



**CHALMERS**  
UNIVERSITY OF TECHNOLOGY



# Dealer Simplicity

A case study at a company in the automotive industry

Master's thesis in Quality and Operations Management and Supply Chain Management

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## Abstract

The service market can be a major source of revenue and profit, and offer higher economic benefits than the initial sale of the product. However, the complexity of the service market is high which makes the existing potential difficult to capture. Within the automotive service market, dealers operate as a middleman between OEMs and end-customers and play an important role. The end-customers need to maintain a high uptime for their vehicle, requiring dealers to solve their problems quickly. To enable dealers to focus on end-customers, OEMs need to simplify their business by improving the value offering to the dealers. Consequently, the aim with this thesis is to suggest improvements to enhance Dealer Simplicity. To fulfil this purpose, a description of the new concept Dealer Simplicity was established and challenges diminishing Dealer Simplicity were identified to discover areas for improvement.

This thesis is a qualitative study based on a case study of a heavy commercial vehicle company. In the study, 16 interviews were conducted with employees at AutoCo with the objective to understand the context and AutoCo's view of Dealer Simplicity. In addition, eight interviews and five site visits at different dealers were conducted to identify current ways of working and existing challenges. In parallel, a literature study was performed creating a theoretical framework that covers areas such as simplicity, service quality, value creation process and service innovation.

The concept of Dealer Simplicity, which describes to which extent an OEM facilitate their dealers' businesses, was found to consist of three cornerstones; availability at point of need, excellent information-sharing and simple processes. To succeed with Dealer Simplicity, new ways of working and improved value propositions are required. The major challenges were discovered within the return process, however improvement areas connected to the order process were also found. To enhance Dealer Simplicity, AutoCo were provided with a set of improvement suggestions. Examples of recommendations include developing and reducing the number of systems, improve the information-sharing, implement track and trace of packages, provide educational support, collect customer input, improve the information transparency and revoke different order types.

**Keywords:** dealer simplicity, simplicity, service quality, value creation process, value co-creation, service innovation, service market




# Acknowledgements

This thesis has been conducted during Spring 2020 within the Department of Technology Management and Economics at the division of Service Management and Logistics. This thesis constitutes the final part of our Master's within Quality and Operations Management and Supply Chain Management at Chalmers University of Technology and has been performed in collaboration with a case company within in the automotive industry and their dealers.

Firstly, we would like to thank our supervisor at Chalmers University of Technology, Jan Lenning, for his insightful comments, exceptional guidance and invaluable support. He has always been available to discuss ideas and encouraged us to think one step further and continuously raise our work. In addition, we would like to thank our examiner Ida Gremyr for her helpful advice that contributed to setting the scope and direction of this study, and for her useful feedback to refine our report.

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Moa Josephson  
Gothenburg, June 2020



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Anna Nänzén  
Gothenburg, June 2020



# Table of Contents

<b>List of Figures .....</b>	<b>xi</b>
<b>List of Tables.....</b>	<b>xiii</b>
<b>1. Introduction.....</b>	<b>1</b>
1.1. The Service Market Context.....	1
1.2. Theoretical Relevance .....	2
1.3. Practical Relevance.....	3
1.4. Aim and Research Questions .....	4
1.5. Scope .....	5
1.6. Report Disposition.....	5
<b>2. Theoretical Framework.....</b>	<b>7</b>
2.1. Service Market Context.....	7
2.2. Laws of Simplicity .....	8
2.3. Grönroos' Model of Service Quality .....	10
2.4. Value Creation Process According to Service Logic .....	15
2.5. Service-Logic Innovations.....	17
2.6. Synthesis.....	19
<b>3. Method .....</b>	<b>20</b>
3.1. Research Strategy and Approach.....	20
3.2. Research Process.....	21
3.3. Data Collection.....	22
3.3.1. Interviews.....	22
3.3.2. Site Visits.....	26
3.3.3. Literature Study .....	27
3.4. Data Analysis.....	27
3.5. Research Quality.....	28
3.5.1. Trustworthiness.....	28
3.5.2. Authenticity.....	29
3.6. Research Ethics .....	29
<b>4. Empirical Findings.....</b>	<b>31</b>

