



Enhancing the Logistics of Case Company for Improved Customer Experience

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Abstract

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<p>Logistics strategy plays a crucial role in ensuring customer satisfaction and maintaining a company's market position in today's rapid and highly competitive business environment. The purpose of this thesis is to investigate the current situation of the case company's logistics and explore the ways to develop its logistics strategy to improve customer experience. The case company is globally one of the leaders in its branch. The research questions are focused on the current state of logistics in Europe, the biggest challenges in the supply chains and ways to overcome them from the customer service personnel's standpoint.</p> <p>The theoretical framework used for this study focused on logistics strategy, global logistical problems, supply chain management, and customer experience. The study used a qualitative research approach, using interviews to collect primary data from the case company's customer service centers' personnel. The data was analysed using thematic analysis to identify common themes and patterns.</p> <p>The findings revealed that there are several challenges facing the case company's logistics, including discrepancies in delivery accuracy, lack of internal communication, and the need for up-to-date technology. The study also found that there is a strong desire among end-customers for reliable delivery times and accurate tracking information. To address these challenges and better meet customer expectations, the study recommends that the case company should align its stock management systems, investigate the causes for unreliable delivery times, and to work more closely with its customer service department to gather feedback from customers, incorporating their ideas into its logistics strategy.</p> <p>In conclusion, this thesis provides valuable insights into the logistics challenges the case company faces and offers practical recommendations to enhance its logistics strategy to tighten customer trust. The findings of this study can be used by the case company and other companies dealing with similar challenges to improve their logistics strategy and stay competitive in the marketplace.</p>
Key words Logistics strategy, customer experience, delivery accuracy, global logistical problems

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1 Introduction

This is a bachelor's thesis for Haaga-Helia University of Applied Sciences, the Degree Programme in Business administration, specializing in global markets and trade. The topic was chosen based on personal interests that surfaced during my specialization studies. These were international working environment, global logistics and the depth of supply chains. The recent global events also spiked interest in the affects on international businesses. Since before starting the thesis process, it was already chosen that this thesis would be done in collaboration with the case company, the ideas and needs of the chosen case company was also taken into consideration. Then with the personal interesests and needs of the case company combined, a clearer topic was formed.

Personal experience working in the case company shed light on the obstacles and issues that the customers experience because of logistical, supply chain management or other challenges. As the case company (see chapter 1.5) is a global company, it gave the option to choose a more international viewpoint for the topic. With international logistics, it is common to regularly face some sort of issues or variables, for instance when one transportation method is delayed the whole process might need revising. An up to date look of the current situation of supply chains and their recurring obstacles will benefit the company as a whole and the end-customer. Since the company is looking to remodel their old supply chains to better fit different customers, this thesis will give them better working tools to start the remodel.

1.1 Aim of the thesis

The central phenomenon researched in this thesis is logistics strategy. The aim is to bring forward current issues in the logistical strategy of the case company and how they may have an affect on the customer experience. For this purpose, a case company is used to gain in-depth knowledge about this topic and to provide new insight for future research. Based on the current issues, the logistics needed for different scale customers in Europe can be specified and the more targeted individual supply chains can then better meet customers' needs. Because logistics is closely in relation with the customers, the topic of customer experience is slightly touched. Hakala (2022) lists the following qualities to be necessary in a good thesis: originality, innovation, practicality, analyticality and professionalism. Innovation and praciticality show in the main research question (see chapter 1.2). Analyticality is showcased by studying the current situation of the commissioning company to create a proper base for the research findings and conclusion. Professionality comes from following a clear frame in the research and conducting proper research methodologies in the chosen research approach.

This thesis topic is constantly under the magnifying glass, since the core of the case company's business lean on the movement of goods. The key topics can be understood by the support of the literature review and by secondary data sources provided by the company. The primary data collection method is interviews conducted from the personnel of the case company.

1.2 Research problem

This thesis aims to study how the existing supply chains in Europe of the case company can be developed and improved to better customer experience. The thesis covers international aspects by looking into complex international supply chains and their management in a globally well-known company. The research question was build from the thought of how well the wishes and development ideas of case company's European customers in terms of the company's logistics and supply chains meet the current situation. Below presents different investigative questions to further study the research problem. The main research question is **how the logistics and customer service of case company in Europe can be improved and developed to enhance customer experience?**

The investigative questions of this thesis are the following:

IQ 1. What is the current situation of logistics and different supply chains in Europe?

IQ 2. Which steps are the biggest obstacles challenging the supply chains?

IQ 3. How can the logistic strategy be improved?

IQ 4. What are the hopes and wishes from end-customers regarding the company's logistics?

Research is needed to better understand the current state of the logistics in Europe and what are the unpredictable global problems affecting it. As of supply chain management and logistics strategy, are there existing allowances in place to avoid these unpredictable events? What is customer experience, why is it important and what does the customer journey of a customer of the case company look like? The table 1 below presents the investigative questions, theoretical framework components, research methods and results chapters for each investigative question in an overlay matrix. This matrix is used to state how research will be formed and what methods will be used to answer these investigative questions.

Table 1. Overlay matrix of the investigative questions

Investigative question	Theoretical Framework	Research Methods	Results (chapter)
IQ 1.	Logistics, Current state of supply chains	Expert interviews, Case company analysis	4.1
IQ 2.	Current state of supply chains, Global logistical problems and preparation for them	Expert interviews, Case company analysis, Secondary data	4.1
IQ 3.	Logistics strategy, Current state of supply chains, Delivery accuracy	Case company analysis, Expert interviews	4.1
IQ 4.	Customer experience	Expert interviews	4.1

1.3 Scope of the study

Scope of the study is pictured to be the core building block of any thesis (Hakala, 2022). This study will be conducted in a three-month-long period in 2023, starting from conducting a literature review to the thesis topic and then collecting primary data. The research method is interviews to the case company's customer service personnel from agents to managers. One or two interviewees are selected from each customer service center, depending on scheduling conflicts and openness to give responses.

Since the case company is a large-scale organization, the focus is steered on the company's operations that are located in Europe, with most operations happening in Finland. To get a more defined perspective on the research question, the viewpoint is from the customers perspective and how the logistics affects the customer experience. The specific countries are determined by the location of the biggest customer service centers of the case company. In supply chain, the current situation is briefly examined but the main focus is on the developmental side. To study the expectations of customers, a focus on customer experience, logistics strategy and their improvement points is taken.

1.4 Key concepts

This thesis will be used in the case company to improve customer relations and target the existing supply chains individually to meet customers' needs better. To meet the goals, the key concepts are illustrated below to highlight their need and purpose in this study.

Customer experience includes all the perceptions and feelings a customer has based on all their interactions with a company. With customer experience, a company can seek to differentiate themselves and their value proposition from competitors based on human factors. These factors could

be how well the customers feel that they are understood, considered, served, and treated. Better customer experience can increase customer loyalty, retention and generate better sales. (IBM, no date a.)

Logistics refers to the controlling of the material flow all the way from the source of raw materials to production and customers, to the flows of information that control the material flow and to the buying and selling, transport and storage of products. The general aim for logistics is to have the product available in the right place at the right time, to have the process cause no negative environmental or safety risks and to have the costs minimized. (Logistiikan Maailma, no date a.)

Logistics strategy is integral to any company's strategy, and it helps to refine service levels to the point that the company is functioning at its most cost-effective and energy efficient way. To ensure the optimization of workflow, management principles can be used in logistics strategy. In any organization, logistics strategy works in parallel within the supply chain management. (Díaz, 2021.)

Supply chain refers to the sequence of activities from the time of ordering a product until it is delivered to the end user. Companies usually have multiple supply chains that all form a part of the logistics process. (SCM EDU, no date b.) Supply chains typically include everything from marketing, sales, financing, procurement, operations processing, maintenance, service to logistics (Adzija and Kukhta, 2022).

Supply chain management covers all the corporate network's comprehensive planning, leading and management of material flow including information and money flows targeting at maximizing customer added value. (Logistiikan Maailma, no date c.)

1.5 Case company

The case company is globally one of the leaders in its branch, focusing on manufacturing products of its own product range and modified products as per customer request as contract manufacturing. The manufactured products are considered as high-quality premium brand and it is strongly rooted in the company's values.

The company is a privately owned family run company with roots going back over 30 years. The company is solely B2B based. Customers vary from bigger original equipment manufacturers to all kinds of importers, distributors, catalogue sellers, and whole sellers. Currently there are 7 manufacturing sites worldwide, in Europe, Asia and in the USA. Warehousing, customer service centers, and other operations are in 17 countries. The company employs over 500 personnel and total revenue is currently 80 million euros.

The case company's largest customer service centers managing the orders delivered are in Finland, Denmark, Poland, United Kingdom, and France. However, the headquarters and main operations are in Finland. The writer of this thesis has worked in the headquarters' customer service for the two previous summers and the contact person from the company works as the supply chain management manager, leading the customer service department and warehouse operations.

In this thesis the case company is the mother company of a group, and it is the provider of goods. Warehousing is a third-party logistics service, outsourced to a local service provider partner. Additionally, there are a few smaller external suppliers.

2 Global supply chains and their challenges

The literature review discusses logistics, logistics strategy, global logistical problems, supply chain management, and customer experience. In chapter 2.2 logistics and strategy, the most used methods of transportation in the European logistics of the case company are studied. To establish the current situation of the logistics and supply chains (see chapter 2.3), existing reports and information given by the company are utilized. The benefits of third-party logistics (see chapter 2.3.1) and green logistics (see chapter 2.3.2) from the company's standpoint are highlighted in the supply chain scoping. The chapter ends in theoretical framework (see chapter 2.5), where the research is justified.

2.1 Logistics and strategy

Almost every organization moves materials and delivers products to its customers. Material can be either tangible, for example raw materials, or intangible, for example know-how. These delivered products are usually either goods or services. (Waters 2003, 4-6.) Goods refer to items and products that can be purchased or moved (Cambridge Dictionary, no date a). In the case company the products offered are considered as goods. Inbound logistics refers to the movement of material from supplier into the organization and outbound logistics refers to the reversed action, so to the movement of materials out to customer. (Waters 2003, 4-6.)

