a specific product is running low in inventory, the customer should be asked about substituting. There is a possibility of mistakes when substituting items, and basic substitution rules should be followed, and staff should be trained. Lastly, flexibility is required, e.g. with curbside pick-up slots, in order to accommodate changes in buying modes. (Nicholls 2021)

Feld-Jakobsen (2021) explains that grocery orders typically consist of multiple products, which is time-consuming in terms of picking and packing, and the picking process is time-sensitive. In addition, order picking staff must consider several factors: product weights, substituting items, cancellations of products, products that require special treatment, and the need for customer communication. For instance, a large order of bananas needs to be considered in terms of ripeness, depending on whether the fruit will be consumed over time or simultaneously by a larger number of people. Furthermore, with substituting items retailers need to consider price differences and apply refunds on cheaper replacements, or discounts on more expensive replacing items, in order to match the price paid for the original order. In addition, when picking orders in physical stores, it is inevitable that some items will be out of stock, which needs to be considered by providing order picking staff with recommendations for substituting items. This eliminates decision-making during order picking, saves time, and improves customer satisfaction. (Feld-Jakobsen 2021, Neren 2020)

According to Neren, practices for ensuring successful order fulfilment include optimizing the brick & mortar stores, attention to customer experiences, and leveraging technology. Using small, manageable solutions for storing products, such as cold storage totes, improves food safety, and saves both space and cost. In addition, storage totes are scalable, which enables adding capacity. Picking efficiency involves building density, i.e. picking multiple orders during one picking session, or zone picking, which involves breaking up the store into zones, where picking staff can specialize in certain zones. (Neren 2020)

Perishable groceries are often ordered by weight, and there are several methods used to present, buy, and pick them. It is not possible to determine the exact weight of single items, such as a single fruit. Further, supplies are not necessarily available due to the limited shelf life, high turnover, and limited store and warehouse capacity. For grocery retailers with store picking functions, customers will be in the stores simultaneously, picking some of the same items from the shelves, meaning that the stock level cannot be accurate. In addition, grocery orders are picked as late as possible, meaning that several days may pass between the order being placed, and the order picking, which makes product stocks nearly impossible to know once an order is being picked. Depending on the fulfilment centre's location and the assortment of products sold, grocery e-commerce is often limited to a specific geographic area. In order to extend business areas, multiple service centres can be established. (Feld- Jakobsen 2021)

Regarding user experience, online customers wish to immediately view their favourite products. This can be enabled by navigation and favourite or suggested product features, or a saved shopping list. In addition, customers require the ability to filter products according to specific filter such as allergens, vegan, and eco-friendly, and search results to be based on their personal purchase and browsing history. (Feld-Jakobsen 2021, Neren 2021)

## **2.4 Online consumer behaviour**

Consumer behaviour is defined by Laudon & Traver as “a social science discipline that attempts to model and understand the behaviour of humans in a marketplace” (Laudon & Traver 2015 p. 374), and “online consumer behaviour resembles offline consumer behaviour, although there

are some apparent differences” (Laudon & Traver 2015 p. 374). Chaffey et al. (2019) describe online buyer behaviour as “an assessment of how consumers and businesspeople use the internet in combination with other communications channels when selecting and buying products and services” (Chaffey et al. 2019 p. 131).

The consumer decision process consists of five stages: awareness of a need, information search, evaluation of alternatives, the purchase decision itself, and contact with the firm post-purchase. The process as a whole is the same regardless of the shopping environment, however there are some new features to the general consumer behaviour model in the online environment. In addition, the internet has some unique features that allow new ways for customer interaction, which need to be considered. Laudon & Traver (2015) have created a model of online consumer behaviour based on a general model of consumer behaviour (Fig. 6). The online model focuses on user and product characteristics, and web site features, as well as traditional factors such as the influence of social networks both online and offline. The online model accentuates website features, consumer skills, product features, and attitudes towards online shopping, and perceived control over the web environment. Website features include navigability and confidence in the security of a website. Customers’ knowledge of conducting online transactions is referred to as consumer skills, which increase with experience. The fact that some products are easy to describe, package, and ship over the internet, while others are not, is referred to as product characteristics. These factors combined with traditional factors, such as brand and advertising, create specific attitudes towards purchasing from a website. The transaction log established as consumers move around the internet is referred to as clickstream behaviour. The log stretches from search engines to different websites, webpages, and lastly, a purchase decision. (Laudon & Traver 2015 pp. 376–377)

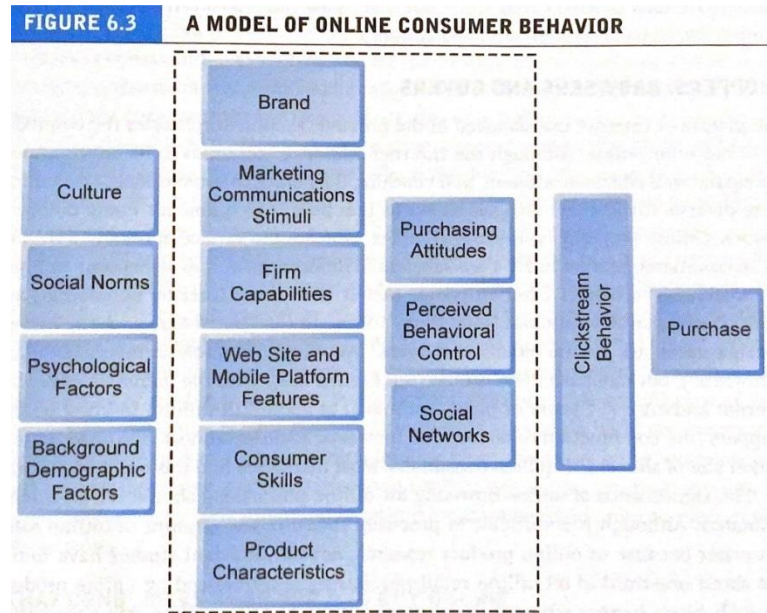


Figure 6. A model of online consumer behaviour (Laudon & Traver 2015 p. 377)

Although online shoppers tend to be well educated, wealthy, and youthful, they are becoming increasingly diverse. The internet audience consists of buyers, who make purchases, and browsers, who research products online but buy them offline. Laudon & Traver (2015) suggest that the significance of browsing online in order to make purchases offline should not be undervalued, and even though it is difficult to measure, studies have shown that around one-third of offline retail purchases are influenced by product research conducted online, as well as banner ads, blogs, and other exposure online. Browsing, also known as webrooming, is described by Flavián et al. (2016) as a process where the consumer first looks online for the product that is likely the best match to their needs, after which they go to a physical store to confirm the product information, and to make the purchase (see Flavián et al. 2019). (Flavián et al. 2019, Laudon & Traver 2015 p. 378).

E-commerce is a major factor that generates offline shopping, and offline marketing media affects online behaviour and sales. This illustrates that the two channels are linked and should be considered as a continuum of consumer behaviour, often with the same people as customers. According to Laudon & Traver (2015), retailers with online functions should pay less attention to selling per se and create content that appeals to browsers and ranks high in search engines, and promote products offline, to support the online functions. Online stores are excellent for

product search, although things are not always as expected, e.g. in terms of size and colour. Furthermore, it is hard to get additional information regarding a product online. Therefore, hybrid channels are valuable, due to easy searching and comparing, combined with the possibility to view the physical product in store. Shopping online is also common for instance if a colour or size is unavailable in a local physical store. (Hausman, 2012 (see Close Scheinbaum 2012 pp. 286-287), Laudon & Traver 2015 pp. 378–379)

#### **2.4.1 Factors affecting online consumer behaviour**

Hausman (2012) found in their study that individuals have different preferences for shopping channels; some prefer online shopping while others prefer visiting brick & mortar stores. Either way, customers tend to stick to their preference, instead of utilizing multiple channels. Some people dislike shopping in physical stores and see no value in using online channels for ordering products that will be delivered to a physical store for pick-up. Those who like to shop online may do so for instance because it provides an element of surprise when the order is delivered. In addition, online shopping enables shoppers to use their imagination and create the impression of products with outstanding attributes that will solve one's problems – although the possibility of disappointment is likely, whereas in physical stores products are presented as they are, displaying their limitations. On the other hand, some like to shop in store because it involves an atmosphere and a sense of togetherness. In addition, it allows hunting for bargains. Furthermore, there are customers who have no particular preference for their shopping channel and see the value of omnichannel shopping – for instance placing an order online and then returning or exchanging the order in a physical store, or being able to pick up the order in store at the same time as running other errands, instead of waiting for the delivery person. Thus, some customers will likely continue to make purchases using their channel of preference instead of utilizing multichannel options, while others will continue using different channels. Hausman suggests that this seems to be a consumer trait. (see Close Scheinbaum 2012 pp. 280–281)

Customer service, or lack thereof, can make a big difference, and may reduce frustration among customers and the number of abandoned shopping baskets, and increase sales. Online customer service involves more than follow-through on order fulfilment; it concerns enabling customers

to communicate with the company and to receive the information they need within a decent time frame. Consumers are able to serve themselves, provided that the desired information can be found relatively easily, or should they have questions or problems, answers should be relatively quick and answer their specific issue. Real-time customer service chat systems, where customer service representatives assist online shoppers, are common and enable answering questions, providing direction, and fix technical issues that may prevent a purchase from being made. In addition, some customers wish to be helped by a salesperson to help find a product suitable for their needs. (Chaffey et al. 2019 p. 130, Laudon & Traver 2015 p. 412)

Chaffey et al. (2019) explain consumers' fears about placing online orders. A common fear involves uncertainty of what a product is really like. For many customers, the sensory aspect of shopping is important, and being unable to touch, feel, or smell a product makes customers worry about making the wrong decision. Online retailers can help overcome this fear by providing product videos, 3D views, comparison tables, and detailed information on product attributes such as materials, dimensions, or measurements. Frequent and common problems with online shopping include slower delivery than expected, technical failure while ordering or paying, receiving wrong or damaged items, and problems finding information for example concerning guarantees. Barriers for shopping online include, most importantly, the trust factor, i.e. fear of cheating merchants, losing credit card information, or personal information being misused. Secondary factors are shipping costs, returns, and being unable to touch and feel products. In addition, some consumers are resistant to change, and do not feel comfortable viewing products on a screen instead of in-store. (Chaffey et al. 2019 pp. 128–130, Laudon & Traver 2015 p. 380, Schneider 2007 p. 19)

Laudon & Traver (2015) suggest that online sales can be roughly divided into two groups; big-ticket items, such as consumer electronics where orders easily add up to more than \$1000, or small-ticket items, such as apparel or books, where orders are of smaller value, typically less than \$100. Previously, small-ticket items were far more popular than big-ticket items, which have since expanded rapidly. Free shipping offered by retailers has also accelerated online sales of more expensive and larger items, such as furniture and large appliances. In addition, customers' level of online buying experience affects the type of purchase; new users tend to buy small-ticket items, while more experienced users are more open to buying big-ticket items. (Laudon & Traver 2015 p. 379)

Verhoef and Langerak's investigation on the effects of perceived relative advantage, compatibility, and complexity on consumers' intention to purchase groceries online, suggests that there is a positive influence on the intention to adopt online grocery shopping. The perceived complexity of online grocery shopping, on the other hand, had a negative impact. Situational factors play an important role as triggers for adoption of online grocery shopping, which suggests that the process is driven by circumstances and unexpected and may be discontinued if the circumstances that initiated the adoption change. Based on research by Hansen (2005) and Davis et al. (1989), Hand et al. conclude that consumers who are already familiar with online grocery shopping have more confidence in their ability to do so. This in turn affects these consumers' perception that online grocery shopping is more compatible, relatively advantageous, and less complex (see Hand et al. 2009).