4.1.	Dealer Simplicity .....	31
4.2.	Context.....	32
4.3.	Process Descriptions.....	36
4.3.1.	Activities in the Order Process.....	36
4.3.2.	Activities in the Return Process.....	40
4.4.	Order Process.....	44
4.5.	Return Process .....	45
4.6.	Functional Quality.....	46
4.6.1.	System Design.....	46
4.6.2.	Information and Interaction.....	48
4.6.3.	Reliability and Trustworthiness.....	50
4.6.4.	Accessibility and Flexibility.....	51
4.6.5.	Attitudes and Behavior.....	53
4.7.	Technical Quality.....	54
4.8.	Image.....	55
4.9.	Value Co-Creation.....	56
<b>5.</b>	<b>Analysis and Discussion.....</b>	<b>59</b>
5.1.	Dealer Simplicity .....	59
5.2.	Order Process.....	60
5.3.	Return Process .....	61
5.4.	Functional Quality.....	63
5.4.1.	System Design.....	63
5.4.2.	Information and Interaction.....	66
5.4.3.	Reliability and Trustworthiness.....	67
5.4.4.	Accessibility and Flexibility.....	68
5.4.5.	Attitudes and Behavior.....	70
5.5.	Technical Quality.....	70
5.6.	Image.....	72
5.7.	Value Co-Creation.....	72
5.8.	Answers to Research Questions .....	75
5.8.1.	RQ1: What characterizes the concept of Dealer Simplicity in the automotive industry context? .....	75

5.8.2.	RQ2: What interactions and activities in the order process and return process are not in line with the Dealer Simplicity concept and thereby degrade the dealer’s ability to add value and serve the end customer? .....	76
5.8.3.	RQ3: How can the interactions and activities in the order process and return process be improved to enhance Dealer Simplicity? .....	76
5.9.	Limitations and Future Research.....	77
<b>6.</b>	<b>Recommendations .....</b>	<b>78</b>
6.1.	Restructuring the Return Process .....	78
6.2.	Improvement Suggestion-Kits .....	80
<b>7.</b>	<b>Conclusions.....</b>	<b>82</b>
	<b>References .....</b>	<b>83</b>
	<b>Appendix A - Interview Template .....</b>	<b>86</b>
	<b>Appendix B – Order Process Activities.....</b>	<b>89</b>
	<b>Appendix C – Return Process Activities .....</b>	<b>91</b>

# List of Figures

Figure 2-1 The ten laws of Simplicity according to Maeda and Antonelli (2006).....	9
Figure 2-2 Illustration of Grönroos Model of Service Quality, adapted from Grönroos (1984) .....	11
Figure 2-3 The seven criteria of good perceived service quality .....	14
Figure 2-4 Illustration of the Value Creation Process according to Service Logic, adapted from Grönroos and Voima (2013).....	17
Figure 2-5 The five areas of literature covered in the theoretical framework.....	19
Figure 3-1 Illustration of the research process.....	21
Figure 4-1 Illustration over the service market supply chain at AutoCo.....	33
Figure 4-2 The three sub processes in the order process.....	36
Figure 4-3 Activities included in the subprocess Identify repair need.....	37
Figure 4-4 Activities included in the subprocess Order repair parts (1).....	38
Figure 4-5 Activities included in the subprocess Order repair parts (2).....	38
Figure 4-6 Activities included in the subprocess Receive repair parts (1).....	39
Figure 4-7 Activities included in the subprocess Receive repair parts (2).....	39
Figure 4-8 Last few steps in the order process .....	40
Figure 4-9 The four sub processes in the return process .....	40
Figure 4-10 Activities included in the subprocess Request return (1).....	41
Figure 4-11 Activities included in the subprocess Request return (2).....	42
Figure 4-12 Activities included in the subprocess Check return approvals.....	42
Figure 4-13 Activities included in the subprocess Prepare and send return (1) .....	43
Figure 4-14 Activities included in the subprocess Prepare and send return (2) .....	43
Figure 4-15 Activities included in the subprocess Check credit .....	44