Effective and efficient logistics is essential for operations of the business. **Logistics** refers to the process of planning, implementing, and controlling flow of goods efficiently and effectively from point of origin to point of usage. The process is usually driven by customer requirements. The controlling of the flow of goods includes warehousing, packaging, transporting, supplying, and managing the stock. The purpose of logistics is to secure that goods are delivered cost-effectively and in a timely manner, maximizing the usage of the company's capacity, resources, suppliers, distribution network and infrastructure. (SCM EDU, no date b.) After the term logistics began to be used globally in 1950s, it has developed several somewhat differing definitions. In addition to the core meaning, it can refer to the planning of materials and services associated with productive and cost-effective purchasing management, warehousing, transportation and distribution, implementation and monitoring taking customer requirements into account at the same time. In logistics, the needs of a customer are highlighted because the identification and anticipation of them have a critical role for businesses to be successful and profitable. In any successful business, the importance of customer focus and customer orientation can be seen. (Logistiikan Maailma, no date a.)

Logistics can be roughly divided into two: internal and external logistics. Internal logistics refer to the moving of goods inside a facility or a single location. External logistics is the movement of

goods between locations, like supplier, factories, distribution centers, docks, and customers. (Adzija and Kukhta, 2022.) Generally, there are three main parts in all logistics processes: strategic, operational, and tactical. Strategic logistics refers to the process of planning and organizing the overall logistics operation of a company, including transportation, warehousing, inventory management, and security. Operational logistics implements the strategic plan and ensures that it is actualized efficiently. The operational side includes transportation, packaging, inventory management, and order processing. Lastly, tactical logistics makes sure that the right goods are delivered to the right place at the correct time. This is managed by resourcing according to customer demand, creating delivery schedules and routing orders to the right locations. (SCM EDU, no date b.)

At the European Union level, logistics is stated to be one of the key industries of business, which seeks to improve competitiveness of the member states. Compared internationally, Finland has a small market, where there are approximately 5.5 million inhabitants. In a logistics survey in 2018, Finnish logistics costs in relation to gross domestic product (GDP) was estimated at 11.2 per cent. Internationally this is a high number. The core purpose of logistics is to deliver raw materials, semi-finished and finished products to the destination, on time with quality and quantity as agreed. Delivery should be handled in compliance with the service level chose by each business so that the financial result is maximized. Simultaneously environmental burden should be as low as possible. An overall picture of the company environment is created to support the understanding of logistics. It is not sufficient to look over one part without considering the issue as a whole. (Logistiikan Maaailma, no date a.)

There are multiple steps in the process of logistics. The process usually starts from procurement sending a purchase order to a supplier, meaning that the procurement has found a suitable supplier, negotiates terms and conditions, organizes delivery, arranges possible insurance and payment, and does other required steps to get materials into the organization. Then the inward transport moves the material from supplier to the agreed receiving area. The transport type is usually either road, rail, air, or sea. When receiving, the material is checked to make sure the delivered goods correspond to the order, unloads, inspects and sorts them after. Warehousing stores the material until they are needed. To manage the stock available, efficient stock control is needed to set policies for inventory. By good stock control, the order picking will be able to find and remove the material from stores swiftly. From here the material handling moves the material to outward transport, which then delivers them to customers. (Waters 2003, 12-13.)

Logistics strategy is used in supply chain management to help and allow operations to be planned and outlined on a multi- year time span. The goal of the strategy is to find the best possible profitability and cost-effectiveness while removing unnecessary phases and functions to save

time and money. (Logistiikan Maailma, no date b.) Logistics strategy is a set of principles, attitudes and driving forces that lead the organization of plans, goals, and policies between all the parties in the supply chain (Díaz, 2021). Since the supply chain is changing continuously, then affecting the logistics organization. By implementing a logistics strategy, the flexibility of the supply chain can be adjusted. It also allows the company to identify how imminent changes impact them and to help them make the necessary changes to ensure service levels are not reduced. Altogether there are four levels of logistics: transportation, outsourcing, logistics systems and competitors. All the four should be inspected regularly to see if they are operating at the best level and improving the service levels. (Hill, 2020.)

Unpredictability has always been a critical part of forecasting in companies' logistics. Ideally, each logistics function should have a tolerance for unpredictability. These allowances are sometimes referred to as trade-offs when speaking about logistics. Furthermore, there should be allowances for if X or Y happens, then Z must also happen. The past couple of years have shown how vital the planning of these kinds of allowances are as a part of change management to be able to dodge a cascade of uncontrollable knock-on effects within different logistics processes. (Díaz, 2021.) The biggest and recent unpredictable international logistics problems are discussed in chapter 2.2.

2.1.1 Modes of transportation

Transport refers to the process of moving goods from point A to point B, usually from supplier to consumer. The modes of transport refer to the ways, methods, vehicles, and machines used in moving the goods. (Adzija and Kukhta, 2022.) Transportation commonly happens through road, air, rail, or sea. (SCM EDU, no date b.) The most used transport methods in the case company are examined in chapter 2.1.2. Before determining the mode of transport, a product's description, parameter, restrictions, and product packaging related requirements need to be met. The transport model can be either multimodal, so that one company takes responsibility for the whole journey or inter-modal, where there is a separate contract involved in the various stages or modes of journey of the goods. (Adzija and Kukhta, 2022.)

When choosing the mode of transport, the product, urgency, and possible restrictions need to be taken into consideration (Adzija and Kukhta, 2022). One of the most used transport methods, if not the most used one, is road freight transport. National road transport refers to freight between a place of loading and a place of unloading located in the same country. International road transport is then freight between two different countries. (Eurostat Glossary, no date.) Since there are little to no waterways dividing European countries, most transportation inside Europe goes through road transport in the case company. Road transport gives good advantages, providing fast delivery to retain customers (Ruziyev & Bakhriddinova, 2022).

Marine transport is often used to move large amounts of goods using carrier ships. The goods are packed into containers and transported on a vessel. Comparing to other transport methods, marine transport is cost-effective because normally cargo ship can carry around 18 thousand containers. It is also stated to be the most carbon-efficient method. (Pilkington, 2020.) In 2021, the share of container shipping in total short marine transport was estimated at 16.8 % in EU ports (Eurostat, 2023). Shipping containers can be divided into two categories: less than a container load (LCL) and a full container load (FCL). In LCL shipments, the goods are mixed and transported with other parties' goods in one container on a ship. Contrary, in FCL shipments the goods fully fill up one container on a ship. (Adzija and Kukhta, 2022.) In the case company's European logistics, one of the only countries benefitting from marine transportation are the United Kingdom and Ireland. This way is known to take longer usually requiring a longer lead time. For bigger or bulkier shipments this is more cost-effective. (Ruziyev & Bakhridinova, 2022.)

2.1.2 Delivery accuracy

Customers are often focused on a good lead time, meaning either the time between the designing of a good and its production, or between ordering a good and receiving it (Cambridge Dictionary, no date b). Managing logistics lead times is crucial to any company's activity and it is a key factor in inventory control. Generally, companies target shorter lead times to streamline their operations and to ensure customer satisfaction. Shorter lead times help avoid large stock holdings when stocks meant for processing are received within a short period. Lesser volumes of stock held result in less capital being tied up, which then also mean fewer space requirements and in addition labor. Lead time can be broken into the following components: purchase order processing time, goods processing time, transit time, clearance time, and transport time. The total lead time can be calculated by the total number of days it takes to carry out and finish a purchase order. (Menon, 2022.)

In the case company, the lead times are given to some customers based on the setup in their systems and they order accordingly. Typically, these customers order goods on stock. Others order by need and the need is usually as soon as possible. If goods are on stock, delivery can be done as requested for normal quantities. If goods are not on stock, the order confirmation is done according to incoming purchase order dates, ERP delivery times, experience, and given instructions. Ideally the backlogs would be at 100 000 or lower to really have customers satisfied. (Case company provided data, no date.)

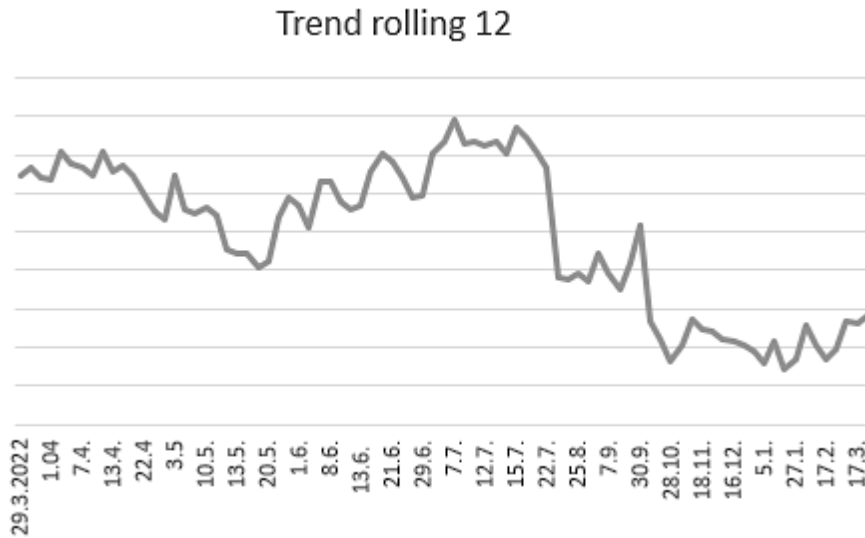


Figure 1. Backlog buildup in the case company in 2022 (from Case company provided data, no date.)

In figure 1 the backlog buildup in the case company's deliveries is shown as a 12-month rolling trend chart. The numbers of backlogged deliveries in the vertical axis are removed to protect trade secrets. The rolling trend shows a notable decrease between the first and last month. At its highest, the backlogs were at 800 000 and at lowest at around 140 000. Throughout the chart there are steady quickly alternating increases and decrease. These alternations presumably come from the period of which stock is received to the warehouse until the backlog is dismantled since the time in between the alternations are brief.

A complete and on-time delivery is one of the measures of customer service. All goods on any order need to be delivered on time for the order to be considered as complete and on time. On-time delivery can be used as one of customer satisfaction metrics, as it measures how well the company is meeting the customers' needs. To calculate the amount on-time deliveries, the number of orders delivered on time is divided by the total number of orders. By tracking this metric, companies can identify areas where they need to improve, so that they can provide a better customer experience and remove unnecessary complexity from the supply chains. (SCM EDU, no date a.)