Building customers' trust can be done by means of different tools, e.g. supply chain monitoring, to provide visibility on the origins of their food. This is becoming more significant as customers are increasingly aware of quality, freshness, and product traceability. (Thinks Mobility 2020)

#### **2.4.2 Online customer groups**

Six major groups of potential online grocery customers, presented in Fig. 7, were identified through a study conducted by the Consumer Direct Cooperative (see Småros & Holmström (2000)). The groups have different attitudes toward time, shopping, and technology, and, consequently, different perceptions of value. Småros & Holmström (2000) suggest that since the groups have different attitudes, it seems surprising that retailers only offer home delivery of ordered goods as their means of competition. While home delivery is definitely of great value for the users who are unable to go to a store, those with limited time for shopping, and customers who dislike buying groceries, it does not remove the inconvenience of making a shopping list, deciding what to order, and placing the order. Thus, home delivery may not be enough to convince consumers who avoid shopping. In addition, it does not offer a great deal to consumers whose self-worth is enhanced by shopping, or those who do enjoy in-store

shopping. Therefore, e-grocers must be able to provide new services, in order to offer additional value to customers and gain a competitive advantage. (Småros & Holmström 2000)

<b>Group</b>	<b>Description</b>
<b>Shopping avoiders</b>	Dislike grocery shopping
<b>Necessity users</b>	Limited in their ability to go to the store for some reason
<b>New technologists</b>	Typically young and comfortable with technology
<b>Time starved</b>	Insensitive to price and will pay extra to free up their schedules
<b>Responsibles</b>	Have available time and get an enhanced sense of self-worth from shopping
<b>Traditional shoppers</b>	Older, avoid technology and genuinely enjoy shopping in a store

Figure 7. Six major groups of potential online grocery shoppers (Consumer Direct Cooperative, see Småros & Holmström (2000))

## 2.5 Online shopping in the time of COVID-19

### 2.5.1 Online consumer behaviour

According to OECD, demand has shifted from brick & mortar stores to e-commerce, as physical interactions are being limited in order to avoid transmission. The COVID-19 pandemic has sped up the expansion of e-commerce in terms of new firms, new customers such as the elderly and new types of products e.g. groceries. It has made a broad spectrum of products available to customers from their homes and allowed firms to keep operating despite restrictions. In many countries, e-commerce focus has to some extent transformed from luxury items towards everyday items, which have a higher relevance for the majority of people. Some changes in the e-commerce scene are likely to be long-term, due to e.g. possible new waves of the pandemic and the convenient new ways of shopping. However, the demand has not applied to all product categories. Demand has increased for personal protection items, such as disposable gloves,

home activities, and groceries, but decreased for travel, for instance suitcases, sports, e.g. gym bags, or formal clothing such as bridalwear. (OECD 2021)

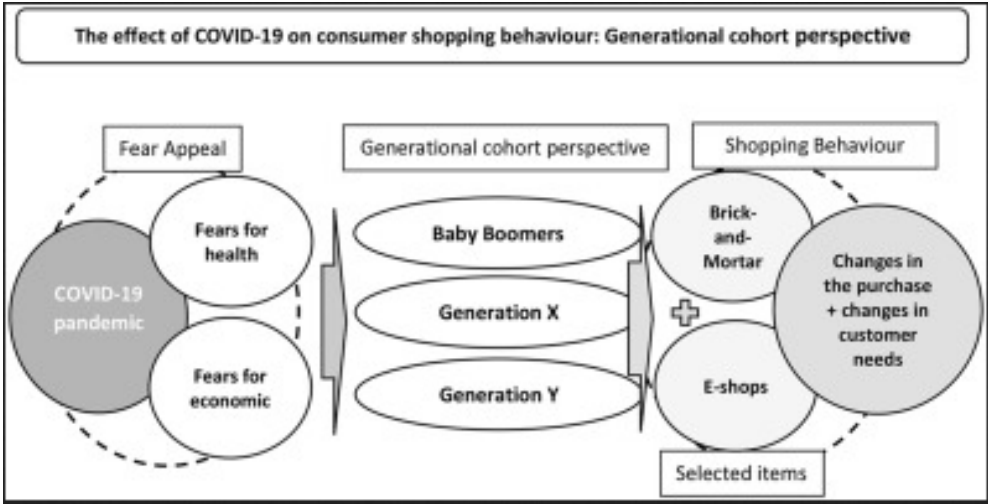


Figure 8. The effect of COVID-19 on consumer shopping behaviour: Generational cohort perspective (Eger et al. 2021)

Eger et al. (2021) found in their study that generally, consumer shopping behaviour during the COVID-19 pandemic is affected by fear: the change in shopping behaviour increases according to the amount of fear, and health fears affected reasons for choosing new items. The results of the study also indicate that during the pandemic, consumers have centred on the most basic of needs. In addition, the study evaluated purchasing behaviour differences in different generations, and found that buying behaviour is influenced by generational determined lifestyles and social environment. In particular, the purchasing behaviour of the oldest generation is expected to be affected by the pandemic restrictions. (Eger et al. 2021)

According to Mathur et al. (see Guthrie et al. 2021), stressful events such as pandemics cause shifts in long-term behaviour, and changes in consumption lifestyles, in order to adapt to changes in circumstances. The COVID-19 pandemic, lockdown, and social distancing have interfered with buying practices. In addition, they have resulted in consumers experimenting with new channels, and learning new habits. Guthrie et al. (2021) propose that, because of the pandemic, online consumer behaviour followed three phases, as illustrated in Figure 9 below. First, consumers react to the perceived threat of COVID-19 and seek to purchase and hoard products that limit the threat to health, in order to regain control of freedom lost. Next, by adopting new behaviours and applying control in other areas, such as personal well-being, consumers begin

to cope. Lastly, consumers adapt consumption habits to the new normal, and continue purchasing online. (Guthrie et al. 2021)

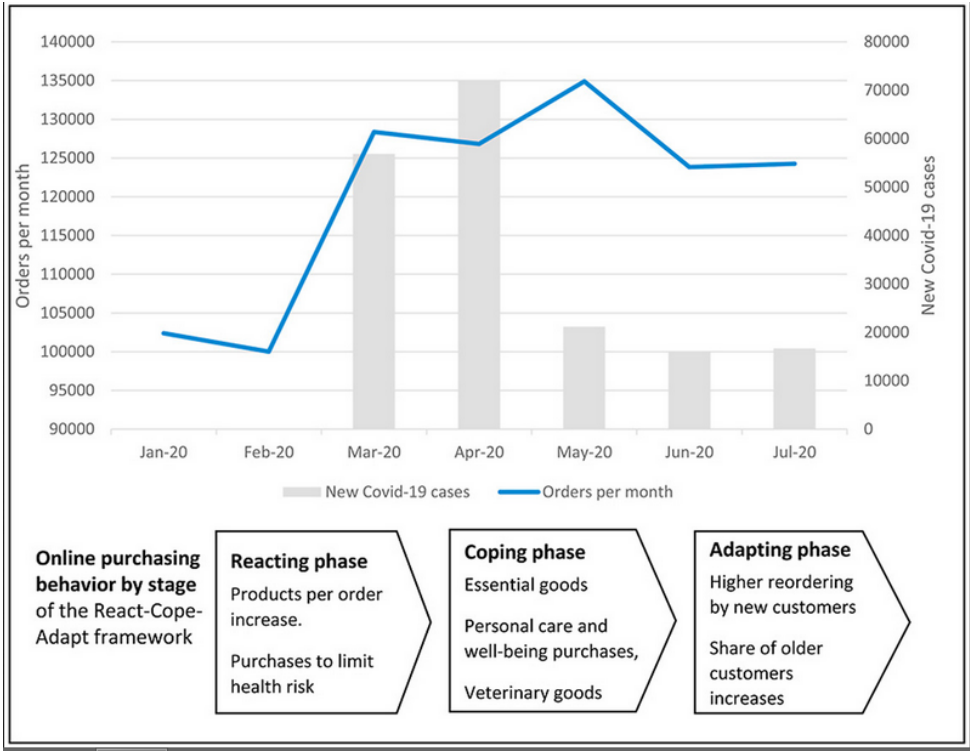


Figure 9. E-commerce behaviour before, during, and after a COVID-19 lockdown (Guthrie et al. 2021)

Sheth (2020) argues that there are four major contexts that control and affect consumer habits. These are changes in social context, such as marriage or relocation, new technology, including online shopping and delivery, the impact of consumption habits due to new rules, such as the COVID-19 pandemic regulations, and the less predictable context of ad hoc natural disaster, such as the COVID-19 pandemic. As a result of lockdowns and social distancing, consumers have had limited choice for places to shop. Consumption is time and location bound, and with flexible times, but inflexibility with location, consumers have learned creative and innovative ways to improvise. The boundaries of work and life have become blurred, as people work, study, and relax at home. The store has come to the consumer since the consumer is unable to go to the store. Following adaptation to staying at home, consumers are likely to adopt new technologies that provide more convenience to working, studying, and consuming, and existing habits are likely to be modified. In addition, existing habits are likely to be modified as a result

of embracing digital technology. Moreover, public policy will inflict new consumption habits, particularly in public places such as airports and concerts. (Sheth 2020)

Fig. 10 illustrates the immediate effects of COVID-19 on consumer behaviour and consumption, as explained by Sheth (2020).

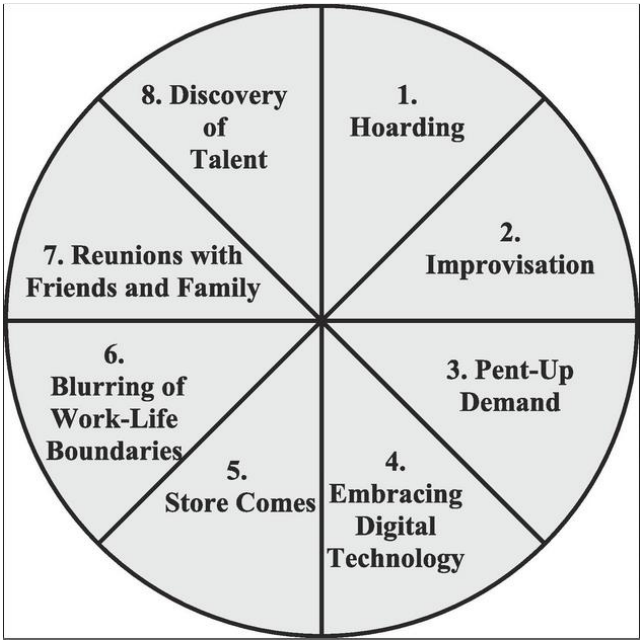


Figure 10. Immediate impact of COVID-19 on consumer behaviour (Sheth 2020)

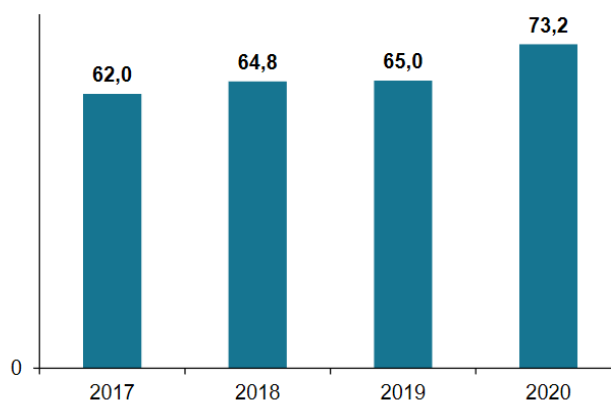
1. Hoarding is a common reaction to managing the uncertainty of the future availability of essential products for daily consumption and basic needs, such as toilet paper, bread, and water. Hoarding involves stockpiling products, which results in temporary shortages.
2. Constraints lead to consumers learning to improvise, which leads to existing habits being discarded, and new ways to consume are invented.
3. Consumers tend to postpone purchase and consumption of non-mandatory products or services, often concerning durable large ticket goods, such as cars and appliances. This leads to a shift of demand, which is postponed into the future.

4. Several new technologies have been adopted by consumers out of necessity. Digital technology and, particularly, social media have a major impact on consumer behaviour, and time will tell whether the adoption of technology will affect old habits.
5. Lockdowns have resulted in stores, work, and education coming home, which enhances convenience and personalization in consumer behaviour.
6. Consumers are imprisoned at home, with limited space and too many separate activities, such as working, learning, and shopping. Consequently, boundaries between work and home are blurred, and thus schedules and categorization are needed.
7. The COVID-19 pandemic has accelerated fast, universal adoption of new technologies, which is expected to cause dramatic changes in consumer behaviour.
8. Consumers have become more creative e.g. with cooking, playing music, and shopping online, and are becoming producers with commercial possibilities (Sheth 2020)

A consumer survey conducted by Finnish Commerce Federation shows that Finns reduced shopping trips to physical stores, whilst digital commerce was on the rise. However, the number of online shoppers was not yet explosive, since the majority of consumers under the age of 50 were already experienced online shoppers. In addition, among families with children the increase in online shopping is also above average. Few had regularly purchased groceries online, and the majority of users resided in the metropolitan area and Uusimaa region. It was anticipated that even though online grocery user rates will decrease, there is no turning back to how things used to be. Especially in the larger areas, online grocery shopping is going to become more common. In 2020, online retail trade grew 22 per cent in Finland, a record speed for the 2010s. International purchases accounted for a 10 per cent growth, while domestic purchases grew by 30 per cent. The growth in e-commerce of daily consumer goods reached a level that Jaana Kurjenoja, Chief Economist for the Finnish Commerce Federation, had previously forecast to be reached in 3–4 years. The share of e-commerce of all daily consumers goods trade increased from 0.6 to 2 per cent in one year. The below figure (Fig. 11) by Finnish Commerce Federation (2021) illustrates the share (%) of internet users in Finland between the ages of 18 and 74, who had made digital purchases during the past 3 months. (Finnish Commerce Federation 2020, 2021)

## Aktiivisten digiostajien määrä kasvoi Suomessa selvästi

Edellisen kolmen kuukauden aikana digiostoksia tehneiden osuus 18–74-vuotiaista netin käyttäjistä, %



Lähde: Kurjenoja 2018, Digitaalinen kauppa 2017, Kaupan liitto;  
Kurjenoja 2019, Digitaalinen ostaminen kasvaa meillä ja muualla, Kaupan liitto;  
Kurjenoja 2020, Digitaalinen kuluttajakauppa Suomessa, Kaupan liitto;  
Kaupan liiton toimesta Kantar TNS:n toteuttama kuluttajakysely 2021.