# List of Tables

Table 1-1 Report disposition of this thesis .....	5
Table 3-1 List of AutoCo employees interviewed in the first round of interviews .....	23
Table 3-2 List of dealers interviewed in the second round of interviews .....	25
Table 3-3 List of dealers visited.....	26
Table 5-1 Improvement suggestions related to System Design .....	65
Table 5-2 Improvement suggestions related to Information and Interaction .....	67
Table 5-3 Improvement suggestions related to Reliability and Trustworthiness .....	68
Table 5-4 Improvement suggestions related to Accessibility and Flexibility .....	69
Table 5-5 Improvement suggestions related to Attitudes and Behavior.....	70
Table 5-6 Improvement suggestions related to Technical Quality .....	72
Table 5-7 Improvement suggestions related to Image .....	72
Table 5-8 Improvement suggestions related to Value Co-Creation.....	75



# 1. Introduction

In this chapter, a brief introduction to the topic and the rationality of this thesis project is presented. Firstly, the context of the service market is introduced, in which this thesis has been conducted. This is followed by theoretical and practical relevance of the research area. Thereafter, the aim and research questions of this thesis are described, followed by the project scope. Finally, the structure of this report is outlined.

## 1.1. The Service Market Context

The activities taking place after the initial sale of a product, also called the service market, can be a major source of revenue and profit for manufacturing companies (Giardelli, Saccani & Songini, 2007). The service market takes place after the initial sale of a product and aims to provide the customers with goods and services necessary for maintaining its functionality (Nawzar & Sheik, 2016). In fact, the number of units sold on the service market can be as high as four to five times larger than for the original business of the Original Equipment Manufacturer (OEM) (Cohen, Agarwal & Agarwal, 2006). Consequently, the opportunities for revenue and profit can be higher in the service market than in the initial sale of the product. Not only do after-sales provide a source of profit, but good after-sales quality can have a positive impact on the sales of the original product, since it is closely linked to customer satisfaction and loyalty. Cohen et al. (2006) claim that this link is extra clear in the automotive industry.

The service market differs from manufacturing in many ways and is much more complex to operate in (Cohen et al., 2006). As opposed to manufacturing, the demand in the service market is perpetually sporadic (Krupp, 1993), varies a lot between products and includes a large number of stock keeping units (SKUs) (Cohen et al., 2006), which make it difficult to capture the great potential that exists. Furthermore, there are high requirements on the service market as the cost of downtime is high (Cohen et al., 2006). Therefore, the supply chain in the service market needs to be flexible and provide quick responses (Cohen et al., 2006). Additionally, the competition in the service market has increased with the transition from product business to service business, as third-party vendors nowadays often offer sales and services that are compatible with OE parts (Cohen et al., 2006). Products sold by the OEM cannot be perfect, and customers do not expect them to be either. However, when a product breaks down, customers expect the OEM to fix the problem smoothly and quickly, which requires OEMs to compete on service experiences instead of solely on prices to succeed in the service market (Cohen et al., 2006).

## 1.2. Theoretical Relevance

In 1999, the importance of simplicity in human-computer interaction design was highlighted by Norman in his book *The Invisible Computer*. Several benefits of simplicity were emphasized, whereas the most profound one within the area of human-computer interaction was that simplicity improves usability. Moreover, Norman (1999) claimed that simplicity is desirable and created through reduction. However, the definition of simplicity is subjective in its focus (Norman, 1999). Further research within the area has examined the importance of simplicity in product design and organizations. In 2007, Schmitt and Perl stated that simple solutions lead to remarkable results in their book *Simple Solutions*. Simplicity is not always easy to achieve but the benefits are always worth the effort (Schmitt & Perl, 2007). Furthermore, Maeda and Antonelli (2006) presented ten laws of simplicity that can be used collectively or individually and applied to any context. Maeda and Antonelli (2006) claim that simplicity not only evokes loyalty for product design but is a key strategic tool for business to handle internal complexities.

The total perceived quality of a service is usually defined as the result of an evaluation process where a comparison between the customer's expectations and the customer's experiences is made (Grönroos, 1984). In the years, multiple frameworks for understanding service quality have been developed, whereof Grönroos' model of service quality introduced in 1984, dividing total perceived quality into technical and functional quality, is one of the most adopted. In 1985, Zeithaml, Berry and Parasuraman introduced the ten determinants of service quality, which later was reduced to five determinants, constituting a base for the SERVQUAL model. The SERVQUAL model is a gap model that can be used to measure how customers perceive service quality and identify discrepancies between the expectations of a service and the actual experiences. In 2000, Grönroos developed a comprehensive list of seven criteria of good perceived service quality that can be used to evaluate service quality.