In the case company, the request is for a minimum 95 % on-time delivery performance. As of February 2023, the level was 70 %. In figures 2-4, the monthly delivery performance based on actual delivery date is shown from 2021 and until March of 2023. Additionally, in figures 2-4 the numbers of deliveries in the vertical axis are removed to protect trade secrets. The delivery performance is measured more heavily in the case company than in many other companies. In all the figures the undelivered lines are not counted. This leads to partly misleading data because is many backlog lines are shipped, it decreases the delivery performance. Contrary, if only new lines are shipped

according to the order confirmation and backlogs remain undelivered, the graphics show better performance. (Case company provided data, no date.)

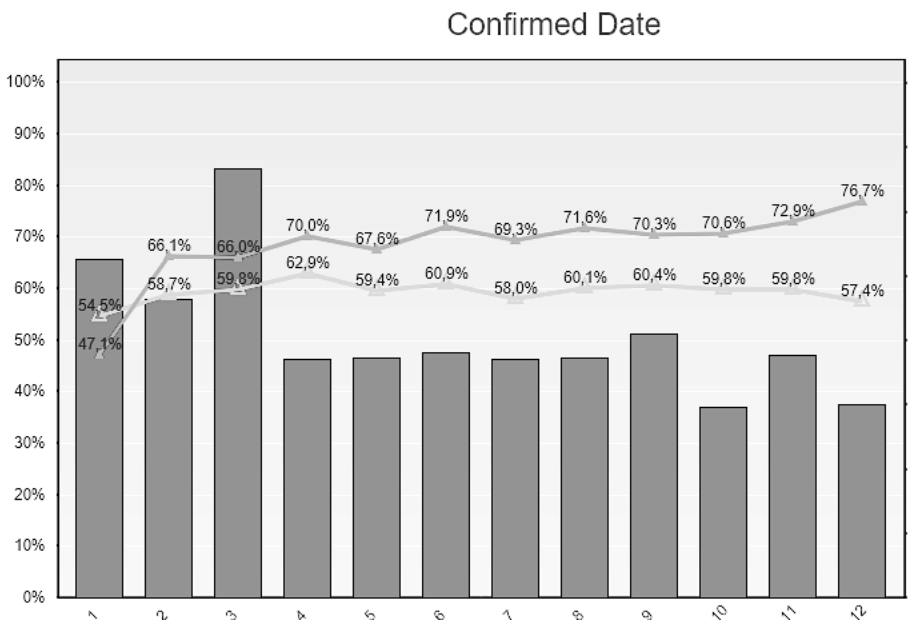


Figure 2. Delivery performance by confirmed delivery date in 2021 (from Case company provided data, no date.)

In figure 2 the delivery performance by confirmed delivery date in 2021 starts from around 55 % and at the end of the year the level was at 57 %. The lighter line (below) in the figures showcases the on-time percent and the poles represent each month of the year. It is good to note that in 2021 the global Covid-19 pandemic brought its own obstacles and unsettled stock availability because of raw material issues (see chapter 2.2).

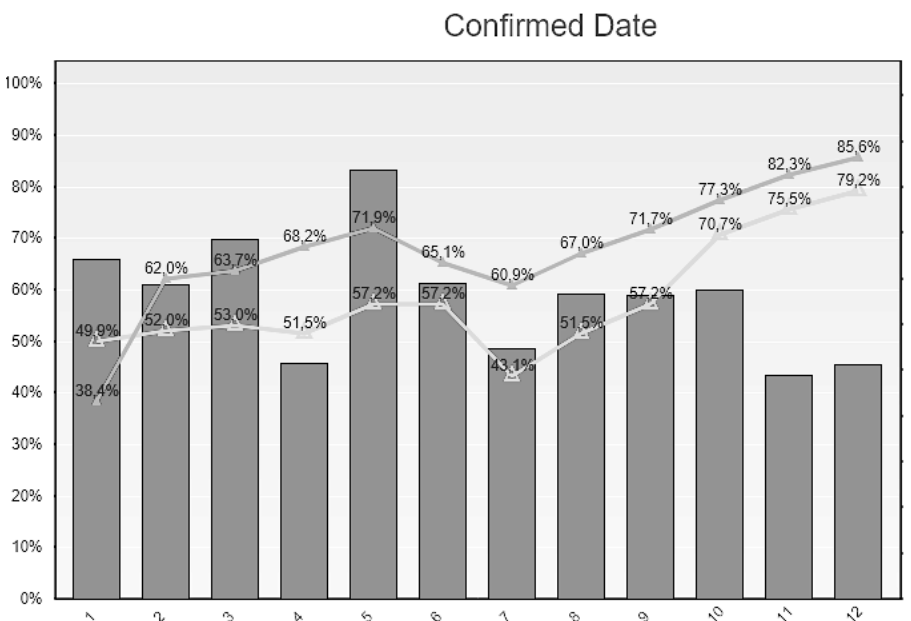


Figure 3. Delivery performance by confirmed delivery date in 2022 (from Case company provided data, no date.)

In figure 3 the delivery performance by confirmed delivery date in 2022 starts from around 50 % and at the end of the year the level was at 79 %. This is already a notable improvement from the previous year. The trend in both figure 2 and figure 3 is that the delivery performance is the lowest in the first months of the year and by the second quarter it follows a somewhat low improvement throughout the year quite steadily. There is also a deviating bend in July of 2022, where the level was at its lowest at 43 %.

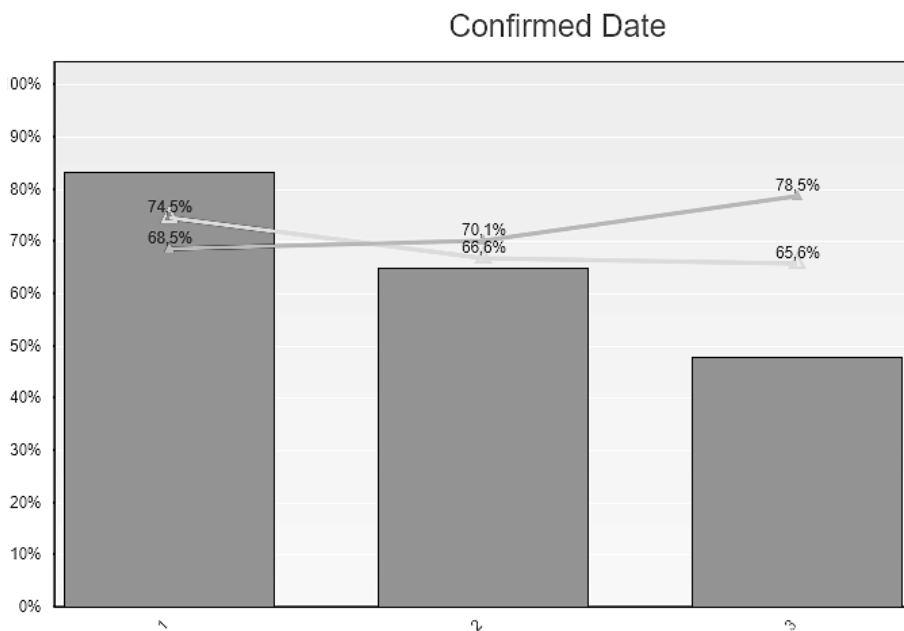


Figure 4. Delivery performance by confirmed delivery date in Q1 of 2023 (from Case company provided data, no date.)

The delivery performance by confirmed delivery date in the first quarter of 2023 starts from 75 % and is at 65 % by the end of the quarter in figure 4. The first quarter is showing better levels than either 2022 or 2021. Also, the trend of the year starting with lower levels is not seen in the beginning of 2023.

2.2 Global logistical problems and preparation for them

Supply chains can face risks ranging from road infrastructure, climate change, theft property damage to environmental damage, global events, poor inventory management and transportation delays. By planning to avoid risks as much as possible and by preparing to dynamically manage unpredictable situations, the possible damage caused can be minimized. Assessing potential risks and challenges before they happen also help to mitigate them. (Adzija and Kukhta, 2022.)

In the past decade global logistics faced many sudden unpredictable problems, for example in 2010 the Icelandic volcano Eyjafjallajökull erupted and heavily disrupted the air freight industry (Mazzocchi et al., 2010). On the other hand, a predictable event was Brexit, the United Kingdom's withdrawal from the EU in the beginning of 2020. This change presented impacts on all people living in EU countries and companies operating in them. Brexit made the relations between EU and the United Kingdom significantly more distant. (Prime Minister's Office Finland, no date.) Then the Covid-19 pandemic shocked the World in early 2020 and just as the pandemic was easing Russia started an invasion war in Ukraine in March of 2022. On top of the pandemic-related disruptions, accident such as the blockage of the Suez Canal in 2021 exposed a dichotomy. In global logistical problems, some companies have been able to fare much better than others. The companies that spotted logistical problems relatively quickly, most often because of their size and direct involvement in logistics operations, were capable of responding much earlier during the pandemic. Critical information is freely available for companies that know what to look for. (Shih, 2022.)

When the Covid-19 pandemic hit the globe in the early 2020, it exposed the vulnerability of global supply chains. To overcome these problems and respond to the crisis, a high degree of flexibility and close cooperation between the different parties in the supply chain is required. The fragility of supply chains and especially sea freight exposes in global supply chain disruptions, port congestion, capacity shortages, and inflating ocean freight rates. The pandemic challenged shippers, ports, carriers, and logistics providers during the past few years. Adjusting to the post-Covid era unveiled that the pressure on global supply chains continued. The sea freight rates seem to stay high and are unlikely to fall back to pre-Covid levels. Capacity problems and congestion in the ports are faced today, while also combining a strong global demand in the consumer goods sector. (Trepins, 2022.)

The blockage of the Suez Canal happened when one of the world's largest cargo ships, The Ever-Given, got stuck sideways on the canal and blocked other ships from passing through the canal. The blockage resulted in more than 3000 vessels waiting to pass through which totaled in around 12 % of world trade being stopped. Even after the blockage was resolved and traffic had resumed, the buildup backlog created problems to container and vessel availability. (Lee and Wong, 2021.)