Figure 11. Number of active digital buyers aged 18-74 in Finland (Finnish Commerce Federation 2021)

A study conducted by Posti in 2020 found that “nearly 60% of Finns buy online on a monthly basis” (Posti, 2021) and nearly 1/3 (29%) buy online weekly. The pandemic increased online buying by nearly 30%. According to Tommi Kässi, Vice president of Parcel and eCommerce at Posti, the exceptional circumstances of spring 2020 had multiple effects on the online buying behaviour of Finns. Online shopping increased significantly, partly due to the pandemic, and the fact that buying is easy. In addition, free deliveries, parcel tracking, and predictive notices of delivery account for the increase. Top product categories include clothing, footwear, and accessories, which account for 27%, and home electronics, computers, phones etc., which account for 17%. Clearly stated delivery costs, accurate product descriptions and images, and low delivery fees were considered important in web stores. 80% of online shoppers added items to their shopping basket to meet the limit for free delivery. Posti is the most popular delivery company, and parcel lockers are increasingly popular. Over 40% of shoppers prefer Posti’s parcel lockers. More than 57% prefer Posti, compared with 14% Matkahuolto and 6% for DHL. (Posti 2020a)

The sales of consumer goods on Prisma.fi quadrupled since March 12<sup>th</sup>, 2020, including a wide variety of product categories. Especially products related to staying home and exercising at home have stood out since the beginning of the pandemic; game consoles and board games,

books, home appliances, and products related to working from home. Many newcomers have tried out online shopping. Prisma has implemented different campaigns concerning delivery costs, which have contributed to online sales. The online sales manager of consumer goods for Prisma.fi believes that the digitalization caused by the pandemic will continue to keep online sales on their current level post-pandemic. (S-ryhmä 2020a)

Loppupeleissä kysymys on siitä, pystymmekö lunastamaan asiakkaiden odotukset ja tulevatko he meille uudestaan. Vaikka tietyillä tuotealueilla, kuten pukeutumissa, on ollut suuren kysynnän vuoksi toimitushaasteita, olemme pärjänneet tiukassa tilanteessa yllättävänkin hyvin. / At the end of the day, it is about being able to meet customers' expectations and make them return. Despite delivery challenges, we have managed surprisingly well in the challenging situation. (S-ryhmä 2020a)

### **2.5.1.1 Online groceries**

The COVID-19 pandemic changed the grocery industry to a great extent – perhaps more than any other sector in retail, as years of predicted evolution occurred over the course of months. The pandemic changed consumers' lives, and online ordering, home deliveries, and in-store pick-ups became the norm. For online groceries, consumers expect delivery to be ever-faster, particularly in metropolitan areas where same-day delivery has become common. Timed deliveries are important, although the importance has decreased to some extent due to people working from home, and simply getting a delivery slot during the pandemic was considered a victory by many customers. COVID-19 has expanded the digital disruption in the grocery industry. Prior to the pandemic, grocery e-commerce has lagged behind other retail sectors, but the pandemic accelerated the growth of online groceries by eliminating obstacles for consumers' adaptation of online shopping. (Nicholls 2021, Redman 2021)

According to Goldman (2021), customers are expected to purchase groceries online more frequently, due to the length of the pandemic, ease of use, and awareness of the grocery category. As a result of the prolonged pandemic, consumers have had time to sharpen their new online purchasing habits. Even though there are some downsides to digital grocery, the overall experience is still positive enough: it saves time, it is perceived as safer, and when delivery is

involved, eliminates expenses for petrol and parking. There are now a variety of incentives and options for ordering groceries online. A large number of first-time online grocery buyers affected by the pandemic now prefer online grocery shopping due to convenience. The pleasant customer experience should encourage hesitating consumers to give online grocery a try in 2021, encouraged by positive word-of-mouth. (Goldman 2021).

Since the beginning of the pandemic, retailers providing crucial goods, such as groceries, have met increased opportunities for serving customers in their homes. Simultaneously, they have experienced challenges with managing their inventory, supply chain, and delivery, and maintaining their facilities as safe environments. Meanwhile, retailers of fashion and other non-crucial products have met notable drops in sales and are forced to find new ways to reach their customers, for instance by altering their assortments to meet the demands brought by the COVID-19 pandemic. While these sudden, temporary changes are critical for retailers to adapt to, it is equally important to foresee the retail environment following the pandemic, as some of the new, adapted behaviours are likely to remain as the ‘new normal’. Retailers will probably reconsider some parts of their processes in order to improve their ability to provide customers with what they want, when they want it. Understanding the outcomes of the changes made, and reasons for the outcomes, as well as any moderating factors that may affect the outcome, is crucial for retailers. Furthermore, Roggeveen & Sethuraman suggest that it is also likely for consumers to adjust to new shopping habits, for instance increased demand for home delivery of groceries. For this, retailers need to find ways to make the shopping experience resemble shopping in person, in order to generate impulse purchases. (Roggeveen & Sethuraman 2020)

### ***2.5.1.2 Process and development***

According to OECD, during the first wave of the pandemic it was observed that obtaining a delivery slot was difficult, and wait times could be several weeks, which discouraged many elderly consumers from purchasing groceries online, despite having access to digital technology. Some grocery retailers responded to this by reserving delivery slots for online groceries specifically for the elderly, and other high-risk consumers, or allocating online

delivery slots for these customers by asking low-risk shoppers to shop in brick & mortar stores. In some cases, it may be necessary to regulate how grocery stores identify vulnerable shoppers when it comes to online shopping. (OECD 2021)

As online orders rapidly increased, delays became widespread, and deficiencies in manual picking processes were revealed. “Grocery stores are designed for customers, not pickers” (Ritter 2020). The store environment is often constrained for space, and store layouts and the positioning of products are optimized to maximize sales instead of minimizing travel during a shopping trip, contrary to a distribution centre. Ritter suggests that grocers can improve the efficiency and capacity of in-store processes by making use of practices from their distribution centers. The practices include picking several orders at once, two-stage picking, where specialty items such as meat or deli items are ‘pre-picked’ instead of order pickers waiting in line to be served, and separating the store areas into zones, allowing the retailer to assign more experienced pickers in zones where additional expertise is required. “COVID-19 may be the tipping point for e-commerce in grocery, permanently changing consumer behavior and shopping habits. In that case, grocers have less time than ever to develop efficient, effective fulfillment capabilities” (Ritter 2020). The vast increase in demand of online groceries has drawn attention to key issues in efficiency and productivity, and consequently, profitability of fulfilment. Previously seen as a problem to be faced in the future, the profitability and efficiency of online ordering suddenly became an immediate issue as a result of the pandemic. (Tveraabak 2021)

According to Sheth (2020), three managerial implications have risen from the COVID-19 impact on consumer behaviour. Businesses have had to learn to improvise, although, due to formal processes, they cannot be changed quickly. However, as large enterprises have adapted cloud computing, improvising has been easier. For instance, large retailers such as Target and Walmart, have managed to merge their online shopping with brick & mortar stores, and additionally, introduced omnichannel deliveries. Matching demand and supply has been another challenge, as shortages appeared at the beginning of the pandemic due to hoarding behaviour. The significance of online procurement is increasing, as the process becomes reversed: from products waiting for customers on a shelf, to customer making an order and the retailer’s warehouse collecting and delivering the order. The third implication for management is consumers returning to their previous habits, unless the technology they have learned to use, e.g. ordering

online, makes a significant difference to their lives. Strategic investment areas will be the customer experience in the virtual world and customer support. (Sheth 2020)

Guthrie et al. (2021) found in their study concerning activity at CyberPharma during the pandemic, that there was a spike in online activity, which was fuelled by a significant increase in orders, repeat orders and order size. As online visitors and orders began to rapidly increase, the company's management ceased all marketing and promotional activities, and focused on order fulfilment. The increased number of orders led to recruiting 100 pickers during the first two months of the pandemic.

In the store picking functions in Prisma Kaari, Helsinki, the impacts of COVID-19 have been clearly visible, with demand levels soaring both for consumer and daily consumer goods. By mid-May 2020, the number of store order picking personnel had been doubled, with up to 60 employees working in three shifts, including night shifts. Despite the added capacity, meeting the new levels of demand was challenging, and introduction of new employees has been ongoing. The store picking functions have done their utmost to meet delivery times. In early April 2020, Foodie.fi visitor numbers had doubled or tripled, and delivery slots were fully booked a week ahead. The capacity of Foodie.fi was rapidly increased since the pandemic broke out by recruiting hundreds of new employees to the store picking operations. Several new brick & mortar stores with order picking functions and home delivery services were opened, and the service was extended onto new areas. In addition, simplified procedures, where stores received orders by e-mail or telephone, were introduced, and in some areas this service was aimed particularly at high-risk groups. In addition, the opening of the Herkku Food Market online store was accelerated in order to meet growing demand. Demand increased particularly in larger areas, such as the capital region, Tampere, and Turku. Alepa Kauppakassi delivery times were expanded to seven days per week, and slots added on Saturdays and Sundays. (S-ryhmä 2020a, 2020b)

Furthermore, a temporary food order service was implemented by HOK-Elanto together with the city of Helsinki and parishes. The service, called Helsinki-apu, allowed elderly customers (70+) to place grocery orders by telephone. Within a week, the new service and online grocery ordering system was established, customer service agents trained for the telephone service, and city and parish employees were introduced to delivering orders. (Helsingin Kaupunki 2021, HOK-Elanto 2020b)

In December 2020, S Group's department store Sokos initiated a new collaboration with Wolt, providing customers with the option to order items through the Wolt application, and during autumn 2021, new services were trialled through S-Kaupat. Inexpensive express deliveries are piloted in the capital region and Tampere and in addition, a new type of service based on club membership is trialled. The services are especially aimed at busy city dwellers and small households. (HOK-Elanto 2020, S-ryhmä 2021a)

## **2.5.2 Post-pandemic and future**

Sheth (2020) states that most habits are expected to return back to normal. However, inevitably some habits will die, as a result of more convenient, affordable, and accessible alternatives that have been discovered under lockdown conditions. Due to the COVID-19 pandemic, consumers may find working, learning, and shopping at home easier, and what used to be secondary alternatives to existing habits become primary, and vice versa. Three factors are likely to generate new habits, and affect giving up old habits: public policy, technology, and changing demographics. Security checks at airports became the core after 9/11, and similarly, screenings and boarding procedures such as taking the temperature, or testing for the presence of the virus will increase. Secondly, technology is a major driver of consumer behaviour. With inventions such as automobiles, airplanes, the telephone, internet, social media and the user generated content, it has significantly transformed consumer behaviour. Digital technology is turning wants into needs, which significantly affects the development of new habits, such as online shopping. Thirdly, changing demographics generate new habits. New needs for wellness and retirement arise, and the aging population worries about personal safety, and safety of possessions. In addition, interest in recreation changes, in comparison to the younger population. Furthermore, shared consumption is replaced by individual consumption. Additionally, the trend of living alone by choice is growing, and with aging of the population, senior citizens are living alone by choice. New habits for what, how much, and from where purchases are made, are formed. (Sheth 2020)

According to Arhi Kivilahti, strategic consultant and founder of Ada Insights, the current big winners are webstores whose picking is done in-store, as they are able to meet the growing demand due to brick & mortar stores where picking can be done. In addition, Kivilahti points out that brick & mortar stores have proved to be a good supporting point for e-commerce, but bad in terms of efficiency. Location is an asset of a broad network of physical stores, which allows quicker and more environmentally friendly deliveries, since distributors do not need to make a detour to a central warehouse. The million-dollar question is how to improve the order picking model to become more efficient. (Posti 2020b)

In 2020, the pandemic required retailers to quickly respond to the changes it caused, altering the supply chain and increasing capacity to keep up with the demand. Whereas in 2020, actions were focused on responding to the effects of the pandemic, the current theme is strategic management for long-term growth, concentrating on customer loyalty and merchandising, and improving the shopping experience. In addition to improving processes, grocers are estimated to apply more technology for personalization and tools for meal planning, in order to make online shopping more manageable, and perhaps enjoyable as well. As shoppers become increasingly comfortable with online ordering, and e-commerce becomes the new normal, consumers' expectations are rising. Retailers need to be able to provide more than just e-commerce, as customers are seeking experiences that make their lives more convenient. (Neren 2021, Wells et al. 2021)

E-commerce economics will continue to be challenging in comparison to brick & mortar stores, but retailers who are able to build loyalty, offer personalised offers, and create incentives for visiting offline stores, while increasing basket sizes and online buying frequency, will benefit significantly. In addition, using an omnichannel strategy has proved successful. (Aull et al. 2021)

Regardless of the recovery scenario, there are four changes that emerge from the restriction period(s); increased online shopping, people centred communication, return to local commerce, and personalized customer experience on website. Omnichannel shopping is expected to become more popular, meaning that retailers need to understand customers' buying behaviour; what marketing channels they face, and what motivates them to make a purchase. Multichannel shopping includes researching a product online and purchasing it offline or purchasing online

and picking up in-store. According to Beeketing, the more channels customers use, the likelier an increased average order value. (Beeketing 2021, Botmind 2021)

To succeed in e-commerce, retailers need to think beyond e-commerce and consider what experience needs to be offered to consumers. Gramling et al. (2021) list points for retailers to consider, to help define decisions concerning investments and operating models. These include an agile and adaptive platform, silos in the organizational structure that isolate e-commerce, merchandising, store operations, supply chain, and marketing, and thus interrupt the experience, online vs. offline assortment compatibility, how impulse purchases can be displayed online, and how to maintain the experience until the consumer's doorstep. According to a survey by Ernst & Young, 21% of U.S. consumers are forgiving retailers for disruptions in service due to COVID-19, meaning that the pandemic is no longer considered a reasonable excuse for not delivering orders on time. In addition, delivery becomes a cornerstone of the experience, and the importance of fulfilment is accentuated. The survey also found that 37% of U.S. consumers in-store pick-up will increase the future. However, long waiting times e.g. due to jammed parking lots, or stores being unable to accommodate online purchases, can quickly cause pick-up to lose its appeal. Thus, using physical stores as fulfilment centres requires that systems and business units communicate with each other. Similar to services, retailers' ability to deliver a consistent experience must also scale, and retailers need to be prepared to continue developing stronger and deeper relationships with their customers, both online and offline. (Gramling et al. 2021)

According to Whitler (2019), the future e-commerce experience will be delivered beyond the screen through new touchpoints. e.g. as voice, wearables and kiosks, such as touch-screen kiosks with an AI-powered product search. Moreover, with the improved predicting of needs, the experience will be more personalized. The experience will be individual and based on e.g. geographic location, search history, and previous behaviour. The future of e-commerce will use smarter technology, to provide an improved experience, for instance improved search functions that distinguish searches such as shirt dress, from dress shirt. (Whitler 2019)

### **3 METHOD**

The research approach, methodology, and participants are introduced in this chapter. The main idea of this thesis is to investigate the impact of the COVID-19 pandemic on online consumer behaviour and, consequently, on the e-commerce processes of the case company, and what measures were taken to cope with the exceptional circumstances. In addition, the research aims to get an understanding of the post-COVID prospects of e-commerce and online consumer behaviour. The aim is to answer the following research questions:

- How has the pandemic affected online consumer behaviour and the e-commerce processes of the company?
- What has changed?
- What measures have been taken?
- What are the post-pandemic expectations?