The framework of Service-dominant logic explaining how value is created and exchanged between different actors was developed by Vargo and Lusch (2004). The general idea of service-dominant logic is that actors in a network exchange competencies to benefit from each other (Vargo & Lusch, 2004). Since its development, numerous studies have elaborated on the idea. Grönroos and Voima (2013) developed the "Value Creation Process according to Service Logic", claiming that there are three processes of resource integration; value facilitation, value-creation and value co-creation, that take place in different spheres; service provider sphere, customer sphere and joint sphere. According to service logic, value co-creation may occur during interactions between the service provider and customer (Grönroos, 2011). Based upon the service-dominant logic and the transition towards service businesses, the idea of innovation has evolved into an interplay between service concepts, delivery systems, client interfaces and technologies (Agarwal et al., 2015).

Prior research has emphasized both potential benefits to gain from Simplicity and the complexity related to achieving Simplicity in product development and organizations. However, little research has been performed within the area of Simplicity in service processes. This research introduces the concept of Dealer Simplicity which describes to what extent a service provider's operations facilitate and simplify their dealers' businesses. The concept of Dealer Simplicity can be applied in other industries than the automotive industry as well, however the main attributes and greatest challenges differ. Therefore, this research can be seen as a starting point for future research, by exploring Dealer Simplicity within the automotive service market context. Moreover, previous research has offered extensive insight into service quality, value co-creation, service innovation and the importance of simplicity in product development. However, no research has established a connection between simplicity and these three research areas. Within this research, service quality, value co-creation and service innovation have been utilized to enhance Simplicity within the service market and made an indication of a possible relationship between the research areas.

### 1.3. Practical Relevance

The case company for this thesis is a manufacturer of heavy commercial vehicles, further referred to as AutoCo. In this section, the information is gathered through personal communication with employees at AutoCo in February 2020. AutoCo is a luxury brand that both sell new vehicles and repair parts to customers. The service market for heavy commercial vehicles is an important business that is characterized by high uncertainty and variation in demand. In the service market context, AutoCo need to offer exceptional service to compete with more low-end brands in the automotive industry, since the product quality of repair parts between different brands are not differentiating enough. Repair parts are quite similar regardless of brand and hence, premium prices can't be motivated solely by superior product quality.

Dealers play a big role in the service market context, as they work as a middleman between AutoCo and the end-customers and have a large influence on which brand that is selected for the repair. AutoCo does not have any direct contact with the end-customers, thus it is of high importance that the dealers keep high service quality to the end customer to maintain great brand recognition for AutoCo. The dealers' purpose is to solve the end customers' problems as smoothly and quickly as possible to maintain uptime of the vehicles. If a vehicle or machine is standing still due to an error, thousands of Swedish crowns are lost each hour. Therefore, it is essential that the right parts are at the right place, time and amount at the point of need. However, the dealers' business is not easy to operate in as it is characterized by low profit margins, high number of SKUs and a complex troubleshooting process. In addition, a considerable amount of the dealers' customers can be drop-in customers with acute need of service, requiring the dealers and the supply chain to be flexible and fast. The end-customers also complicate the dealers' work since they occasionally do not show up for a planned repair service or reschedule

several times. As a consequence, many repair parts are ordered and returned by the dealer unnecessarily, which leads to multiple problems for both the dealers and AutoCo. For instance, over-ordering results in increased transportation and handling costs and extra time spent on excess administration tasks related to double orders and returns.

In order to improve customer satisfaction and loyalty, AutoCo need to support their dealers' businesses in an optimal way. The dealers value an OEM that simplify their work so they can focus on serving and adding value to the end customer. However, many decisions by AutoCo have caused increased complexity for the dealer. For OEMs to become the most attractive supplier, they need to understand service quality from a dealer's perspective to realize what they appreciate. Hence, by supporting and simplifying the dealers' businesses, dealers can place more time and focus on serving the end-customer, which increases the customer satisfaction and loyalty for AutoCo. It can also imply a greater potential for revenue and profit for both the dealers and AutoCo.