In 2022, there were six key figures impacting global supply chains: logistics disruption, production delays, overreliance on a limited number of third parties, commodity pricing, workforce shortage and doubling down on technology investments. Logistics disruptions kept stemming from the continuous pandemic causing goods to pile up in storage. To avoid this, companies should consider redesigning alternative supply chain flows. Production delays rose from the manufacturers competition for limited supply of key commodities and logistical capacity, resulting in empty shelves and

long purchase lead times for consumers. By focusing on supply chain evaluation and evolution, companies are compelled to address many persistent supply issues and to invest in long-term supply chain strategies. (KPMG, 2022.)

McKinsey & Company (2022) list supply chains problems into four types: unanticipated catastrophes, predictable catastrophes, unanticipated disruptions, and predictable disruptions. Unanticipated catastrophes are historically remarkable events that cannot be predicted, and they lead to huge losses. For example, extreme terrorism and a systemic cyberattack. Foreseeable catastrophes shock similarly to an unanticipated one but differ in that larger patterns and probabilities can guide general preparedness. Financial crises and global military conflicts could be foreseeable catastrophe. Unanticipated disruptions are serious and costly but are on a smaller scale, like data breaches, products recalls, and industrial accidents. Foreseeable disruptions can be predicted, like the China and United States of America trade disputes and the United Kingdom's exit from the European Union. (McKinsey & Company, 2022.)

After a year of Russia started an invasion war in Ukraine, there are still notable disruptions in the supply chains of critical sectors. These sectors include agriculture, automotive, energy, and food. The magnitude of these shocks has been increased by the changes in the environment and global economy. Additionally, historical inflation is experienced globally. Inflation can substantially raise the costs for input and raw material, like energy, and have a negative effect on profits and losses. The product areas exposed to market forces can be assessed to see whether they are under inflation or deflation. While the pandemic, war, inflation, etc. outliers are not everyday events, companies still should consider such possibilities in decision making and strategic movements. This would mean moving the focus on cost, service, and quality in supply chains to resilience, agility, and sustainability. (McKinsey & Company, 2022.)

2.3 Current state of supply chains

Supply chain refers to a network where different organizations lead and develop together material and service flows and associated with them money and information flows. Supply chain structures differ depending on the company's products, industry, and customers. Because supply chain connects company and its suppliers with customers and distribution organizations, it is an entirety focused on cost efficiency, customer orientation and the production of added value. (Logistiikan Maailma, no date d.) **Supply chain management** refers to the handling of the whole production flow of a good or service. It includes the handling of the raw components all the way to delivering the final product to the consumer. A network of suppliers and parties are created by a company which then moves the product along from the suppliers of raw materials to those parties that deal right with users. Traditionally in a simplified supply chain management, there are five components:

planning, sourcing, manufacturing, delivery and returning. Planning includes, as the name suggests, the initial plan and management of all resources required to meet customer demand for a company's product or service. While establishing the supply chain, the metrics to measure whether the supply chain is efficient, effective, delivers value to customers and meets company goals are determined. (IBM, no date b.)

If a supply chain is resilient, it can withstand, adapt, and thrive in the event of internal and external obstacles – both predictable and unpredictable. Operational resilience, including supply chains, refers to companies maintaining sturdy production capacity than can adapt to shifts in demand and remain stable midst disruption, without letting quality slide. In supply chain management, there are steps to take to prep for long-term uncertainty and possible upheaval. Firefighting is the short-term, daily actions that can help recognize previously overlooked supply chain gaps. However, firefighting does not build resilience. By integrating and streamlining operations, resilient supply chains can be formed. This includes creating a nerve center to strengthen companywide responses, preparing for extreme disruptions, and reassessing just-in-time inventory strategies. (McKinsey & Company, 2022.)

The case company has global and complex supply chains varying in size and complexity. These factors already bring up their own challenges in managing the supply chains. Currently, one of the biggest challenges is meeting customer requirements. The company has grown significantly in sales and after gaining better order intake after factory improvements, the order backlogs have not increased. The company's delivery performance calls for constant improvement. As seen in chapter 2.1.2 the delivery accuracy is not near the levels that they should be. These levels are heavily affecting customer satisfaction. As per delivery accuracy, the third-party provided warehouse operations are perceived to not be a part of the problem. Available stock is delivered on time with near-perfect accuracy. (Case company provided data, no date.)

Different office locations might also have differing views on the state of the supply chains. As per managing the supply chains, each employee takes at least some part in it, but the customer service representatives and supply chain management team works most closely with it. As a quickly growing company, the case company has plans in developing the customer service operations and supply chains, since some of them might have been in place since the early days of the company. As of 2023, the World has thrown a good number of unpredictable events (see chapter 2.2) in the recent years to shake global logistics and supply chains, but the company has been able to keep operations as steady as possible during these times. These events have also showcased and tested the supply chains' resilience. (Case company provided data, no date.)

2.3.1 Third-party logistics

Third-party logistics (3PL) refers to a situation, where the company outsources all their logistics operations to a specialized third-party logistics provider. Usually this includes the management of road transport, warehousing, stock control, and other related services. By utilizing third party logistics, the company can reduce costs, improve efficiency, and have flexibility in managing their operations. At best, the usage of third-party logistics can be an excellent way to gain a competitive advantage in the market while also releasing internal resources for other key functions. (SCM EDU, no date c.)

According to Hofmann and Osterwalder (2017) there are four generic third-party logistics business models: standard regional providers, niche service specialists, international standard providers, and international service specialists. The most basic type of third-party logistics, standard regional providers, offer standardized short-haul transportation and transportation management services within certain territories, like cities, provinces, or countries. Typically, companies within this business model also provide warehousing and inventory management, but no extensive additional services. The smallest business model, niche service specialists, offer similar services that standard regional providers but they have specialized knowledge and can develop solutions for business customers with unusual service requirements. The companies in the standard international service providers are medium-sized or large organizations that render mainly different modes (road, rail, air, and sea) of long-haul transportation services, warehousing, and inventory management services in international networks. Similarly, international service specialist renders international services but with a focus on business customers including provision and development of global tailored supply chain management solutions. (Hofmann and Osterwalder, 2017.)

A business flow chart maps the steps in a certain business process and their sequence. These charts are often used to define and analyze an existing process. Flow charts also allow a business to find areas for improvement in a process. These areas could be unnecessary steps, gaps, barriers, etc. (Walsh-Kelly, 2015.) In appendix 1, the usage of a third-party logistics provider to outsource logistical processes in the case company is illustrated using a business flow chart. The process begins from the creation of a sales order that is send automatically to the third-party logistics customer service through an electronical transfer message. The third-party logistics customer service then creates a delivery, makes logistical preparations, and transfers sales order notes. Re-sourcing control is done after by the third-party logistics management. Then the third-party logistics warehouse does the picking, packing, and generating of transport documentation for the goods. The shipment ready goods are transported by the chosen transport company and the customer

service of the third-party logistics does issue postings which then updates stock balances automatically. (Case company provided data, no date.)

2.3.2 Green logistics

In a circular economy, the impact of materials, resources, and energy used to make, move, and store goods is considered. The goal is to preserve the value of goods for as long as possible and trying to return them back into the manufacturing cycle. To achieve this goal, supply chains should use as few resources as possible. Ideally, resources would stay in circulation as long as possible, extracting the maximum value from them while they are in use and then recovering and regenerating goods at the end of their life cycle. (Adzija and Kukhta, 2022.)

The ongoing public concern for the environment has forced companies to minimize environmental impact and damage of their logistics operations. The distribution of goods often affects local air quality, generates noise, can cause accidents, and makes a significant contribution to climate change. Research has shown that global warming presents a much greater and more immediate threat than previously thought, which then has naturally brought more attention to the impact of logistics. (Browne et al. 2010, 3-4.) Green logistics refers to all the actions that a company makes to minimize the environmental impact of the logistics network and delivery. At its best, green logistics secure a strong base without sacrificing customer satisfaction (see chapter 2.4) nor the prosperity of the planet. Often the primary driver for companies to make the move to green logistics is customer demand. After the move, companies usually also experience improved profitability and good corporate citizenship. When consumers see the real-world results of climate change in the media, they tend to shift loyalties to more responsible companies that are taking permanent steps toward a sustainable future. (SAP, no date.)

For the case company, most of the processes of green logistics come from the third-party logistics and their operations. The company still seeks to make decisions with the environmental impact in mind. For example, full shipments are heavily favored to maximize the usage of shipments. This means that even if some goods are in stock of one order, the personnel handling orders are instructed to wait for the rest of the goods to arrive rather than sending multiple small, often unnecessary shipments. However, bigger customers receiving standard weekly shipments can sometimes be an exception of this since they are usually still able to utilize full shipment capacity by adding other orders. (Case company provided data, no date.)

2.4 Customer experience

Customer experience is the glue between a business and its customers. When executed well, customer experience investments have revealed good results: better customer retention and

acquisition, increased sales, and stronger customer loyalty. High quality customer experience involves building a relationship by understanding what the customers want, need and value. A customer's journey includes pre-purchase connections with the brand, the process of researching and making the purchase and post-purchase interactions. Successful customer journey should be like a well-oiled machine: smooth and efficient interactions between the business and the customer. (Accenture, no date.) All the parties in the company contribute to the customer experience and are responsible for exceeding expectations. Only one party providing great customer service is not sufficient anymore. Essentially a well thriving customer experience can capture customer loyalty and promote evangelism by offering prime service and an enchanting experience at every interaction, from all the way from browsing product catalogues on a retailer's website to returning a product to the seller. (Silverthorne, 2019.) Additionally, it can also help differentiate the company's value proposition from competitors. Value proposition is a critical part of any company's strategy since it states the specific benefits their goods or services provide for the customers. The proposition supports the customers' purchasing decision by answering the question of why should they buy from you and not someone else? (University of Minnesota, 2015.)



Figure 5. Simplified customer journey map of the case company (adapted from Yale, no date.)

In figure 5, the customer journey of a customer of the case company is pictured. The customer touchpoints are laid out from the need of purchasing to first contact with the company and then to direct interaction with the local service provider, so a local customer service center. The touchpoints include all the actions a customer takes to complete an objective across a certain timeframe. Since customers may have varying expectations of the journey, their behavior and actions can also vary. (Yale, no date.) Even though a customer journey map might seem simple, the process is usually very different and personal between separate customers.