#### **3.1 Research design**

##### **3.1.1 Qualitative research**

Typically, qualitative research focuses on words rather than numbers in terms of collecting and analysing data. Qualitative researchers have an interest in understanding how experiences are interpreted, how worlds are constructed, and what meaning is attributed to experiences, by people. Merriam & Tisdell (2016) describe four key characteristics to understanding the nature of qualitative research; “The focus is on process, understanding, and meaning; the researcher is the primary instrument of data collection and analysis; the process is inductive, and the product is richly descriptive” (Merriam & Tisdell 2016 p. 15). Understanding the phenomena of interest from the point of view of participants, rather than the researcher, is at the core. (Merriam & Tisdell 2016 p. 6, pp. 15-16, Bell et al. 2019 p. 355)

For this thesis, a qualitative method was chosen, as qualitative research focuses on words rather than numbers, and the purpose of the study was to get an understanding of the different effects

of the COVID-19 pandemic on online consumer behaviour and thus the e-commerce processes of the company.

### **3.1.2 Case study**

This study was conducted as a case study, which according to Bell et al. (2019 p. 63) involves a “detailed and intensive analysis of a single case” (Bell et al. 2019 p. 63), and a case can be a single organization, location, person, or event. Most commonly, a case study involves a geographic location, for instance an organization or a workplace. The difference between a case study and other research designs is that the case study focuses on a limited situation or system. (Bell et al. 2019 p. 63)

### **3.1.3 Semi-structured interviews**

When conducting a semi-structured interview, the interviewer uses a list of relatively specific topics that they wish to be included, also known as an interview guide. The guide is followed to some extent. However, the interviewee has a fair amount of freedom in replying, and questions may not follow the guide precisely. Questions not included in the guide may be asked, following replies to previous questions, as the interviewer wishes to elaborate on something. In general, all questions listed in the guide will be asked, and similar wording will be used for each interviewee. The process is adjustable, and focuses on the interviewee’s perspective, i.e. what they consider as important when interpreting events, patterns, and forms of behaviour. (Bell et al. 2019 p. 436)

## 3.2 Data collection and interview guide

The data was collected by conducting online semi-structured expert interviews with e-commerce specialists employed by SOK and one of the local co-operatives. The interview consisted of 10 open-ended questions. The interviews took place in Helsinki, Finland, and were performed between mid-February and May 2021. The duration of each interview was approximately 45-60 minutes. The interviews were conducted and recorded using Microsoft Teams video or audio calls. The recordings were then transcribed.

With interview guides, it is of importance that the questions allow interviewers to understand the ways in which research participants view their social surroundings. In addition, it is essential that there is flexibility in the interview conduct. When preparing an interview guide, Bell et al. (2019) suggest the researcher to consider what they need to know in order to answer each research question they are interested in, and try to get an understanding of what the respondent considers to be important and significant to each topic area. Therefore, the questions need to cover such areas that the researcher thinks they need to know about, from the respondents' perspective.

### 3.2.1 Respondents

The following respondents were interviewed for this study:

**Respondent 1:** Product lead

**Respondent 2:** Business developer

**Respondent 3:** Business developer

**Respondent 4:** Development manager

**Respondent 5:** eCommerce sales manager

**Respondent 6:** Product & eCom Supply Chain lead

### **3.2.2 Data analysis**

For the data analysis, the recorded interviews were transcribed. The transcribed interviews were colour coded to highlight and differentiate relevant themes. According to Merriam & Tisdell (2016, p. 199), “coding is nothing more than assigning some sort of shorthand designation to various aspects of your data so that you can easily retrieve specific pieces of the data.” The analysis was done using a thematic analysis method. Bell et al. (2019 p. 519) describe a theme as a category the analyst has identified through their data. A theme relates to the research focus and builds codes that have been identified in transcripts. Themes can be found in transcripts by, for instance, looking for repetition, similarities and differences, or metaphors and analogies. (Ryan & Bernard 2003 (see Bell et al. 2019 p. 519))

## **4 RESULTS**

In this chapter, the research findings are presented. Results are grouped according to the order of themes presented in the theoretical framework chapter: ecommerce processes, consumer behaviour, and future and post-pandemic.

### **4.1 General**

Each of the respondents stated that the pandemic appeared as a sudden increase in demand, sales, and volumes. Following the sudden increase in demand, operations and networks expanded. Inquiries from customers, and the number of online orders increased, which required extra labour and caused challenges with prioritizing and figuring out how to meet the demand. The increased demand created a need for scaling, which led to expanding the network of stores participating in e-commerce, and subsequent actions such as hiring new order picking personnel.

Kaikki toimintomme kasvoivat merkittävästi, että ihan se asiakaskyselyt ja tilausten määrä, ja sitä kautta kaikki taustaprosessit ja kaikki, niin kaikkiin tuli ihan hirvittävästi lisää työtä, että se on ehkä se, miten se on näkynyt arjessa. että volyymit moninkertaistuivat yhdessä yössä. / All our functions grew significantly – customer enquiries, the number of orders, and, as a result, all supporting activities and processes, there was a lot more work, so that is perhaps how it was visible in our daily operations; that volumes multiplied overnight. (Respondent 1)

Asiakkaiden kulutustottumukset muuttuivat, ja meillähän se näkyi siis todella valtavana myynnin kasvuna silloin alkuun. / Customers' consumption habits changed, and to us, it was initially visible as an enormous growth in demand. (Respondent 3)

The growth caused by the pandemic was described by the respondents as a growth leap, which accelerated development with several years, in comparison to estimates.

Kyllä uskon, että ruoan verkkokauppa sai tästä merkittävän kasvuloikan, mitä ei olisi tapahtunut ilman koronaa. / I do believe that online groceries got a significant growth spur from this, which would not have happened without COVID-19. (Respondent 1)

Tämä on ehkä enemmänkin semmoinen digiloikka mikä on tehty, eli me nähdään [...] että tässä on oikeastaan vuoden aikana niin ehkä menty 3 vuotta eteenpäin siinä mitä me arvioimme, että mihin markkina kehittyisi. / This is perhaps more of a digital leap. During the past year, we have perhaps proceeded 3 years from where we had estimated that the market would develop. (Respondent 2)

## 4.2 Process challenges during COVID-19

According to several respondents, one of the most prominent challenges with e-commerce processes was the scaling of order picking, particularly in daily consumer goods, to meet the sudden increase in demand and being able to pick all incoming orders. Based on the interviews, the largest bottlenecks with the scaling of order picking functions appeared to be the effectivity of the process and increasing capacity.

Varmaan keräys ylipäättään, että kuinka me saadaan ne tehtyä. / Probably order picking in general, how we can get it done. (Respondent 3)

Kyllä se suuri pullonkaula on – rehellisesti sanottuna meillä ja kilpailijoilla niin on ollut, ja on tälläkin hetkellä se keräilyn - keräilykyky. / The biggest bottleneck to be frank, for us and for competitors, has been, and at this moment, the order picking ability. (Respondent 4)

In addition, regarding consumer goods it was mentioned that allocation of store picking personnel, and ensuring sufficient store picking staff were available was also a challenge, since the

employees cannot work from home, which increased their risk of contracting COVID-19 and thus possible quarantines.

Se oli yksi meidän sellainen haaste, että – että se myymälähenkilökunnan resurssointi sinne keräykseen, oli haasteellista. / One challenge for us was resource allocation of store personnel in order picking. (Respondent 6)

Online grocery order picking is done in physical stores and depends on the brick & mortar processes, meaning that the webstore inventory depends on that of the brick & mortar store. Overall, the store environment is designed for the brick & mortar functions, and the brick & mortar and e-commerce processes are not perfectly synced.

Ruoan verkkokauppa voimakkaasti nojaa kivijalan prosesseihin, eli jos kivijalasta on vessapaperi loppu, niin on ruoan verkkokaupastakin loppu. / The online grocery process relies heavily on the brick & mortar processes, meaning that if the brick & mortar has run out of toilet paper, so has the webstore. (Respondent 1)

In addition, inventory levels are not managed in real time, which leads to situations where customers are able to order items that are unavailable in reality. This creates challenges for order pickers, who must try to find a substituting product.

Ja meillä ei itseasiassa verkkokaupassa niin – mitään reaaliaikaista saldohallintaa ole käytössä, niin kyllähän se sitten johtaa siihen, että asiakkaat nyt sitten pystyvät näissä tilanteissa tuotteita tilaamaan, jota meillä ei valitettavasti ole tarjota, ja se tuottaa sitten sinne keräilyyn vähän sellaista päänvaivaa, että täytyy etsiä jokin korvaava tuote tilalle. / Actually, inventory levels are not managed in real time, which leads to situations where customers are able to order products that are unavailable. This creates some inconvenience in order picking, with finding a substituting item. (Respondent 2)

Furthermore, there were process challenges with picking of consumer goods orders, which is done in only 2 stores. The order picking functions in these stores were struggling to meet the schedules especially in spring and during the pre-Christmas season in 2020.

Kun meillä nousi myynnit, erityisesti silloin niin nopealla vauhdilla silloin viime keväänä, niin oli sellaisia prosessihaasteita, että – ja sama meillä oli joulukaupassa, eli nämä – meillä ei tavallaan ollut tarpeeksi kapasiteettia siihen keräilyyn niissä myymälöissä, että, että tuotteita jonkun verran keräillään kahdessa myymälässä, niin sitten ne 2 myymälää ei meinannut riittää siihen, että ne olisivat ehtineet tarpeeksi nopeasti keräämään kaikki tilaukset. / Yes, when sales increased at such a quick pace last spring, we did have process challenges, and the same happened with the Christmas trade, that in a way, we did not have enough picking capacity in the brick & mortar stores. Orders are picked to some extent in two stores, and there was almost not enough capacity in those two stores for picking all orders. (Respondent 6)

Some respondents mentioned that there is a technical feature in the grocery webstore, which only allows placing orders for the following 7 days.

Kun tuossa Foodie.fi -palvelussa niin meillä on ollut tällanen 7 päivän rajoite, näiden katevarausten osalta, ja me ei ole voitu ottaa tilauksia näissä toimituspaikoissa missä on vain verkkomaksu mahdollinen, niin ei ole voitu ottaa tilauksia vastaan yli 7 päivän päähän. / With Foodie.fi we have this 7-day limitation for covering funds, and in stores that only accept online payments we have not been able to take orders with deliveries later than within the following 7 days. (Respondent 2)

The main challenge with grocery distance pick-up locations is that they do not scale very well, since pickup times need to be long enough, and the number of orders exceeds the number of lockers available.

Noutolokerikko niin – niin sehän aika huonosti skaalautuu siihen kasvavaan kysyntään, että on 20 lokerikkoa ja niitä ei yhtäkkiä tule siihen enempää, ja sitten kuitenkin se noudon aika pitää olla aika pitkä sille asiakkaalle, että puhutaan vähintään kahden tunnin nouto noutosloteista, jotta se on sille asiakkaalle edelleen houkutteleva ja helpottaa hänen arkeaan – niin nämä ovat tietysti sellaisia skaalautumisen esteitä. / Distance pick-up lockers do not scale very well to increased demand, so if there are 20 lockers, the number will not suddenly increase, and at the same time the pick-up slot needs to be long enough, at least 2 hours, in order to appeal to customers and to ease their everyday lives, so these are some barriers for scaling. (Respondent 1)

According to respondents, product data, or lack thereof, is a general challenge not so much related to COVID-19, and to some extent stem from a new system implementation that was done during the pandemic. However, the issue has been highlighted, since incomplete product data not only affects the customer experience, but also creates challenges in grocery order picking. One respondent stated that the pandemic has increased the understanding of the importance of correct and rich product data, since before the pandemic, groceries made up a much smaller share of the total online sales of daily consumer goods. In addition, the current webstore solution does not allow displaying such specific data as where a single batch of fruit originates from. However, due to the increased market share of online groceries, more attention is drawn to the issue.

Se ei ole mitenkään koronasta—koronasta minun mielestäni johtuvaa, vaan ylipäätänsä se, että ruoan verkko-kauppa näytteli ennen koronaa vielä niin pientä osuutta siitä koko PT [päivittäistavara]-markkinasta, niin sen tuotetiedon merkitys on edelleen – tai ei ymmärretä sitä, että kuinka – kuinka kriittistä se on, että meillä on tuotteista – tuotteista kattavat tiedot [...]. / That is not in my opinion something that depends on COVID-19, rather that overall, previously online groceries played such a small part in the daily consumer goods market, that it is not fully understood how critical it is that we provide comprehensive product data. (Respondent 1)

Additionally, with consumer goods, product availability data led to increased enquiries from customers. According to one respondent, many customers check the availability of products online before going to a brick & mortar store to make a purchase. Online product availability data is not up-to-date, and, in reality, the products may not be available in store even though

the website indicates that they are in stock. Thus, according to one respondent, the biggest challenges were at the supply chain end; how to inform customers of delivery deviations and of delivery times overall, and how to get in contact with the customer service.