## 1.4. Aim and Research Questions

The aim of this master's thesis is to provide improvement suggestions to enhance Dealer Simplicity and thus dealer satisfaction and loyalty. By investigating the AutoCo repair part order process and return process from an end-to-end perspective, which constitute the major intersect between AutoCo and their dealers, challenges and opportunities for Dealer Simplicity can be recognized. To guide this, the following three research questions have been formulated:

- RQ1: What characterizes the concept of Dealer Simplicity in the automotive industry context?
- RQ2: What interactions and activities in the order process and return process are not in line with the Dealer Simplicity concept and thereby degrade the dealer's ability to add value to and serve the end customer?
- RQ3: How can the interactions and activities in the order process and return process be improved to enhance Dealer Simplicity?

Firstly, in order to enhance Dealer Simplicity, a common view of the complex concept needs to be established. The view could include the most important attributes of Dealer Simplicity and preferred way of working. Further, by investigating the current way of working, factors that complicate the order process and return process such as wastes, poor utilization of existing information and non-optimal distribution of responsibilities can be recognized. By combining the findings with a literature review, and an effort-benefit analysis, possible solutions to the identified challenges and obstacles will be suggested to facilitate Dealer Simplicity. These suggested improvements could relate to e.g. new technologies, information flows and ways of working.

## 1.5. Scope

Dealer Simplicity is a complex concept that has different meanings and implications depending on the context. For example, the meaning of Dealer Simplicity can vary between dealers and suppliers in different parts of the world. AutoCo comprise over ten different business areas that operate all over the world. This study has solely focused on one of the company's business areas *Heavy Commercial Vehicles* and its operations on the Swedish service market.

The scope of this project does not include any implementations for AutoCo. The focus has been on providing AutoCo with suggestions on how to improve their service offering to dealers to enhance Dealer Simplicity and prioritize which actions that should be taken. Furthermore, Dealer simplicity influence all interactions between AutoCo and their dealers. However, the scope of this thesis only includes the interactions and activities related to the order process and return process.

## 1.6. Report Disposition

The thesis is structured as seen in Table 1-1.

*Table 1-1 Report disposition of this thesis*

Chapter 2	<b>Theoretical Framework</b> The theoretical framework used in this study is presented. Areas introduced include laws of simplicity, service market context, Grönroos model of service quality, value creation process according to service-logic and service-logic innovations.
Chapter 3	<b>Methodology</b> The methodology of this study is presented, including research strategy, research process, data collection methods, research quality and ethical considerations.
Chapter 4	<b>Empirical Findings</b> The empirical findings of this study are presented. The concept of Dealer Simplicity and the context is introduced, followed by detailed descriptions of the order process and return process. Thereafter, current challenges faced by AutoCo's dealers are presented.
Chapter 5	<b>Analysis and Discussion</b> The empirical findings are analyzed and discussed in relation to the theoretical framework, leading up to suggestions on improvements that enhance Dealer Simplicity. Additionally, the research questions are

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answered, and the limitations of this research are discussed, proposing ideas of interest for future research.

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Chapter 6	Recommendations Implementations for AutoCo to enhance Dealer Simplicity are suggested and solution-kits on different strategic levels are proposed.
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Chapter 7	Conclusions The significant findings of this study are presented.
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## 2. Theoretical Framework

In this chapter, the literature review of this research study is presented. The chapter commences with a brief overview of service market context and laws of simplicity, followed by an explanation of service quality, including Grönroos Model of Service Quality and definitions of the seven criteria of good perceived service quality. Thereafter, the Value Creation Process according to service logic perspective and service-logic innovation are explained.

### 2.1. Service Market Context

The service market is an after-sales market aiming to provide the customers with goods and services necessary for maintaining the functionality of a product (Nawzar & Sheik, 2016). The aftermarket differs from manufacturing in many dimensions, especially in terms of demand, number of products and structure of the supply chain (Cohen, Agarwal & Agarwal, 2006). According to Cohen et al. (2006), it is much more complex to deliver after-sales services than manufacturing products. While the demand in manufacturing is influenced by market strategy and can be stimulated and controlled by marketing and sales programs, the demand in the aftermarket is rather based on necessity and not on desire (Krupp, 1993). Therefore, the demand in the aftermarket is sporadic and does not follow a predictable pattern (Krupp, 1993), which complicates the pre-planning process and forecasting. Further, the demand can vary a lot between different products.