An experienced customer service person understands that every interaction people and other businesses have with the business elicits some sort of emotion. This feeling, whether good, bad,

happy, or sad, is then associated with the business in further interactions. (Accenture, no date.) Stefan Thomke, a professor at Harvard Business School, implies that the difference between a wow-ing-customer experience and a quickly forgotten one has little to do with catchy marketing and more to do with the design of the experience itself (Gerdeman, 2017). According to a study in a 2010 Harvard Business Review, it is more common for customers to speak negatively about their experience and around half of them will share this experience with 10 or more other people. (Dixon, Freeman and Toman, 2015.) This word to mouth can then result in customers asking the most important question: To buy or not to buy again? With any interaction, good and bad, it is critical to acknowledge that customers' needs, desires, and emotions change constantly based on external forces. (Accenture, no date.)

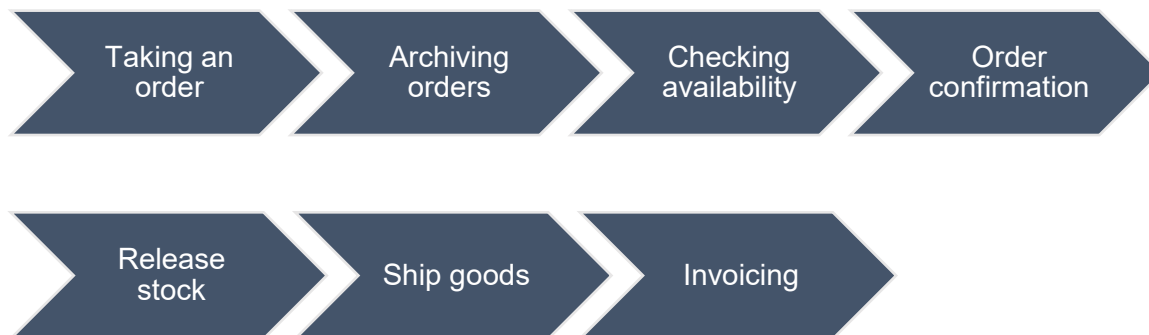


Figure 6. Processes in the customer service department in the Finnish office of the case company (adapted from Case company provided data, no date.)

The customer service process of the case company starts from sales representatives' creation of a customer quotes. In figure 6, all the steps that a customer service representative takes after the creation of customer quotes in processing orders are presented. The customer service representatives take orders and archives them accordingly. Then the available stock is checked through the ERP system and an order confirmation is sent to the customer. If there is no stock available, order confirmation is done according to incoming goods arrival dates, lead times, experience, and given instructions. Through the picking list send to the warehouse, the warehouse can withdraw goods and ship them. Lastly invoicing is done through the ERP system according to customer settings. (Case company provided data, no date.)

Since many of the fundamentals of customer experience have become commonplace, it is progressively more difficult for businesses to differentiate themselves with a good customer experience alone. Traditionally the focus has been on optimizing customer touchpoints around the good or service. Nowadays, a more holistic, dynamic view of who customers are and what motivates their behaviors is needed to treat them as more than just buyers. (Accenture, no date.) To improve

customer experience strategy, a company should examine the quality and success of the current customer experience. Like with any strategy, clear goals should be set out and a tracking system established. The strategy should also deliver value to the customer. By running multiple strategies that create positive interactions anywhere your customer encounters your business, can, a continuous image of the business is created. Each interaction should be prioritized to meet the customer's needs. (Forbes, 2021.)

2.5 Theoretical framework

Theoretical framework is used to justify and contextualize the research. The term aims to frame the research within a clearly specified field, which makes the reader aware of the assumptions that inform the approach of the research. The framework will guide the research methodology and lastly, the discussion will support the justification of the research question. (Vinz, 2022.)

The aim of this research is to help the case company target their existing supply chains to better meet customers' needs by scoping the current state, biggest challenges, and developmental ideas of the company's personnel. To ensure up-to-date information, almost all the sources are from 2010s or later, except for only a few sources. The literature review dives into the current literature from logistics strategy (2.1) and global logistical problems (2.2) to the current state of the case company's supply chains (2.3) and customer experience (2.4) to show the importance of developing logistics strategy to enhance customer experience. According to SCM EDU (no date b) in chapter 2.1, effective and efficient logistics is essential for the operations of companies. Customer requirements and needs usually guide this process.

As established in chapter 2.1.2 delivery accuracy and chapter 2.4 customer experience, the case company is continuously struggling to meet customer expectations and the lead times promised. This is a big issue since it harms the trust of the customers. Occasionally, global logistical problems have also had their effect on the case company's raw material availability and thus affecting other parts of the supply chains. The company seeks to increase the customer experience and efficiency of the supply chains, and the personnel working in the customer service department of the company have the best a first-hand view to how the processes are running currently. Developing and improving this problem could play a major role in having better customer return and more satisfied customers overall.

In chapter 2.3.1, the business flow chart illustrates the outbound picking process of the case company's third-party logistics. The case company has also previously examined that their outsourced warehousing seems to not affect their logistical processes negatively, since available goods are

shipped on a timely fashion. The third-party logistics is implementing green logistic processes in their operations as best fitting for each shipment of goods.

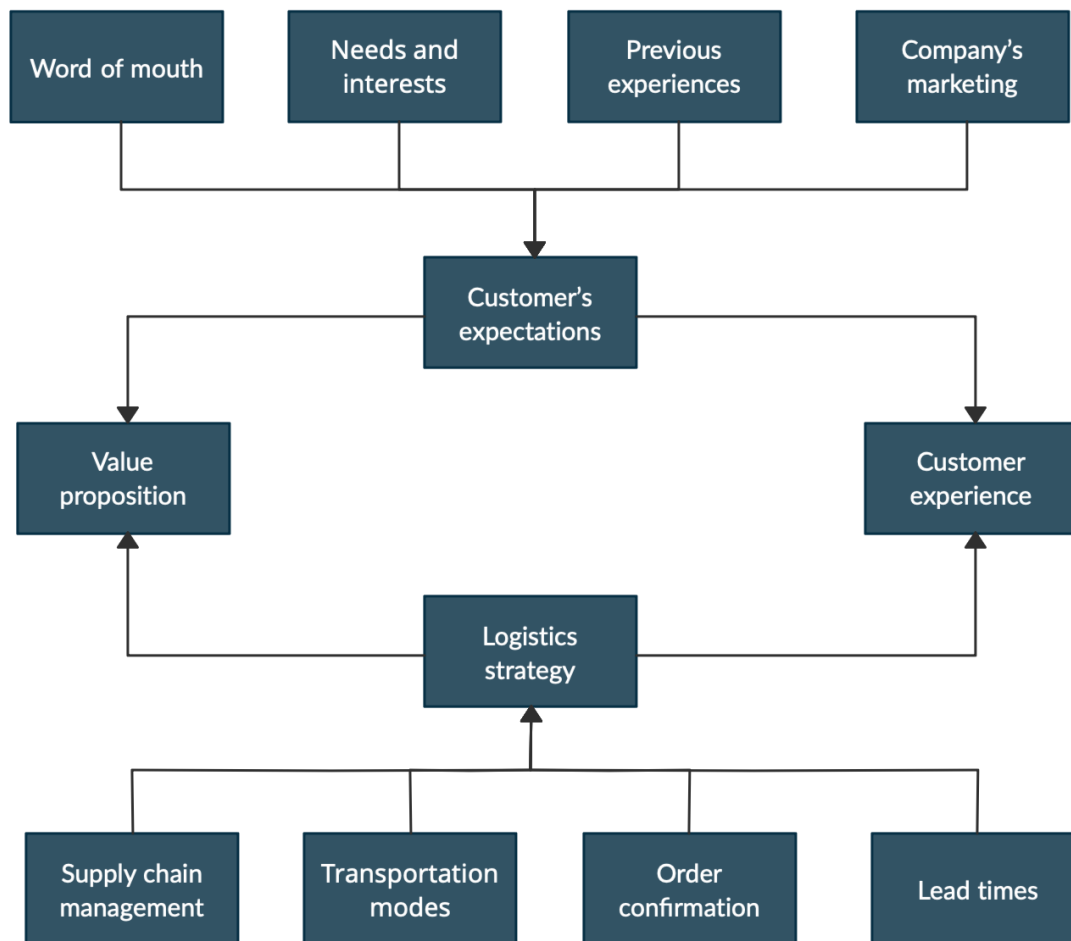


Figure 7. Theoretical framework of the research

Overall, the theoretical framework is constructed from all the topics covered in the literature review and illustrated as a flow chart in figure 7. The importance of logistics strategy and different parts affecting it are linked to the effective management of logistical operations. The flow chart pictures these parts and how they contribute to the building of a company's value proposition and thus customer experience. Based on these assumptions, in chapter 3 the research methodology is described and explained.

3 Research methodology

This chapter discusses the research methods chosen, the analysis of collected data and the findings. Research method refers to different techniques and procedures applied when obtaining and analyzing data (Saunders, Lewis and Tornhill 2009, 3). The method chosen for this thesis is action research and the aim is to form a qualitative study using semi-structured interviews. O'Leary (2007) defines action research as a strategy to tackle real-world problems in participatory, collaborative, and cyclical ways in order to produce both knowledge and action. This method aims toward a kind of change, by having change-oriented goals. (Iowa State University, no date.)