Meillä on ollut – ja on edelleen valitettavasti ongelma muun muassa saatavuustiedoissamme, että ne saatavuustiedot menevät hirveän paljon jälkijunassa sinne meidän verkkoon näkyville, että se ei kuvaa sitä välttämättä sitä todellista tuotteen saatavuutta. / We have had, and still have, problems with our availability data, which is lagging behind online, so it does not accurately display the availability of a product. (Respondent 5)

For consumer goods, the technical solution limits deliveries to Posti, who initially got heavily congested. Since then, the situation has improved significantly.

Tällä hetkellä vähemmän, että silloin alkuaikoina tosiaan se Posti ruuhkautui aika pahasti että, että se varmasti tosiaan sopeutumista tilanteeseen heilläkin vaatinut. / Initially, Posti got quite badly congested, and surely the situation has required adjustment also at their end. (Respondent 5)

Since Posti also favours parcel lockers as their primary delivery option, the capacity was limited and as a result, parcels have been directed to different locations than originally requested by customers. This has left some room for improvement with the last mile of the customer webstore experience. Furthermore, Posti had some challenges with delivering on time, and delayed processes overall, due to quarantines.

Viimeisen vuoden aikana ollut - ja on jonkun verran asiakas- semmoista - harmitusta ollut siitä, että – että ne Postin noutolokerikot menee täyteen, että sitten kun asiakas on toivonut sen tilauksen johonkin – jonkun tietyn S-marketin, vaikka noutolokerikkoon, niin sitten Postilta tulee ilmoitus, että se on täällä näin, että se on siirretty johonkin muuhun pisteeseen. / During the past year there has been some annoyance in that Posti runs out of available parcel lockers, and a customer has requested an order to be delivered to a certain parcel locker location, Posti informs them that it has been moved to another location. (Respondent 6)

### **4.3 Online consumer behaviour during COVID-19**

Generally, more people familiarised themselves with online shopping, and some customers were left with no choice but to start shopping online.

Ehkä pakotetusti niin kyllähän sinne on tullut – tullut tavallaan valtavia massoja uusia käyttäjiä, uusia asiakkaita, vähän pakotetusti, mitkä aikaisemmin ehkä ei ole ollut. / Perhaps by force, large masses of new users, new customers have emerged, who may not previously have used the webstore. (Respondent 4)

According to the respondents, customer segments expanded and for instance older people were more inclined to purchase online. It was also noted that a surprising number of customers need to be assisted with their grocery shopping.

Asiakasryhmät laajenivat, eli jos meillä esimerkiksi ruoan verkkokaupassa aikaisemmin iäkkäät henkilöt, eläkkeellä olevat henkilöt, niin on näytellyt pienempää asiakasryhmää, niin se asiakasryhmään kasvoi valtavasti. / Customer segments expanded; previously with online groceries, there has been a smaller share of elderly and retired customers, so that segment grew enormously. (Respondent 1)

[...] sellainen mielenkiintoinen ilmiö, että aika paljon nähdään myös sitä, että ihmiset asioivat vanhusten puolesta, siis perheenjäsenet, eli omat lapset vaikka tekee sitten niille kotona oleville vanhuksille sen tilauksen heidän niminsä ja – ja tällainen puolesta asiointi on sitten sitä kautta lisääntynyt. / [...] an interesting phenomenon, that we have seen quite a lot of, is that people are shopping on behalf of the elderly, meaning that family members, such as their children, are placing orders for the elderly, so this kind of shopping on behalf of someone else has increased. (Respondent 2)

Along with changes in customer segment shares came new angles in consuming since different segments have different needs and consumption habits. In addition, as a result of restaurant closures, and the fact that people have spent a lot more time at home, an increase in demand of ready-made foods has been recognized. Furthermore, average order values have increased due to these factors.

Sitten tottakai sitä myötä tulee niissä kulutuksissa myöskin uudenlaisia kulmia, koska se lapsiperheen ostoskori on selkeästi erinäköinen kuin sitten vaikka eläkeläisen tai aikuisen pariskunnan ostoskori. / Then of course along with that come new angles in consuming, because the shopping basket of a family with children is clearly different from that of a retired person or a grown-up couple. (Respondent 1)

Ja ehkä toinen sellainen, mikä on näkynyt, ja ehkä sitten vaikuttaa on tuo – meillä keskiostos on jonkin verran kasvanut, kun ihmiset ovat kotona, ei käydä ravintoloissa, syömässä tai lounasruokaloissa, niin sitä kautta ne ostomäärät mitä olemme keränneet asiakkaille, niin ovat olleet isompia. / And perhaps another thing that has been noticeable is that the average purchase has increased to some extent, as people have stayed at home, not visiting restaurants, so that has caused increases in basket sizes. (Respondent 3)

Social distancing and people working from home also appeared to affect the preferred delivery times in online grocery order deliveries. Previously less popular mid-day and Sunday delivery slots became more popular due to people staying at home. Capacity was increased in home deliveries to include a broader range of times, e.g. evenings and weekends. Furthermore, demand for home deliveries increased.

Aikaisemmin oli esimerkiksi niin että viikonlopuille, vaikka niitä ikkunoita oli huomattavasti vähemmän, sunnuntaille ei juuri ollenkaan ollut koskaan aikaisemmin ennen koronaa ollut toimituksia ollenkaan, niin, nyt kun meidän piti lisätä sitä kapasiteettia, niin totta kai sinne lisättiin aamulle varhaisia ikkunoita, illalle myöhäisiä ikkunoita, ja sitten otettiin myös niitä viikonloppuja sieltä käyttöön. / Previously there was a significantly smaller

number of slots for weekends, and hardly any deliveries on Sundays. So now that we had to add capacity, then of course we added early morning and late evening slots, as well as weekend slots. (Respondent 1)

Koronan myötä niin kotiinkuljetusten kysyntä on kasvanut selkeästi, eli sitten kun on tullu myös ehkä sellaisia asiakkaita, jotka eivät välttämättä liiku autolla tuolla, ja eivät käytä tuota - eivät käytä noutopalvelua, niin ovat tilanneet sitten enemmän kotiinkuljetusta. / Along with COVID, the demand for home deliveries has clearly increased. We have gained customers who may not have a car who do not use the pick-up service but instead use the home delivery service. (Respondent 2)

According to several respondents, a notable bottleneck was the number of available slots for home deliveries and distance pick-ups of grocery orders. Due to technical reasons, slots could only be booked for the following 7 days at a time (for online payments). The increased demand together with limited capacity created a new consumer habit; there were a limited number of delivery slots, and any possible opening delivery slots would become vacant in the middle of the night. This led to customers looking for possible slot openings in the early hours.

[...] siellä oli ihmisiä jonottamassa yöllä koneen ääressä ja klikkailemassa päivitysnappeja, että milloin nämä seuraavan päivän ikkunat vapautuvat, että pääsee heti varaamaan sieltä toimitusajan. / People were queuing online in the middle of the night, clicking the refresh button, in order to book any opening slots. (Respondent 2)

Regarding daily consumer goods, the respondents did not have any specific data on demand of specific product categories, stating that largely the same products were in demand both online and offline, e.g. products subject to hoarding, such as toilet paper and canned foods.

Se on kyllä tullut läpi linjan, tuoteryhmistä, eli – eli hyvin samankaltaisesti niin miten sieltä kivijalastaki ostetaan, niin menee sitten verkosta. Että ei oikeastaan voi sanoa että mikään tuoteryhmä varsinaisesti sieltä olisi – olisi noussut tämän pandemian myötä. / Basically, sales have come from all categories, so very similar to the categories in the brick & mortar stores, so there is not really any product category that would have exactly emerged as a result of the pandemic. (Respondent 2)

With consumer goods, it was noted that sales of products related to spending time at home increased, while demand for fashion and clothing decreased. In addition, there was a surge in demand of equipment for working from home, mainly computer accessories. Further, demand increased for children's toys, games, and entertainment for the whole family, since at one point during the pandemic children had to stay home from school.

Vähän tuotealueesta riippuen, että toiset hyötyivät todella paljon, tuli rakettimaisia myynninkasvuja, kun taas toisissa jossa se – sanotaan vaikka matkalaukut, matkalaukkuja ei viime aikoina ole hirveästi myyty, että sellaisissa mitkä liittyy siihen että olet ihmisten ilmoilla, niin niitä ei ole kyllä oikein mitään hirveästi myyty, vastaavasti taas niitä mitkä sitten liittyy kotoiluun, niin niitä on myyty sitten senkin edestä. / Depending on the category – in some categories sales growth was rocketlike, whereas in other, such as suitcases, have not been sold lately. Products related to spending time outside the home have not been in demand, whereas the sales of those related to staying at home have made up for it. (Respondent 5)

According to the respondents, in some respects, regional differences are prominent, and Finland is quite diverse, e.g. in terms of food trends. Veganism is popular in big cities such as Helsinki, Tampere, or Turku as opposed to e.g. Central Ostrobothnia. Overall, grocery e-commerce has traditionally been centred on the capital region and large growth centres. With delivery options, especially in the capital region, home deliveries have been more popular, whereas elsewhere, pickup has appeared to be the best option for customers. Also, in terms of producing the service, home delivery is more difficult to provide in areas with scarce population. And in general, as customer groups have been examined, it has been noted that traditionally, further north, customers prefer visiting brick & mortar stores instead of shopping online.

Yleisesti ottaenhan niin Suomi on alueellisesti todella erilainen, että kaupunkien keskustat, niin niissä ihan toisenlaiset ruokatrendit, ja asiat korostuvat, kun sitten kun mennään maakuntiin, että Keski-Pohjanmaalla niin ei tällaista vegaanibuumia ole ollenkaan, mikä sitten ehkä jossain Helsingissä ja Tampereella ja Turussa jo korostuu. / In general, Finland is regionally very diverse. Food trends are different in city centres, and things are accentuated in the rural areas, so a vegan boom is not present in Central Ostrobothnia, whereas in the likes of Helsinki, Turku, or Tampere it already stands out. (Respondent 1)

Perinteisesti niin – ruoan verkkokauppa on keskittynyt pääkaupunkiseudulle, ja isoihin kasvukeskuksiin. Ja pääkaupunkiseudulla erityisesti niin kotiinkuljetukselle on ollut enemmän kysyntää, kun ihmisillä ei välttämättä ole sitä autoa, ja on ehkä kiireisempää. / Traditionally, online groceries have been centred around the capital region, and large growth centres. And, especially in the capital region, there has been more demand for home deliveries, as people may not own a car, and the pace of life is busier. (Respondent 2)

### **4.3.1 Process improvements and solutions**

Order picking functions were scaled by introducing night order picking where possible.

On tehty myös yökeräilyä, kovimpina ruuhka-aikoina se on toki kalliimpaa tuottaa se palvelu yöllä, mutta se on yksi tapa saada kapasiteettia. / We have also done night picking, during the peak periods it is of course more expensive to produce the service at night, but it is one way of adding capacity. (Respondent 2)

Meillä on keräys laajentunut ympäri kellon pyöriäkseen, joissain myymälöissä, jotka ovat auki, ja missä se on mahdollista tehdä. / We have expanded order picking to happen 24/7, in some stores that are open and where it is possible. (Respondent 3)

In addition, a large number of new personnel was recruited and introduced to the store picking functions.

Esimerkiksi MaRa-toimialalta, kun jengiä jäi silloin, oli lomautus- tai yt-uhan alla niin – niitähän otettiin keräämään, eli siellä on esimerkiksi HOK-Elannolla tehty ihan massiivisia operaatioita siihen. / For example, when people were made redundant from the restaurant and hotel functions they were transferred to order picking, so e.g. the HOK-Elanto cooperative carried out massive operations for that. (Respondent 3)

The capacity of distance pick-up locations was scaled by shortening the time slots for pick-up.

Se miten saamme niihin lisää kapasiteettia ja käyttöastetta suuremmaksi on se, että tehdään lyhyempiä aikaikkunoita, eli sen sijaan että on vaikka koko aamunpäivän ikkuna, niin pilkotaan se tunnin ikkunoihin. / We are able to add capacity and increase occupancy by shortening time slots, so instead of a time slot for, say, the whole morning, we split it into one hour slots. (Respondent 2)

Moreover, the network of in-store pick-up locations was significantly expanded.

Meillä on ollut aina noutopisteverkosto, ja sitä vaan laajennettiin merkittävästi, että – sekin oli ehkä mielestäni juuri sellainen, että aina tiedettiin, että tällaiselle on tarvetta, mutta ehkä sitten se, että nyt se tarve konkretisoitui yhdessä yössä. / We have always had a network of pick-up locations, now it was just expanded significantly. I think that was also one of those things we knew was needed, but perhaps the need really took shape overnight. (Respondent 1)

During the pandemic, customer communication has been improved, both with regard to daily consumer goods order picking, and the customer service chat for consumer goods on Prisma.fi.

Meillä on sellainen käytäntömalli, että jos tilaus on jäämässä paljonkin vajaaksi, että sieltä puuttuu tällaisia keskeisiä - keskeisiä tuotteita, eikä löydetä korvaavia vastaavia tuotteita, niin sitten me soitamme asiakkaalle ja kysymme että miten hän haluaa toimia. / Our policy is that if an order is going to be very incomplete with central items missing, then we call the customer and ask them how they wish to proceed. (Respondent 2)

The customer service chat was improved with a feature for some of the most frequently asked question, e.g. availability, or order status (for consumer goods).

Asiakaspalvelun osalta esimerkiksi olemme parantaneet sitä chatin käytettävyyttä, että siellä on tällainen botti, että pystyy tyypillisimpiin kysymyksiin saada sieltä helposti vastauksen, sieltä chatin kautta. / Regarding our customer service, we have improved the usability of the chat function, so there's a chat bot that gives answers to the most frequently asked questions. (Respondent 5)

A large number of new grocery e-commerce outlets were opened, and the network was significantly expanded across Finland.

Avasimme ihan kokonaan uusia ruoan verkkokaupan toimipisteitä laajasti ympäri Suomea, että verkostomme on triplaantunut siitä, mitä se oli vuoden 2020 alussa, niin verkostoa on laajennettu merkittävästi. / We have opened new webstore outlets widely across Finland, so our network has tripled from early 2020, so the network has been significantly expanded. (Respondent 1)

In addition, new models were created both for receiving orders, and for delivering them to customers, both internally and by external actors. For example, a type of light version of a grocery webstore was created for stores that were not a part of the grocery webstore network.

Sitten tehtiin tällainen kevytverkkokauppamalli myöskin, eli tällaiset myymälät jotka eivät varsinaisesti tee ruoan verkkokauppaa, niin heille asiakkaat pystyivät sähköpostilla laittamaan tilauksia, ja sitten paikalliset kuljetusliik-  
keet toimitti näitä tilauksia asiakkaille. / Then we also created this light webstore solution, where stores who are  
not part of the e-commerce network were able to receive orders by email, and local transport companies delivered  
the orders. (Respondent 1)

Furthermore, a service organized by the city, which secured food supply to the elderly, and  
people who need help with their grocery shopping, was created.

Helsingissä tehtiin myöskin seurakuntien kanssa sitten sitä yhteistyötä, että vapaaehtoiset kävi keräämässä  
niitä tuotteita myymälöistä ja toimitti sitten henkilöille, joilla ei sitten muuta verkostoa ollut, joka voisi toimittaa  
näitä ostoksia asiakkaille kotiin. / In Helsinki we also cooperated with parishes, where volunteers would pick the  
products and deliver them to persons who did not have any other network for delivering their shopping. (Respond-  
ent 1)

According to respondents, deliveries did not appear as a bottleneck in terms of capacity. A  
COVID-19 specific matter mentioned regarding deliveries was that legislation was temporarily  
altered, as Ruokavirasto gave a special permit during COVID-19, allowing groceries to be de-  
livered without using cold transport in the case that transport takes no more than 1 hour. This  
allowed taxi and transport companies to innovate and offer online grocery delivery services e.g.  
where a taxi driver would pick grocery orders in store and deliver them to customers.

Sellainen koronaspesifi asia kuljetuksiin liittyenhan oli että siihen tuli myös uutta lainsäädäntöä, siten että Ru-  
okavirasto antoi tällaisen poikkeusluvan koronan aikana toimittaa näitä elintarvikkeita myös ilman kylmäkulje-  
tusta, siinä tapauksessa että kuljetus kestää korkeintaan tunnin. / One COVID-specific matter regarding transports  
was that there was new legislation, which allowed transporting groceries without using cold transport equipment,  
in the case that the duration of transport did not exceed one hour. (Respondent 2)

In addition, cooperation with Wolt has been trialled during the pandemic, in order to investigate  
the need for express deliveries, and whether customers wish to order something else together  
with their Wolt order. This was not related to COVID-19, as it had already been initiated before  
the pandemic, but the pilot was released in summer 2020.

Myös ruoan verkkokaupalla on Woltin kanssa yhteistyö, eli Woltin sovelluksesta voi Alepan tuotteita muun mu-  
assa ostaa täällä pääkaupunkiseudulla, ja Salen tuotteita Pirkanmaan alueella, ja sehän jatkuu edelleen, eli pikatoi-  
mitukset, niin niiden kysyntää on siinä pilotoitu, ja ehkä myöskin, että haluaako asiakas Woltin tilauksen yhtey-  
teen tilata jotain muutakin samalla. / The online grocery store also co-operates with Wolt, meaning that in the  
capital region, Alepa's products, and in Pirkanmaa, Sale's products can be purchased through the Wolt application.  
This is an ongoing pilot for trialing the demand for express deliveries, and perhaps also whether customers wish  
to purchase something else together with their Wolt order. (Respondent 1)

Volume discounts have not been applied within online groceries and daily consumer goods. Although requested a lot by customers, from a business perspective it is not profitable – especially during the pandemic, since demand exceeded supply.

Meillä ei ole koskaan ollut ruoan verkkokaupassa mitään määrälennuksia. Ja tähän on asia, mitä asiakkaat kovasti toivovat meiltä, mutta se ei sen kustannusrakenteen näkökulmasta ole järkevää bisnestä että – se on pikemminkin toisinpäin, että mitä suurempi asiakkaan ostoskori on, niin sitä enemmän meillä menee aikaa ja rahaa sen keräyksen tekemiseen. / We have never offered any quantity discounts online. This is something that customers do express wishes for, but from a cost structure point of view, it is not reasonable business – rather the opposite, the larger the shopping basket, the more time and money it takes to pick the order. (Respondent 1)

For consumer goods, on the other hand, several campaigns, such as free deliveries, have been implemented.

Todella – todella paljon, ihan oikeestaan siitä – heti maaliskuun lopulla, kun tuli ne tiedot siitä, että tämä korona-juttu on eskaloitumassa, ja ihmiset koteihin, niin me lähdimme siitä heti samantein itse asiassa tekemään tällaisia kotiintoomittamiskampanjoita ja tämän tyyppisiä. / Very, very much, actually immediately in late March, as we got the news that the COVID-19 situation is escalating and people staying at home, so we immediately started doing home delivery campaigns, and such. (Respondent 5)

## 4.4 Post-pandemic and future

### 4.4.1 Ongoing development

Several respondents stated that the pandemic gave a better understanding of the importance of e-commerce and accelerated the development of e-commerce processes.

Mutta melkoisen sysäyksen tämä antoi siihen – ja juuri ne kehityspanoksethan ovat kasvaneet merkittävästi, joskin ne olivat jo – olivat jo kasvaneet ennen kyllä tätä pandemiaa, mutta kyllä se toi siihen selkeästi sellaista huomiota ja fokusta. / But it did give it an impetus, and raised the stakes, although they had already been raised, but it did clearly draw more attention and focus to it. (Respondent 2)

Webstore solutions have been technically developed during the pandemic, for instance a new platform for one of the online grocery stores (Food Market Herkku) was released. In addition, transferring the old grocery webstore onto has been in progress. Even though there were already plans for e-commerce development, the pandemic accelerated growth and development, and drew attention and focus to improvements. Several respondents stated that development of the processes is ongoing, creating customer-oriented way services, and considering their

requirements for the online grocery store. The mission is to develop the services and the webstore to meet customers' needs, and to provide options to choose from. The intention is to replace the light grocery webstore model with proper webstore solutions, and experiments will be continued in order to seek out the best models for producing the service in the future.

Se on yleensäkin sellainen asia, että oli meillä pandemiaa tai ei, niin meidän pitää pystyä todella paljon kehittämään sitä prosessia. / In general, it is an issue that whether there is a pandemic or not, that we must be able to develop the process. (Respondent 3)

#### **4.4.2 Post-pandemic online consumer behaviour**

Once the pandemic ends, all of the new services that have emerged will not be needed. Time will tell which services will remain once customers are no longer 'forced' to use them.

Saa nähdä [...] mille palveluille on sitten – aidosti löytyy ne viikkoasiakkaat- tarpeet – se tavallaan asiakkaiden pakko – pakko vähän niin kuin poistuu. / It remains to be seen, what services will be truly in demand once the necessity for customers to use them is gone. (Respondent 4)

The organic boost provided by the pandemic is expected to fade to some extent, but at the same time, it is believed that a permanent level in demand has been achieved. Many customers are expected to be content with the newfound benefits of online shopping, and unlikely to return to brick & mortar stores.

Uskon vakaasti siihen, että olemme pystyneet niitä asiakkaita, jotka on pandemian aikana meille sisään tulleet, niin on pystytty palvelemaan kuitenkin sen verran hyvin, ja että he ovat löytäneet ruoan verkkokaupasta oikeasti aitoa helpoutta arkeen, että olemme saaneet ihmisiä jäämään käyttämään sitä palvelua. / I firmly believe that we have been able to serve the customers gained during the pandemic well enough, that they have found genuine ease to their everyday life, in order for them to keep using the service. (Respondent 3)

On the other hand, some customers are expected to be looking forward to visiting stores again, for several reasons. Some decrease in demand may occur e.g. within high-risk groups as some segments, such as the elderly, are likely to return to conventional shopping.

Uskon että varmaan sekä että, että se voi olla tapahtuu, että vaikka tietyt asiakasryhmät – ryhmät, vaikka tämä vanhempi väestö [...] niin se voi olla se kaupassakäynti ihan oikeasti henkireikä, ja ihan tervettäkin että he liikkuvat – että tämän tyyppistä tavallaan luontaista kysynnän laskua voi tulla, juuri ehkä niistä riskiryhmistä. / Probably both, I believe. Once restrictions are lifted, for some customer segments, such as the elderly, getting out of the

house may be a lifeline, so this kind of natural decrease in demand may occur, particularly in high-risk groups. (Respondent 4)

At the same time, in the future, consumer behaviour is expected to combine both online and offline shopping, which provides customers with options. This is not regarded as an “either or” situation, as both are needed. Although there are people who still exclusively shop offline and a small number of customers who almost exclusively shop online, the majority utilizes both channels. In addition, centring purchases is beneficial for customers, and customer owners in particular.

On ihmisiä, jotka asioivat edelleen vain kivijalassa, ja sitten on pieni osuus niitä, jotka keskittävät lähestulkoon kaiken verkkoon, mutta sitten on valtaosa sellaisia, että he asioivat kummassakin kanavassa vähän tilanteen mukaan, niin kyllä se on tullut jäädäkseen se verkkoasiointi. / There are people who continue to visit the brick & mortar stores, and a small number who centre nearly everything online, but the majority utilises both channels depending on the situation. So online shopping is here to stay. (Respondent 2)

Varmasti on tietyllä tavalla pysyvä muutos siinä ostokäyttäytymisessä, halutaan sitä tukea jatkossakin, että asiakas voi päättää sen verkkokauppaostamisen ja kivijalkaostamisen välillä, tai että asiakas pystyy löytämään sellaisen sopivan kombon. / Surely in a certain way there is a permanent change in buying behaviour and we want to support the opportunity for customers to decide between online and offline buying, or that they can find a suitable combo. (Respondent 6)

#### **4.4.3 New offerings and services**

Customers want online shopping to save them time and to support their daily cooking, e.g. by providing recipes and ease for selecting products. For example, a meal kit service, where ongoing customer relations bring added value, e.g. based on previous purchases, allergies, and special dietary requirements, and customizing grocery orders accordingly.

Additionally, different types of customer needs created consideration of what types of services should be created for different customer segments, such as elderly people who need to be assisted with their grocery shopping, or customers who do not drive a car.

Se yksin asuvien vanhusten määrä, jotka tarvitsee tällaisissa pandemiatilanteissa apua ostosten tekemiseen, niin se ehkä on yllättänyt, ja ehkä laittanut myös miettimään, että minkälaisia palveluita tälle asiakasryhmälle meidän pitäisi tulevaisuudessa rakentaa ja keksiä. / The number of elderly people living on their own, who need assistance with their shopping at times like a pandemic, has perhaps come as a surprise, and also drawn attention to the kind of services we should be able to provide to this segment in the future. (Respondent 1)

Kaikki ei mene autolla hypermarkettiin, että miten me pystymme palvelemaan erilaisia asiakkaita, joilla on eri asiakastarpeita, niin kyllähän meidänkin täytyy olla tuntosarvet hereillä koko ajan, että mihin tässä ollaan menossa.

/ Not everyone takes the car to a hypermarket, and how we can serve different customers with different needs – we do need to have good antennae and see where we are headed. (Respondent 3)

According to one respondent, speed of delivery is a current topic. With the addition of Wolt deliveries, orders will likely be divided into 3 categories; placing one's grocery order the day before for next day delivery, placing one's order in the morning for same day delivery (evening), and in addition, a 'supplement' order similar to Wolt orders.

Yksi sellainen iso teema tällä hetkellä, mistä keskustellaan paljon, on toimitusnopeus, niin – kun aikaisemmin se on ollut, että huomiseksi, ja parhaat pystyneet toimittamaan samalle päivälle, niin kyllä siihen tavallaan [...] esimerkiksi tämä Wolt-maailma on tullut rinnalle. / A big theme at the moment is speed of delivery. Previously, there were next-day deliveries and in some cases same-day delivery, but in addition to that, the Wolt world has been added to the mix. (Respondent 4)

## 4.5 Summary of main findings

A summary of the main outcomes of COVID-19 mentioned during the interviews is reported in Table 1.