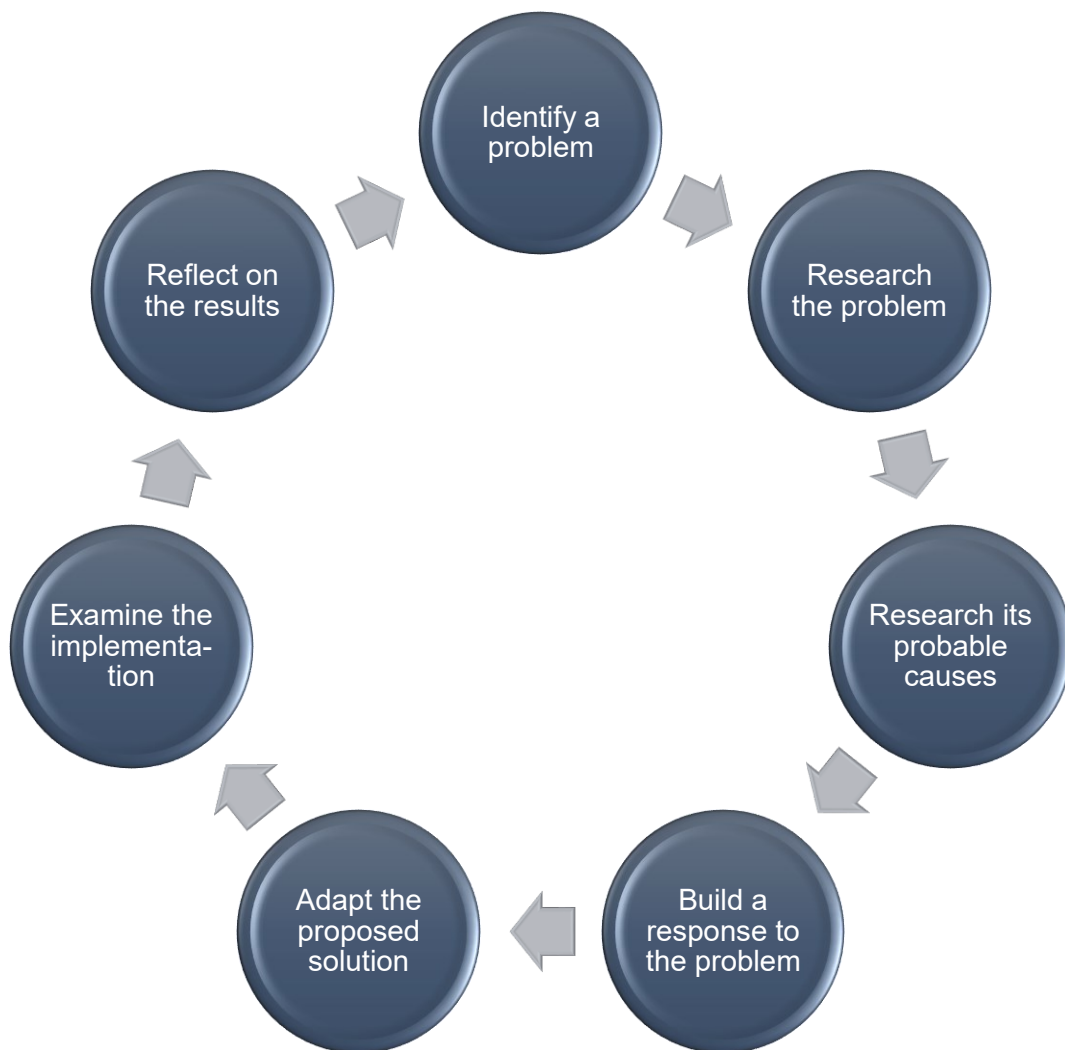


Figure 8. The process of action research (adapted from Iowa State University, no date.)

The process of action research is portrayed in figure 7. The process begins from identifying the problem and researching it. A response to the problem can be built and a proposed solution can be adapted based on the research. After the adaptation, the implementation of the solution is

examined, to see how successful it was. To fully benefit from the research, it is necessary to reflect on the results. From this point on, the same process can be implemented again as many times as needed. (Iowa State University, no date.)

3.1 Research approach

Research approach refers to the plans and procedure made for the research which then span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. Research approaches are usually split into two categories: quantitative research and qualitative research. A mix of these both approaches is referred to as mixed method. Quantitative research tests the objective of theories by examining the connection among variables. These variables should be measurable, in such a manner that numbered data can be analysed using statistical procedures. Qualitative approach explores and understands the meaning of individuals or group ascribe to a social or human problem. The data is typically collected in a participant's setting. (Sage Publications, no date.) Qualitative research can be expressed in words. It seeks to understand concept, thoughts, and experiences. As a result, more in-depth insights of the researched topics can be gathered. Commonly this type of research is done by interviews, observations, focus groups and literature reviews. (Steeferk, 2023.)

In this thesis, qualitative study was chosen due to the nature of the research problem. By gathering in-depth insight, the logistical development and improvement details to meet the company's needs can be conducted. The case company already uses quantitative data on a daily basis to report different statistics in the supply chain management using automated runs in the ERP-system, so qualitative research on the same topic gives good supporting data.

3.2 Data collection

Data collections refers to the process of collecting information about a specific subject. It is crucial to ensure that all the data is collected legally and ethically. Normally the data types can be divided into three: primary data, secondary data, and tertiary data. Primary data is collected directly from personnel in a certain organization, typically by interviews or focus group. Secondary data refers to shared data, namely reports, statistics and other documents. Tertiary data is aggregated data that organizations rent or sell to third parties. From all the data types, primary data is more valuable because it illustrates how someone or something behaves, thinks, and feels. Before data collection, the question aimed to answer, a data subject needed to collect data from, a collection timeframe and a data collection method best suited for the specific research are determined. (Cote, 2021.)

In the research of this thesis, both primary (see chapter 3.2.1) and secondary data (see chapter 3.2.2) collection methods were used. Regarding the goal of the thesis, a part of key information

came from interviewing different employees of the customer service centers of the case company around Europe, and another part was from examining existing reports and other documents conducted by the company. The secondary data was used to support arising themes in the literature review.

3.2.1 Primary data collection

The primary data for this study was collected by conducting interviews to the European customer service centers' personnel of case company. Interviews allow the interviewees to show their opinions, motivations, and feelings (Cote, 2021). The interviews will be semi-structured and done via emails during the first two weeks of April 2023. Semi-structured interviews rely on asking questions within a predetermined thematic framework. Most of the questions are open-ended to allow flexibility. The question order is set to allow comparison between interviewees. Semi-structured questions also give the interviewees room to clarify, elaborate or rephrase their answers if needed. (George, 2022.) The participating people were chosen by office location, job title, service years, and availability. To get different points of views, the interviewees work in different positions in the centers, for example as commercial assistant, customer service representatives or managers. In table 2. The interviewed personnel are listed to illustrate the different viewpoints.

Table 2. Interviewed personnel

Job title	Service years	Office location
Customer Service Agent	25	Finland
Specialist, SCM/OTD-Manager	20	Finland
Customer Service Agent	6	Denmark
Customer Service Manager for Scandinavia	25	Denmark
Customer Service Manager	14	Poland
Commercial Assistant	26	France
Customer Service Agent	10	United Kingdom

In the past decades there has been a movement to online in all things possible. Companies use email daily for working, communicating, selling and all other work-related things. Email interviews give the interviewees a possibility to question and construct their narratives before answering and to thoroughly consider the interviewed topic. (James, 2007.) To better match busy schedules' and to give the interviewees flexibility, the interviews were conducted through email. The interview questions were formed based on the expectations of the commissioning company. With the questions, the aim is to assess the current situation of logistics, the current stumbling blocks and

bottlenecks, and lastly the personnel's development and improvement ideas for the future. The email interview layout and interview questions are listed in Appendix 2.

Table 3. Details of interview data

Interviewee's office location	Length of response (words)	All questions answered	Data received (date)
Finland	550	Yes	14.4.2023
Finland	450	Yes	19.4.2023
Denmark	450	Yes	14.4.2023
Denmark	650	Yes	14.4.2023
Poland	450	Yes	17.4.2023
France	250	Yes	14.4.2023
United Kingdom	250	Yes	14.4.2023

In Table 3, the details of the interview data is listed by the office location of the interviewee. All the interviewees answered all the questions in the interview. Most interviewees gave their response on the day of the follow-up email. The length of the responses varied between approximately 250 to 650 words. The words are rounded up to closest fifty. The varying lengths might be because of busy schedules and not having sufficient time to orientate oneself to the interview. In chapter 3.4, the findings of the interviews are studied.

3.2.2 Secondary data collection

The secondary data for this study was collected during March of 2023. The source of the data was from the case company. This data was used to picture and assess the current state of logistics and customer experience in the case company. In table 3 the types of secondary data, a short description of the contents and numerical information about the data given is listed, since the secondary data is highly confidential and cannot be published as part of this thesis.

Table 4. Secondary data collected

Number of files	Document type	Short description	Number of total pages
1	Report	Project report on confirmation accuracy	30
3	Excel data	Transport company's customer specific data	3
2	Presentation	Purchasing processes	27
5	Histogram chart	Delivery performance graphics	5

3.3 Data analysis

Typically, qualitative data is analyzed by these approaches: content analysis, thematic analysis, or discourse analysis. In content analysis the occurrence, position and meaning of words and phrases are tracked. Thematic analysis refers to the close examination of the data to identify the main themes and patterns. Lastly, discourse analysis studies how communication works in social contexts. When starting the data analysis process, the collected data need to be prepared and organized to be able to then review and explore it. After these steps, recurring themes can be found. (Steeferk, 2023.)

The interview data was handled confidentially, so that identities of the interviewees were deduced from the responses to ensure anonymity. Each interviewee was given a two-week deadline to give their responses. A reminder email was sent three days before this stated deadline. After the interviews, a qualitative thematic analysis was conducted on the gathered answers. By comparing the answers from people in different positions and different office locations in the company, possible similarities or dissimilarities can be found, and then the reasonings discussed. From this, there should be relationships found to the investigative questions (see chapter 1.2).

3.4 Findings

In chapter 1.2, the investigative questions of this thesis are listed as an overlay matrix. Based on the investigative questions, the table 5 below presents the interview questions tie to the investigative questions. The key finding of the interviews was that notable progress has already been made in the case company's logistics processes but there is still noticeable room for improvement. One interviewee voiced that "logistics is in the middle of what we could do better..., but I also see that many things have already changed". Interviewees stated that internal communication plays a major role in all the improvement areas, and they felt that the customer service department is often left

out in the decision making and are not updated on current changes. This was acknowledged from customer service agents to managers. In chapter 4.1, a thematic analysis is conducted from the interview findings.

Table 5. Overlay matrix of the interview findings.

Investigative question	Interview question	Key themes found
IQ 1.	How do you see the current state of logistics within the European customers of (case company's name)? How would you describe the customer experience of (case company's name)? How often do you get feedback from customers directly regarding the logistics of the company? What is the feedback usually about? Generally, is it positive or negative?	Delivery time, customer loyalty, need for modernization, need for improvement
IQ 2.	Which in your opinion is/are the most recurring obstacles in delivering goods to customers? How could we overcome them?	Production line, lead time, stock availability, communication, internal processes
IQ 3.	Do you have any developmental ideas for the logistics or supply chains for the future? If so, please elaborate.	Lack of clear direction, updating systems, real-time information, delivery time
IQ 4.	What do you wish for the future of (case company's name)'s logistics?	Reliable delivery, improved communication, increased staff and inventory, accurate lead times

The semi-structured interviews gave an opportunity to find similarities and dissimilarities between interviewees. All the interviewees brought up similar topics in their answers and no notable

dissimilarities were found. Additionally, the office location, job title nor number of service years did not play into the answers significantly.