Table 1. Effects of COVID-19

Topic	Number of respondents who mentioned
<b>General effects of Covid-19</b>	
Increased demand and sales	6
Digital growth leap	4
<b>Process challenges</b>	
Order picking	
- depends on brick & mortar process	3
- scaling	4
Grocery order deliveries limited to the following 7 days	3
Scaling challenge with distance pick-up locations	3
Posti's parcel lockers	2
<b>Consumer behaviour</b>	
New webstore users & first-time online shoppers	6
New customer segments	5
Shopping on behalf of the elderly	2
New angles in consuming	4
- increased average purchase due to restaurant closures and social distancing	1
- increased demand for ready-made foods	1
- shopping basket diversity	1
- product categories	3
Shift in preferred delivery times	2
Booking slots in the early hours	3
Hoarding	4
Webrooming	1
Increased demand for home delivery	1
<b>Solutions</b>	
Added capacity in store picking	5
Network expanded: opening new grocery e-commerce outlets, light webstore	4
Grocery shopping service for the elderly	2
Scaling of distance pick-up locations	2
Temporary change in legislation allowed transports without cold transport vehicles	3

As can be seen from the table, the most prominent changes in consumer behaviour during the pandemic were increased demand and sales, and new webstore users. The pandemic created a new habit of online shopping, which drastically increased demand, to the point that the retailer was struggling to meet demand. Regarding the processes, the most prominent challenge and bottleneck was scaling of order picking. With the new consumer habit, volumes changed, and attention was drawn to some key issues to be developed. Thus, a digital or growth leap took place, where development, as well as consumer engagement, accelerated overnight – e-commerce had taken a leap of several years. The new webstore users included the aging population,

a previously smaller segment that grew rapidly. Along with new webstore users came new angles of consuming since different segments have different consumption habits and thus different shopping baskets. Hoarding behaviour affected the e-commerce process since orders are picked from brick & mortar stores, which were temporarily emptied of key items due to stockpiling done by customers. In addition, scaling the order picking functions to meet demand and being able to pick all orders was a challenge.

Furthermore, there were challenges with scaling order slots due to a technical payment feature. Slots were constantly fully booked and could only be booked up to 7 days further, with any possible cancelled slots becoming available in the middle of the night. This caused a new type of customer behaviour, as people were up in the early hours queuing for possible slots opening.

Solutions to the challenges include adding picking capacity in terms of new staff, as well as expanding the network or stores with order picking functions.

## **5 DISCUSSION**

The aim of this thesis was to explore the effects of the pandemic on the online consumer behaviour and, subsequently, the e-commerce processes of the retail company, to investigate what changed, and what measures had been taken to handle the situation. Furthermore, the aim was to survey what is expected and estimated to happen once the pandemic is over – will customers return to their old habits, or have some behaviours become the new normal?

### **5.1 General**

The growth caused by the pandemic was described by the respondents as a growth leap, which has accelerated development with several years in comparison to estimates. The ‘digital leap’ fast forwarded the digitalization of operations, as well as customers’ adoption of online shopping. Similarly, the Finnish Commerce Federation (2021) stated that the growth in e-commerce of daily consumer goods reached a level that had previously forecast to be reached in 3–4 years.

Moreover, according to OECD (2021), the COVID-19 pandemic has sped up the expansion of e-commerce in terms of new firms, new customers, such as the elderly, and new types of products, for instance groceries. It has made a broad spectrum of products available to customers from their homes and allowed firms to keep operating despite restrictions. In addition, Redman argues that COVID-19 has expanded the digital disruption in the grocery industry and accelerated the growth of online groceries by eliminating obstacles for consumers' adoption of online shopping. (Redman 2021)

Kyllähän meillä tuo bisnes tavallaan räjähti, että sitä monet kuvasivat, niin viiden vuoden loikka otettiin siinä sitten, kun asiakkaiden kulutustottumukset muuttuivat, ja meillä se näkyi siis todella valtavana myynnin kasvuna silloin alkuun. / Our business operations did, in a way, explode, and what was described by many as a five year leap, was taken, as consumers' habits changed. And to us it was visible as a massive growth in sales in the beginning. (Respondent 3)

Schneider (2007 p. 4) states that even though the rapid expansion of the e-commerce boom years are unlikely to be repeated, a second wave of electronic commerce is well under way. Although unlikely that such a scenario as the COVID-19 was anticipated, it has surely contributed to the second wave, and perhaps it can even be compared to the dot-com boom.

## 5.2 Process

According to this study, one of the main bottlenecks was the scaling and capacity of grocery order picking. Challenges in the order picking functions included capacity and the scaling of operations, to match the explosive demand that occurred as a result of COVID-19 restrictions. The most prominent issue that emerged from the responses was the scaling of operations and, in particular, in-store order picking, as well as the number of delivery slots for grocery orders. As order numbers increased dramatically, there was simply not enough capacity to take all orders because the capacity was not optimized for such volumes. Guthrie et al. (2021) also found in their study concerning online activity at a case company, that as a result of a spike in online activity, the company's management focused on order fulfilment, and recruited 100 pickers during the first two months of the pandemic.

[...] Me emme ihan siihen pystyneet vastaamaan siihen kysyntään [...] ei ole pystytty keräämään niitä tilauksia, mitä asiakkaat olisivat halunneet meiltä tilata. Että sillä tavalla olisi ollut potentiaalia isompiinkin myynteihin. / [...] We were not quite able to meet the demand [...] we have not been able to pick all orders that customers would have wanted. So in that sense there would have been potential for more sales. (Respondent 3)

Several respondents stated that in-store order picking creates certain challenges, since the stores are designed with the brick & mortar customer in mind, and they are not optimized for order picking. In addition, using the same inventory for both channels created challenge during the hoarding phase of the pandemic. Similarly, Tveraabak (2021) states that the vast increase in demand of online groceries has drawn attention to key issues in efficiency and productivity, and consequently, profitability of fulfilment. Previously seen as a problem to be faced in the future, the profitability and efficiency of online ordering suddenly became an immediate issue as a result of the pandemic. In addition, Ritter (2020) states that as a result of the rapid increase in online orders, deficiencies in manual picking processes were revealed. “Grocery stores are designed for customers, not pickers” (Ritter 2020). The store environment is often constrained for space, and store layouts and the positioning of products are optimized to maximize sales instead of minimizing travel during a shopping trip.

Jossain kohtaa siinä myymälässä vain päästään siihen pisteeseen, että onko meidän järkevää tehdä sieltä samasta myymälästä määräänsä enempää sitä, koska se on kuitenkin kivijalka-asiakkaalle suunniteltu, se ei ole sen keräyksen kannalta optimoitu alue [...] / At some point we get to the point where the question arises whether it is sensible to do any more order picking, since the store is designed with brick & mortar customers in mind, and the area is not optimized for order picking. (Respondent 3)

Esimerkiksi määräänsä enempää ei ole kylmätilaa mihin me voimme väliavarastoida niitä kerättyjä tilauksia, ja kaikkea tämän näköistä, että niitä asiakasnoutoautoja ei mahdu enempää pysäköintialueelle, että kyllähän tuollaiset tulee sitten jossain kohtaa vastaan. / For instance, there is only so much cold storage for storing picked orders, and such, or limited parking space for customers who use in-store pickup, so these types of issues do arise at some point. (Respondent 3)

“COVID-19 may be the tipping point for e-commerce in grocery, permanently changing consumer behavior and shopping habits. In that case, grocers have less time than ever to develop efficient, effective fulfilment capabilities” (Ritter 2020). Similarly, Nicholls (2020) explains that certain features unique to grocery e-commerce create challenges for scaling, e.g. basket sizes tend to be much larger than in other categories, and shopping lists, in-store picking, and substituting. Furthermore, Feld-Jakobsen (2021) states that for grocery retailers with store picking functions, customers will be in the stores simultaneously, picking some of the same items from the shelves, meaning that the stock level cannot be accurate. This was also mentioned by

one respondent, who stated that traditionally, order picking is done in the morning, because the presence of brick & mortar customers limits the order picking to some extent.

Perinteisesti niin se kaikki keräily tehdään aamun aikana, aamupäivän aikana. Ja iltapäivät, illat ovat siinä mielessä haastavia, että kun myymälät täyttyvät sitten muutenkin asiakkaista, niin se vähän rajoittaa sitä, että kuinka paljon siellä pystyy silloin kerääjät tekemään toimintaa. / Traditionally, order picking is done in mornings, and afternoons and evenings are challenging in the sense that brick & mortar customers will simultaneously be shopping in-store, which somewhat limits the order-picking process. (Respondent 2)

In addition, Feld-Jakobsen explains that grocery orders are picked as late as possible, meaning that several days may pass between the order being placed, and the order picking, which makes product stocks nearly impossible to know once an order is being picked. Feld-Jakobsen also points out that order picking staff must consider a number of factors, such as product weights, substituting items, and the need for customer communication. Furthermore, with substituting items, retailers need to consider price differences and apply refunds on cheaper replacements, or discounts on more expensive replacing items, in order to match the price paid for the original order. This supports the mention by one respondent, that lacks in product data create challenges for order picking. This supports the mention by one respondent that, especially items that vary in weight, cause challenges for order picking, and requires knowledge that comes from experience.

Yksi murheenkryyni on nämä hintatiedot, ja nyt erityisesti sitten tällaiset muuttuvapainoiset tuotteet, eli punnittavat tuotteet käytännössä. [...] ja sitten se on myös sinne myymälään ja siihen keräilyyn todella ikävää, kun hekin joutuvat vähän arvuuttelemaan, että täällä on nyt 2 kiloa kukkakaalia tilattu, mutta olisikohan tämä ollut vain 2 kappaletta vai 2 kiloa, että se vaatii myös ehkä sellaista kokemuksen myötä tulevaa tietoa siellä myymäläkeräilyssä, että he osaavat vähän tulkita sitä tilausmäärää. / One issue has been price information and in particular, items that vary in weight. This also creates problems for the order picking staff, who need to be guessing, for instance if the order says 2 kilograms of cauliflower but perhaps it should be 2 pieces instead, so in order picking, some knowledge that comes from experience is required, in order to interpret the ordered quantities. Respondent 2)

Another challenge with product data, mentioned by several respondents, is the customer experience. One respondent also mentioned that customers give feedback concerning finding e.g. ecological or gluten free products in the webstore, and stated that product data must be developed, in order to compete with the brick & mortar stores. Similarly, Feld-Jakobsen (2021) explains that online customers require the ability to filter products according to specific filters, e.g. vegan and eco-friendly. This was also mentioned by one respondent who said that customers express wishes about not finding specific products suitable for their diets, such as ecological,

vegan, or gluten free items, and thus there is room for improvement. The respondent also stated that the current processes do not support the ability to unambiguously provide information regarding the origins of produce, such as the country of origin of grapes, or the supplier of tomatoes.

Kyllähän asiakkailta myöskin on sitten tullu itseltä paljon niitä tarpeita – että noudatan luomuruokavaliota, mutta en pysty löytämään nyt täältä verkkokaupasta eksaktisti niitä tuotteita, jotka on luomuja, tai, et minulla on gluteeniton ruokavalio, ja nyt en löydä niitä gluteenittomia tuotteita, että kyllähän myöskin meidän asiakkailta nyt tulee todella paljon sitä palautetta, että sitä tuotetietoa on pakko kehittää, jotta me pystyisimme ihan oikeasti sitten kilpailemaan sen kivijalan kanssa. / Customers have expressed that they cannot find the exact products for their diets, such as organic or gluten free product. We do get a lot of feedback from customers, and product data needs to be developed, in order to compete with the brick & mortar stores. (Respondent 1)

The vast increase in demand initiated some new models, such as a light webstore version for units who were not yet a part of the network of stores participating in e-commerce. In addition, a service was introduced in in the Helsinki area, in cooperation with parishes and the city of Helsinki, to provide grocery shopping help to elderly consumers. Roggeveen & Sethuraman (2020) also state that since the beginning of the pandemic, retailers providing crucial goods, e.g. groceries, have met increased opportunities for serving customers in their homes.

### **5.3 Online consumer behaviour**

According to the results of this study, an increasing number of customers have familiarised themselves with online shopping, groceries in particular, some out of necessity due to the circumstances, since going to a physical store was not an option. The online customer base and segments have broadened as first-time webstore users and older age groups have taken to online shopping. Regarding online groceries, it was stated by one respondent that placing the very first order is the hardest for the customer, an obstacle which may need to be conquered before becoming accustomed to online shopping. This is also pointed out by Goldman, who argues that “in online grocery, first-time adoption evolves into consumer habit” (Goldman 2021). Moreover, Laudon & Traver (2015) argue that customers’ knowledge of conducting online transactions, or consumer skills, increase with experience. Additionally, Hand et al. (2009) conclude that consumers who are already familiar with online grocery shopping have more confidence in their ability to do so.

Merkittävä osa ruoan verkkokaupan pariin siirtyneistä asiakkaista oli varmasti sellaisia, jotka olivat harkinneet sitä tosi pitkään, mutta eivät jostain syystä olleet saaneet aikaiseksi tehdä sitä ensimmäistä tilausta. Ja ruoan verkkokaupan osalta on hyvä tunnistaa, että se ensimmäinen tilaus on se vaikein, että kun on sen ensimmäisen tilauksen tehnyt, niin sittenhän kaikki on aika helppoa [...] / A significant number of customers who shifted to online shopping were surely customers who had contemplated shopping online for a very long time, but for some reason had not yet gotten around to placing the first order. And with online groceries, it is good to recognize that the first order is the hardest, and once that has been placed, everything is quite simple [...] (Respondent 1)

In addition, it was stated that the share of older online customers grew significantly. Previously, older customer groups may have shied away from online shopping since they are not digital natives and may not be at all familiar with using the internet. However, due to the circumstances, many may now have familiarized themselves with online shopping. This is supported by Sheth (2020), who explains the immediate effects of COVID-19 on consumer behavior, which include learning to improvise and inventing new consumption habits and adopting new technologies. Similarly, Mathur et al. (2003) (see Guthrie et al. 2021) argue that stressful events such as pandemics cause shifts in long-term behavior, and changes in consumption lifestyles, in order to adapt to changes in circumstances. The COVID-19 pandemic, lockdown, and social distancing have interfered with buying practices. In addition, they have resulted in consumers experimenting with new channels, and learning new habits. However, not all elderly customers are willing, or able to learn how to shop online. This generated a new consumer habit of ordering on behalf of the elderly.