Half of the interviewees praised the progress the case company has made in the previous years in their logistics processes. One interviewee stated the following: “we made huge progress in production area” and another voiced that “it (lack of stock) is starting to happen less often..., so I think we are already improving”. However, the areas of improvement were the prominent topic in the responses. One interview felt the following: “some parts need improving such as stock levels and lead times”. Both of these topics were mentioned by all the interviewees more than once.

4 Findings and discussion

In this chapter, the findings of the research are analysed (see chapter 4.1) and the conclusion of the research (see chapter 4.3) is conducted at the end with suggestions for future research. The objective of this thesis was to study how the existing supply chains in Europe of the case company can be developed and improved. The main research question was how the logistics and customer service of case company in Europe can be improved and developed? There were no major dissimilarities found between the different locations, positions, nor number of service years of the interviewees. Overall, the interviewees had a lot of similarities in their responses and clear themes were formed between the responses.

4.1 Analysis of the findings

From the first interview question: what is your job title and how long have you been working at the case company?, the exact job titles and service years of the interviewees (see table 2) were gathered to form possible dissimilarities between them. From here on, a thematical analysis was conducted for the rest of the questions. The second interview question mapped the current state of the logistics within the European customers of case company. The question was how do you see the current state of logistics within the European customers of (case company's name)? Based on the responses the company seems to have some areas of improvement. Interviewees stated that customers have expressed their concerns regarding delivery times, availability, and lead times.

There were four themes in responses for the second interview question:

- Theme 1: Timeliness of delivery
- Theme 2: Customer loyalty
- Theme 3: Need for modernization
- Theme 4: Need for improvement

As for timeliness of delivery, interviewees noted that the case company attempts to send goods to customers in a timely fashion. However, there were concerns about the company's ability to meet agreed delivery times, even when goods were in stock. Customers often experienced delays, and the lead times provided were not always accurate. Interviewees felt that more action needed to be taken to prevent goods from going into backlog. One interviewee noted that there are too many late and partial deliveries. Additionally, they stated that this is because of the factory delivering goods too late rather than the warehouse. As for customer loyalty, many of the European customers have a long history with the case company and are very loyal. This suggest that the company has been able to build strong relationships with its customers, despite some logistical challenges. As for the need of modernization, interviewees felt that the company needed to modernize its

logistics processes to better serve customers. They cited issues with lead times, stock level, and trust in the information provided by the company. The need for modernization suggests that the company's current processes may not be keeping up with the needs of its customers or the broader industry. Lastly for the need for improvement, interviewees felt that there was room for improvement in the case company's logistics processes. Overall, while some aspects of the company's service were good, such as availability during periods of low sales, there were concerns about delivery accuracy, lead times, and trust in the information provided by the company.

The third interview questions scoped the recurring obstacles in the supply chains. The question was which in your opinion is/are the most recurring obstacles in delivering goods to customers and how could we overcome them?

There were five themes in the responses regarding recurring obstacles:

- Theme 1: Production line
- Theme 2: Lead time
- Theme 3: Stock availability
- Theme 4: Communication and feedback
- Theme 5: Internal processes and systems

As for production line, one interviewee mentioned that the production line is the biggest obstacle affecting the delivery times, since they are unable to produce proper amount of goods at the right time. Another interviewee suggested that better tools could make the production processes more efficient. It was stated that more resources for the factory could increase production capability. For the second theme, lead times, two interviewees stated that it is a challenge, and often products are not delivered within the promised time frame. One interviewee highlighted the confusion between the two-week lead time rule the company has and the the actual time required for the products to reach the customer's location, as delivery often adds at least a week to the total lead time. One interviewee voiced that the automatically produced lead times in the ERP system are often not accurate. Additionally, wrongly confirmed orders were mentioned to play into on-time delivery. The new system of the asking file (a shared file where customer service can ask lead times straight from factory) was praised to be outstanding and shortened response times significantly. As for stock availability, two interviewees mentioned that the lack of stock and stock not arriving on confirmed dates is a recurring obstacle. However, in contrary, one interviewee noted a positive change in stock arriving on time more than before. One interviewee also mentioned that the company should not wait until the stock is empty and suggested that the company should never empty more than 70 % of the stock. For theme 4, communication and feedback, the response time for complaints were mentioned to be too long. Feedback on the

complaints also often felt to be delayed, requiring several follow-up request. One interviewee highlighted the need to focus on the customer behind each order. As for internal processes and systems, one interviewee suggested that the company needed a new ERP system or at least an external consultant to look at the existing processes with fresh eyes. Another interviewee conveyed that for example stock availability has improved suggesting that the company may be taking the right steps to improve internal processes.

The fourth interview question dived into customer experience and meeting customer needs. The question was how would you describe the customer experience of (case company's name)? Additionally, customer feedback was added to this topic. The questions regarding it were how often do you get feedback from customers directly regarding the logistics of the company and what is the feedback usually about?

There were five themes found regarding customer experience and satisfaction:

- Theme 1: Feedback frequency
- Theme 2: Delivery and logistics issues
- Theme 3: Positive vs. negative feedback
- Theme 4: Competitor threats
- Theme 5: Customer service challenges

As for feedback frequency, the interviewees reported getting feedback from customers quite often, ranging from weekly to quarterly, indicating that customer feedback is an important aspect of the company's operations. For some customers it was noted that there are meetings held where the case company goes through the overall situation with the customer. For theme 2, delivery and logistics issues, the most common feedback received by the respondent was related to delivery time, missing goods from orders, and poor communication about order statuses. One interviewee mentioned having to have made delivery promises to customers, but were unable to keep them, which then led to negative feedback. Another reported that the biggest distributor customers received delivery statistics every three months, and there were times where goods were not delivered on time, leading to customer dissatisfaction. There were also some delivery issues, that were not in the hands of the case company and therefore cannot be solved totally by the company itself. For positive and negative feedback, more often the feedback was negative rather than positive, indicating that the customer experience of the case company is generally perceived as not that great. One interviewee reported complaint about long wait times in correspondences, while another another stated that many customer had left during the years because of poor availability and high prices. As for theme 4, competitor threats, it was voiced that the case company had let competitors into the market with more modern designs, which had led to the lodd of customers

over the years. For customer service challenges, interviewees mentioned that there were a lot of on-going changes in the company, and the customer service personnel were not always up to date with the current methods of operation and changes that had happened.

The fifth interview question mapped the wishes and developmental ideas of the interviewees regarding the logistics and supply chains of the case company. The question was what do you wish for the future of (case company's name)'s logistics? The interviewees were guided to try to think from the customers' point of view.

There were four themes found regarding the wishes:

- Theme 1: Reliable and consistent delivery
- Theme 2: Improved communication
- Theme 3: Increased staff and inventory
- Theme 4: Accurate lead times

As for reliable and consistent delivery, the interviewees expressed the desire for the company to provide more trustworthy and dependable delivery times and to actually keep their promises of delivery to the customers. One interviewee specifically highlighted on the importance of delivering within agreed timelines. For theme 2, improved communication, two interviewees voiced the need for better communication between different departments within the company, as well as with customers. Another suggested implementing automated tracking and delivery notifications to save time and improve customer service. As for increased staff and inventory, there was a wish for more staff to be hired to improve responsiveness to customers, to speed up order fulfillment and to have more parts in stock to reduce lead times. For theme 4, accurate lead times, interviewees expressed the need for more accurate information on lead times to provide customer with more realistic expectations.

Lastly, the sixth question scoped the developmental ideas of the case company's personnel. The questions were do you have any developmental ideas for the logistics or supply chains for the future and if so, please elaborate.

There were four themes found regarding the developmental ideas:

- Theme 1: Lack of clear direction
- Theme 2: Updating the warehouse management system
- Theme 3: Need for real-time information
- Theme 4: Delivery time

For the lack of clear direction, interviewees suggested that the company has problems with canceling and changing decisions, indicating a lack of clear direction in logistics and supply chains.

One interviewee felt that better logistics coordination would improve the personnel's order handling process leading to less wrongly confirmed delivery times and less destruction to the supply chains. One interviewee also mentioned the current issue of bigger customer overriding the smaller ones, meaning that the stock is emptied for one big customer, often leaving the smaller customers waiting for the same goods for several months. As for theme 2, updating the warehouse management, one interviewee implied that the company needs a more professional warehouse management system or a new ERP system to better manage inventory and supply chain operations. They also mentioned that the company needs to change the way they see goods availability to prevent out of stocks for popular goods, indicating a need for more accurate demand forecasting and inventory management. For this, the interviewee gave an example of double ABC classification for product availability. One interviewee suggested that a maximum order quantity should be adapted meaning that personnel could only sell a certain amount at once to avoid out of stocks. As for the need for real-time information, one interviewee suggested that the company should adapt the latest technology to enable real-time dispatch dates and inform staff of real-time issues that may occur, so they can relay the information to customers. Lastly for theme 4, delivery time, all the interviewees emphasized on the importance of accurate delivery times. One interviewee also mentioned customer prioritization, and that the company should not always prioritize one customer over others.

4.2 Validity and reliability

Validity and reliability are used to evaluate the quality of a study. Validity examines the accuracy of how a method measures what it is meant to measure. Validity can be tested by looking at the correspond of the research to established theories and other measure of the same topic. High validity would then mean that the research produces results that correspond to real properties, characteristic, and variations in the surrounding world. Generally, a valid measurement is reliable. Valid can be divided into three types: construct, content, and criterion. Construct validity examines the adherence of a measure to existing theory and knowledge. In content validity, the measurement should cover all aspects of the topic being measured. Criterion validity refers to the extent of the results corresponding to other valid measures of the same topic. (Middleton, 2023.)

In terms of validity, the interview findings can be considered to have validity, as the responses appear to be relevant to the research questions and provide valuable insights into the perceptions and experiences of the interviewees. However, it is important to note that the studied group is relatively small, which may limit the generalizability of the findings to other contexts.

On the contrary, reliability evaluates how consistently a method measures something. A measure is reliable when the same result can be achieved by using the same methods under the same

circumstances. There are different types of reliability: test-retest, interrater, and internal consistency. Test-retest measures the consistency through time. Interrater refers to getting matching results when different persons conduct the same measurement. In internal consistency, the same result should arise from different parts of a test that are designed to measure matching thing. (Middleton, 2023.)

The interview findings may be considered to have good interrater reliability. However, the reliability of the findings may be limited by the fact that the interviews were conducted by a single interviewer, which may introduce bias or inconsistency in the data collection process. To reduce this issue, future research (see chapter 4.3) could involve multiple interviewers to enhance the reliability of the findings. Overall, while the findings provide valuable insights into perceptions and experiences of the interviewees regarding the logistics and supply chains of the case company, caution should be exercised when generalizing the findings to other contexts. Lastly, future research should aim to address potential sources of bias and inconsistency to enhance the validity and reliability of the findings.

4.3 Future research

Based on the analysis of the interview findings (see chapter 4.1), some conclusions can be drawn about the current state of the case company's logistics and potential areas of improvement. Overall, the interview findings suggest that there is room for improvement in the case company's logistics and supply chains, particularly in the areas of delivery reliability, communication, stock availability, and inventory management. The findings have also shed light on some important issues and challenges facing the case company's logistics and supply chains. The following topics could be explored further in future research to identify solutions to these issues and challenges.

Firstly, there is room for improvement in communication between different departments. Other departments should work more closely with customer service to better understand the needs of the customer, since they are the ones who are in daily contact with customers and usually know them better. Future research could explore how technology can be leveraged to improve communication and collaboration between the different departments and with customers, and how this could improve supply chain efficiency.

The case company may benefit from implementing a new warehouse management or ERP system to improve stock availability and inventory management. Additionally, it was noted that the company often runs out of commonly sold items, suggesting a need for more accurate demand forecasting and inventory management. Future research could investigate the most suitable

warehouse management system or ERP system to meet the company's current needs, while also considering factors such as cost, scalability and compatibility with existing systems.

Interviewees highlighted the need for real-time tracking of deliveries and accurate information on lead times to better customer satisfaction. Future research could investigate the latest technologies and tools for real-time tracking and providing accurate information to customers. Additionally, the research could explore how this could be integrated with existing systems to provide a seamless experience to customers.

There was a common desire among the interviewees for the company to improve their delivery times and be more reliable in meeting promised delivery times. Many highlighted the importance of accurate and timely delivery in building trust with customers. Interviewees also emphasized on valuing all customer equally and ensuring timely response to inquiries. Future research could investigate how the case company could manage its orders more efficiently, including strategies for reducing lead times and managing inventory.

Finally, there were mentions of obstacles that can not be controlled by the case company itself in multiple founded themes of different delivery issues. These obstacles were similar to the global logistical problems mentioned in chapter 2.2. Future research could investigate the specific challenges and opportunities these global problems present for the case company, including the impact on trade agreements, tariffs, raw material availability, and regulatory compliance

In conclusion, the findings have highlighted several areas where the case company's logistics and supply chain management can be developed and improved. Future research can explore these areas in more detail to identify practical solutions and strategies for improving supply chain efficiency and customer satisfaction.

4.4 Conclusions

The biggest challenges for the research of this thesis surfaced from time management and fitting different schedules together. This was later solved by opting for email interviews, letting the interviewees conduct their responses when best fitting for them. If something could be done differently now, the interviews could be conducted more widely in the company, but this leaves the door open for more in-depth investigation in topics the company decides to focus on and further research.

The current state of the case company's logistics is that it is constantly improving, and steps have been made in the right direction, but there is still room for more improvement. Biggest challenges in the supply chains were mentioned to be the production line, lead times, stock availability,

communication, and internal processes. From all of them, lead times were mentioned most in all the responses between different interviewees.

Another area for improvement is internal communication, especially between different departments. Interviewees felt that even though they are the ones closely working with customer and taking part in order management, they are not internally informed properly on current changes and decisions are made without particularly taking the customers into consideration.

In the literature review, it was stated that the delivery accuracy is not near the needed levels, and this was highly supported by the interview findings. Interviewees suggest that the case company could benefit from updating the warehouse management or ERP system. Additionally, it was noted that commonly used goods often run out, which suggests a need for more accurate demand forecasting and inventory management.

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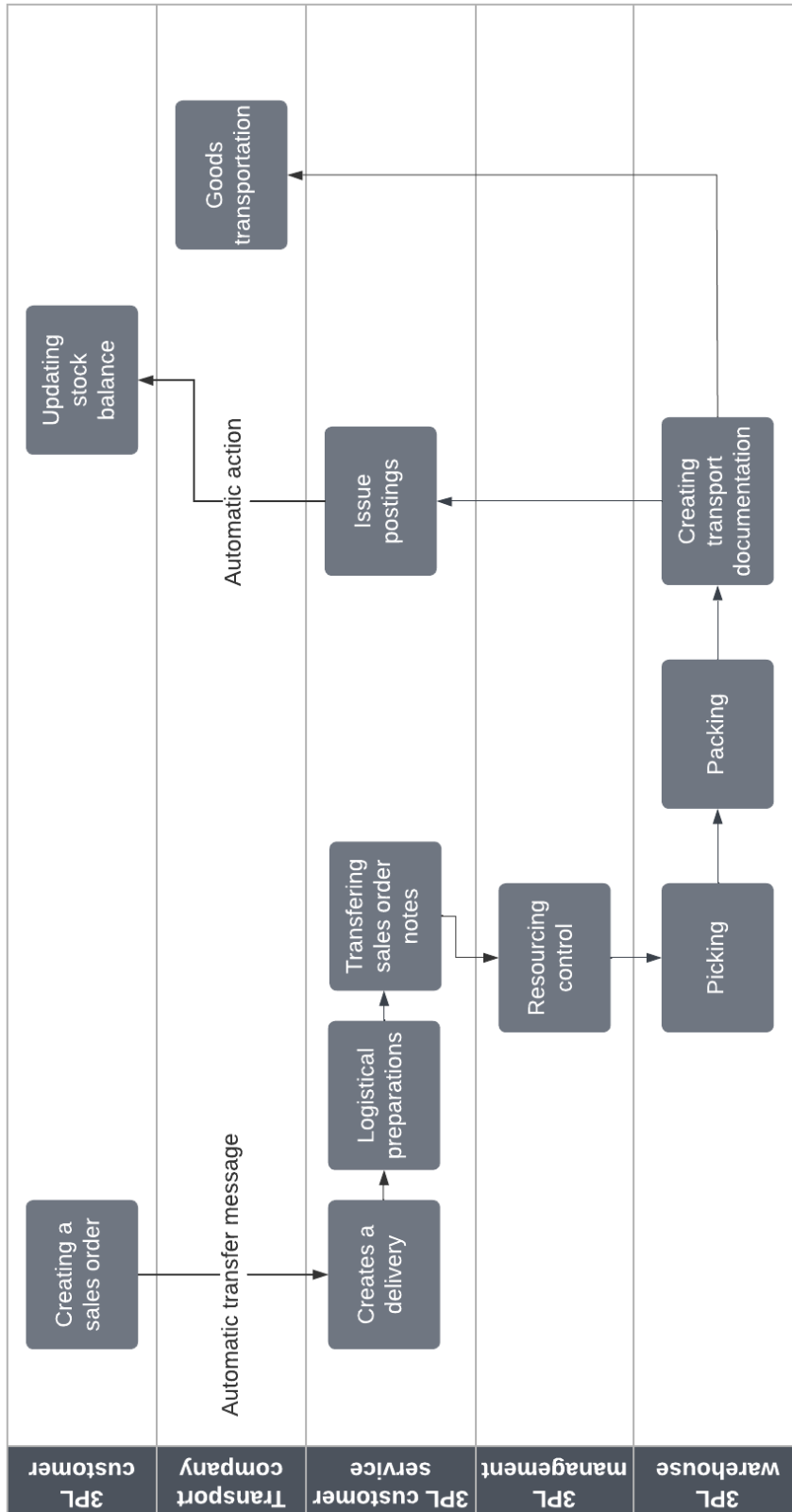
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Appendices

Appendix 1. Outbound logistic picking process in the case company (adapted from Case company provided data, no date.)



Appendix 2. Email interview layout and questions

Hello (recipient),

I would like to welcome you to answer the research interview of my bachelor's thesis in Haaga-Heilia University of Applied Sciences in the degree programme of business administration. This research was done in collaboration with (case company's name) and (contact's name) as my contact person. The aim of the research is to find how the logistics and customer service of (case company's name) in Europe can be improved and developed. For this, we would like to collect some thoughts and ideas from (case company's name) personnel from different office locations and different positions. The interview is concentrated on scoping the current state of logistics in Europe from successes to frequent issues and obstacles. Lastly, we want to give you the stage in freely stating your wishes and ideas for the future.

All the interviews are confidential and the identities of the interviewees are deduced from the answers. Information from which you could deduce the identity of the interviewees is processed separately. Answering this interview will take approximately 20-25 minutes. Please take your time in answering the questions as thoroughly as you can, this is the time to voice your thoughts! I kindly request you to answer this interview April 16th the latest. Since spring can be busy, I also kindly ask you to inform me if you are unable to answer this interview, so we can seek for compensatory interviewees. Your answers will be much appreciated and I thank you very much in advance!

The interview questions:

What is your job title and how long have you been working at (case company's name)?

How do you see the current state of logistics within the European customers of (case company's name)?

Which in your opinion is/are the most recurring obstacles in delivering goods to customers? (response time, lead time, on time delivery, truck availability, correct goods, etc.) How could we overcome them?

How would you describe the customer experience of (case company's name)? How often do you get feedback from customers directly regarding the logistics of the company? What is the feedback usually about? Generally, is it positive or negative?

What do you wish for the future of (case company's name)'s logistics? (try to think from your customers' point of view)

Do you have any developmental ideas for the logistics or supply chains for the future? If so, please elaborate.

If you should have any questions or inquiries regarding the interview, please do not hesitate to ask!

With kind regards,

Jonna Henttinen