Ja se määrä paljonko meilläkin asiakkaat asioivat omien vanhempiansa puolesta, koska eihän sinun 85-vuotias äitisi välttämättä osaa käyttää enää sitä verkkokauppaa, tai halua opetellakaan käyttämään sitä, mutta ei sitten myöskään ole oikein turvallista mennä sinne kauppaan, niin sitten lapset tilaavat vanhemmilleen ruokaa verkosta. / The number of people shopping on behalf of their parents, since one's 85-year old mother may not know how to use a webstore or may not even want to learn to do so. But since it is also not safe to shop in-store, it leads to children placing their parents' orders online. (Respondent 1)

The hoarding phase at the beginning of the pandemic was mentioned by several respondents. Hoarding is the first effect on customer behaviour listed by Sheth (2020), who explains that hoarding is a common reaction to managing the uncertainty of future availability of essential products, and involves stockpiling products, which results in temporary shortages.

Ja sitten tietysti se, että pandemia aiheutti niin suurta kysyntäpiikkiä tiettyihin tuotealueisiin, niin se myymälän hyllytila ei ehkä skaalautunut siihen kysyntään. / The pandemic caused such a large spike in demand in certain product categories, that the shelf space in stores did not scale accordingly. (Respondent 1)

Overall, the pandemic created and fueled new features of online consumption, such as shifts in home deliveries, as people were largely staying at home and were able to receive grocery deliveries during the day, whereas previously, evening deliveries were more in demand. In addition, demand increased for home deliveries. Roggeveen & Sethuraman suggest that it is likely for consumers to adjust to new shopping habits, for instance increased demand for home delivery of groceries.

One respondent mentioned that, regarding consumer goods, many customers are looking up products and their availabilities online, before going to a physical store to purchase them. This is supported by Laudon & Traver, who state that, in addition to buyers, the internet audience consists of browsers, who research products online but buy them offline. Furthermore, according to Laudon & Traver, the significance of browsing online in order to make purchases offline should not be undervalued, and both channels should be considered a continuum of consumer behaviour, often with the same people as customers. (Laudon & Traver 2015 p. 378–379)

## **5.4 Post-pandemic & future**

### ***5.4.1.1 Consumer behaviour***

When asked about the future of online consumer behavior, and whether the respondents expect consumers to go back to their old habits, the majority of respondents stated that the organic boost provided by the pandemic is expected to fade to some extent. In contrast, one respondent stated that the assumption is that demand is unlikely to decrease, as a result of the growth/digital leap caused by the pandemic, and that growth will continue from here. At the same time, it is believed that a permanent level in demand has been achieved, and growth is expected to continue. Many customers are believed to be content with the newfound benefits of online shopping, and unlikely to return to brick & mortar stores. In addition, it was stated that the customers during the pandemic have been served well enough in order for them to keep returning. This is supported by Sheth (2020), who states that although one may expect most habits to return back to normal, inevitably some habits will die as consumers have discovered alternative ways that

are more convenient, affordable, and more easily available. Similarly, according to OECD (2021), new consumer segments such as the elderly may have adjusted to their new-found routines, and continue them after the crisis. Convenience is one of the benefits of online shopping, and many of the new online shoppers are likely to continue ordering at least some product categories online in the future. Other customers may continue ordering due to additional waves of the virus, or due to loyalty programmes.

Kyllä me silti näemme, että nyt kun moni on tottunut käyttämään sitä verkkokauppaa, mahdollisesti vaikka ensimmäistä kertaa, tai sitten muuten tässä jo reilun vuoden ajan tottunut käyttämään sitä, niin varmasti on tietyllä tavalla pysyvä muutos siinä ostokäyttäytymisessä. / We do see that, now that many have gotten accustomed to shopping online, possibly for the first time, or in general during the past year, then surely in a certain way there has been a permanent change in consumer behaviour. (Respondent 6)

However, some customers are expected to return to conventional offline shopping, e.g. for social reasons, or simply for inspiration – something that the webstore cannot achieve in such a way as the brick & mortar store does. This is supported by Verhoef & Langerak (see Hand et al. 2009), who suggest that the situational factors that trigger adoption of online grocery shopping may be discontinued if the circumstances that initiated the adoption change.

Additionally, Hausman (see Close Scheinbaum, 2012 p. 280–281), suggests that some people dislike and some like to shop in-store, and in addition, there are those who have no particular preference, and thus, some are likely to continue shopping using their channel of preference while others will continue using different channels

Some of the respondents described the webstore and brick & mortar stores as competitors to one another, and stressed the importance of improving online shopping experience, so that customers no longer feel the need to visit offline stores.

[...] meillähän on kovat myynnin kasvutavoitteet verkkokaupassa, ja se, miten niihin halutaan päästä, on sitten se että kehitetään näitä meidän prosesseja, ja tehdään siitä asiakaskokemuksesta yhä paremp, ja tavallaan tehdän tästä verkkokaupasta sellainen tasavertainen kilpailija sen kivijalkamyymälän kanssa. / Our objectives for online sales growth are large-scale, and the way we want to achieve those is by developing our processes and further improving the customer experience, and in a way by making the webstore an equal competitor to brick & mortar stores. (Respondent 5)

On the other hand, perhaps more importantly, many of the respondents stated that the online and offline stores are not exclusive of one another, but rather that they coexist, as the majority of customers were said to use both channels. This provides consumers with more options and brings added value to customers, since the network of brick & mortar stores is extensive, and

centring purchases is beneficial to customers, in particular to customer owners. Additionally, some of the respondents stressed the importance of the webstore channel regarding the whole customer relationship, as online grocery customers also use the brick & mortar services.

Kyllähän mä näen että – S-ryhmän ruoan verkkokaupan asiakkaan kuluttajakäyttäytyminen niin – kyllä se yhdistyy edelleen siinä sekä kivijalka että verkkokauppa. / I do see that the consumer behaviour of S Group's online groceries combines the brick & mortar and online stores. (Respondent 1)

[...] että myös verkosta tilataan, ja se ei varmasti ole sellainen joko tai- juttu, että kumpaakin tarvitaan, että on ihmisiä, jotka asioivat edelleen vain kivijalassa, ja sitten on pieni osuus niitä, jotka keskittävät lähestulkoon kaiken verkkoon, mutta sitten on valtaosa sellaisia, että he asioivat kummassakin kanavassa. / People order online as well, and it is surely not n either-or situation, and both are needed. There are people who only shop in the brick & mortar stores, and a small portion of people who almost exclusively shop online, but the majority uses both channels. (Respondent 2)

Similarly, Laudon & Traver (2015 p. 378–379), suggest that online and offline channels are linked and should be considered as a continuum of consumer behaviour. Hausman also found that some customers see the value with omnichannel shopping, for instance placing an order online and returning or exchanging the order in a physical store or being able to pick up an order in-store while running other errands (see Close Scheinbaum 2012 p. 280–281). In addition, according to Beeketing (2021), omnichannel shopping, which includes researching a product online and purchasing it offline, or purchasing online and picking up in-store, is expected to become more popular, and the more channels customers use, the likelier an increased average order value.

#### **5.4.1.2 Process**

As mentioned earlier, the pandemic increased and improved the general understanding of the importance of e-commerce and drew attention to critical areas in the company's e-commerce processes that need to be improved and developed.

Ehkä olemme saaneet vähän sellaisen piristysruiskeen siihen, että nyt me näemme jotenkin selkeämmin sen, että mitkä ne meidän skaalautumisemme haastekohdat ovat, ja mihin meidän pitää ensimmäisenä pureutua. / Perhaps we have gotten a kind of boost, and now we can see the challenges for scaling, and what needs to be tackled first, more clearly. (Respondent 1)

Several respondents mentioned further development of services, that bring additional value to customers, for instance customized meal kits and recipes that consider what the customer has bought previously and already has at home, their dietary requirements, etc. One of the respondents stated that customers already express wishes for services such as ready solutions and concepts for organizing a birthday party, that would provide a complete package of food and decorations for a party. Furthermore, it was mentioned that the line between a restaurant and online grocery store will waiver in the future, meaning that different food services should be combined with the online grocery webstore. Småros & Holmström (2000) also argue that, in order to offer additional value to customers, online grocery retailers need to be able to provide new services. Similarly, Neren (2021) states that as e-commerce becomes the new normal and shoppers become increasingly comfortable with online ordering, expectations are rising, and retailers need to provide more than e-commerce, as customers seek user experiences that make their lives more convenient. In addition, according to Aull et al. (2021), e-commerce economics will continue to be challenging in comparison to brick & mortar stores, but retailers who are able to provide personalized offers, and create incentives for visiting offline stores, while increasing basket sizes and online buying frequency, will benefit significantly.

[..] kyllä meidän pitää koko ajan kehittää asiakaslähtöisiä palveluita, että me oikeasti laitamme asiakkaan keskiöön ja pohdimme sitä, että minkälaisia vaatimuksia asiakkaalla on sille ruoan verkkokaupalle, ja nähdään jotenkin se, että – ehkä sellaisten - vaikka ravintolan ja ruoan verkkokaupan välinen raja häilyy tulevaisuudessa, että – meidän pitäisi pystyä yhdistämään paremmin erilaisia ruoan palveluita sen ruoan verkkokaupan yhteyteen. / We do need to constantly develop customer-oriented services, and really put the customer at the core. We need to consider what customers' requirements are for online grocery shopping, and see that in a way, e.g. the boundaries between a restaurant and an online grocery store will waiver, and we need to better be able to combine different food services with online groceries. (Respondent 1)

The new customer segments and their needs also generated consideration of the types of services that should be provided, such as elderly people who need to be assisted with their grocery shopping, or customers who do not drive a car. Furthermore, additional types of deliveries such as speed delivery, and overall, providing customers with different choices of delivery according to their needs and budgets, was mentioned by respondents.

## **6 CONCLUSIONS**

The aim of this thesis was to get an understanding of the effects of the ongoing COVID-19 pandemic on consumers' online shopping behaviour, and the consequences on the e-commerce processes of the case company. The assumption was that online buying had increased as a result of social distancing, and consequently the processes had been affected by the increased number of orders. As the results of this study indicate, there was surge in the interest in online shopping. This led to e-commerce taking a leap of several years and becoming the new normal – regarding online groceries in particular. Many customers who had previously shied away from online shopping became acquainted with it and found new consuming habits. In addition, it increased the general understanding of the importance of e-commerce, the webstore, and online shopping. Although it involved a big workload and tight schedules, the pandemic helped speed up development of processes, and solutions were found even though time was limited.

### **6.1 Limitations and suggestions for further research**

This study was a case study and thus the sample was limited, as many of the responses were fairly similar. Further research can be conducted on this topic using a larger sample and business area, e.g. by collecting data from different companies to get a broader understanding of the challenges and issues encountered due to COVID-19. In addition, by including consumers as respondents, one could get a better understanding of consumer behaviour and their perceptions of the challenges and issues caused by the pandemic. In addition, more in-depth and varied data could be gathered by studying the particular issues encountered in different departments, such as the customer service or order picking functions.

The main challenges of this study include finding relevant prior research on the particular topic, as some of the research and material had not yet been published at the time of creating the theoretical framework for this thesis. For example, customer behaviour during a pandemic has not been broadly covered in prior research. Thus, some theories and references have been added along the way. Due to this, the interview questions were also of rather general nature. In

addition, theories that specifically focus on the Finnish market, were scarce. Furthermore, the case company investigated had not yet looked into details on a more specific level at the time of the interviews. Moreover, the study was conducted through qualitative interviews, meaning that the number of participants was limited.

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## APPENDIX 1. INTERVIEW QUESTIONS (FINNISH)

- Millä tavoin koronapandemia on näkynyt päivittäisissä verkkokauppatoiminnoissanne?
- Minkälaisia muutoksia olette havainneet verkkokaupan kuluttajakäyttäytymisessä pandemian aikana?
- Oletteko tarjonneet asiakkaille ”yllykkeitä” kuten alennuksia toimituskuluista tai ilmaisia toimituksia pandemian aikana?
- Oletteko havainneet haasteita/tekniisiä ongelmia/pullonkauloja, jotka ovat vaikuttaneet verkkokaupan prosessien sujuvuuteen?
- Oletteko havainneet haasteita tai ongelmia kuljetusten/kuljetusfirman/pakettiautomaattien suhteen?
- Millä tavoin olette ratkaisseet haasteet/ongelmat?
- Onko pandemian aikana otettu käyttöön uusia verkkokaupan käytäntöjä tai prosesseja?
- Uskotteko pandemiasta johtuvien muutosten olevan pysyviä, vai tulee tilanne muuttumaan esimerkiksi koronarokotteen ansiosta?
- Minkälaisena näette S-ryhmän verkkokaupan kuluttajakäyttäytymisen jatkossa?
- Onko jotakin muuta pandemian aikana esille tullutta, jonka voisi mainita?

## APPENDIX 2. INTERVIEW QUESTIONS (ENGLISH)

- How has the pandemic been visible in your daily e-commerce operations?
- What changes have you noticed in online consumer behaviour during the pandemic?
- Have you offered any incentives, such as discounted or free deliveries, during the pandemic?
- Have you encountered challenges/technical issues/bottlenecks that have affected your e-commerce processes?
- Have you encountered challenges or problems regarding deliveries/delivery companies/parcel lockers?
- How/in what ways have you addressed the challenges/problems?
- Have you introduced any new e-commerce practices or processes during the pandemic?
- Do you see these changes as permanent – do you expect sales to even out between brick & mortar and online stores post-pandemic or will the situation change, e.g. as a result of a vaccine?
- How do you see the future of S Group's e-commerce consumer behaviour?
- Is there anything else that has emerged during the pandemic and may be of interest/relevant or worth mentioning?