Another aspect that differentiates the aftermarket from the manufacturing supply chain, and adds a dimension of complexity, is the high number of SKUs. Since the aftermarket should cover all of the company's products for a long period of time, the product portfolio is heterogeneous and the number of SKUs can be up to 20 times higher in the aftermarket (Cohen et al., 2006). Keeping all SKUs in stock would not be feasible, and hence the supply chain needs to be flexible (Cohen et al., 2006). According to Cohen et al. (2006) the aftermarket requires quick responses, usually the same or next day. The aftermarket comprises two different product flows – the forward flow from Original Equipment Manufacturer, OEM, to dealer, i.e. the order process and the backward flow from dealer to OEM, i.e. the return process, as opposed to traditional manufacturing that only comprises one flow.

According to Cohen et al. (2006), companies can gain large benefits by focusing on serving the aftermarket. Giardelli, Sacconi and Songini (2007) claim that revenue and profit opportunities are greater in the aftermarket than for the initial sale of the product. Providing high quality in the after-sales services is especially beneficial in industries with long product life cycles, as the opportunities for additional revenues increase with an increasing product life (Cohen et al., 2006). Another fact emphasizing the importance of focusing on the aftermarket is that it is less costly to keep existing customers than to find

new ones (Cohen et al., 2006). Giardelli et al. (2007) claim that serving the aftermarket can work as a driver for customer retention and a way to understand customers better. Cohen et al. (2006) agree with Giardelli (2007) and add that there is a clear link between customer satisfaction, after-sales quality and repurchases in the aftermarket. This correlation is extra clear in the automotive industry context (Cohen et al., 2006). Furthermore, Cohen et al. (2006) state that after-sales services can work as a differentiator, helping companies to understand their customers. This is further confirmed by Giardelli (2007), who claims that after-sales is “one of the few constant connections that customers have with a brand”, and thus have a large impact on the customer satisfaction and loyalty.

Cohen et al. (2006) claim that we have entered the golden age of services, requiring every company to transform into a service business in order to survive. With the transformation from product businesses into service businesses, the potential for profit in the aftermarket has increased. Cohen et al. (2006) claim that the number of units sold on the aftermarket has become more than four to five times larger than the number of units sold in the OEM business. However, the complexity of after-sales services makes it difficult to capture the potential that exists. At the same time, the competition in the aftermarket has increased, as third-party vendors often offer sales and services that are compatible with OE parts (Cohen et al., 2006). Products cannot be perfect, and customers do not expect them to be either. However, when a product breaks down, customers expect the OEM to fix the problem smoothly and quickly (Cohen et al., 2006). Therefore, OEMs need to compete on service experiences instead of solely on prices to succeed in the aftermarket (Cohen et al., 2006).

## 2.2. Laws of Simplicity

Simplicity will gain in importance as complicated technologies keep emerging, according to Maeda and Antonelli (2006). Solutions that simplify the lives of customers will be bought and loved, and more efficient and simpler ways are searched for, to move the economy forward (Maeda & Antonelli, 2006). Maeda and Antonelli present ten laws of Simplicity, see Figure 2-1. The first law, *Reduce*, states that “The simplest way to achieve simplicity is through thoughtful reduction”. The law concerns how to balance simplicity and complexity, as the service or product should be easy to use and at the same time possess all the abilities people wish it to acquire (Maeda & Antonelli, 2006). Generally, people prefer to keep the functionality that exists and do not wish to remove any functionality if they are not forced to (Maeda & Antonelli, 2006). However, the authors argue that people should remove, but carefully.

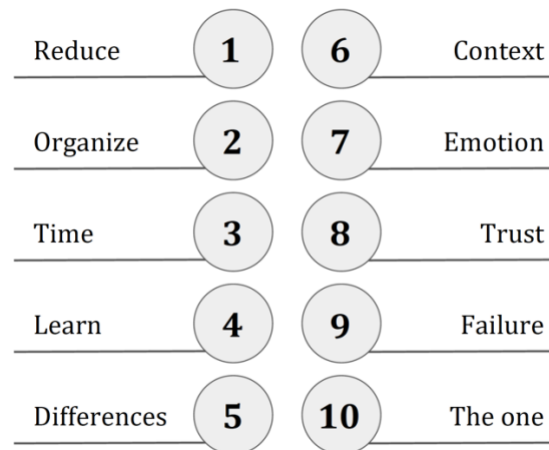


Figure 2-1 The ten laws of Simplicity according to Maeda and Antonelli (2006)

The second law is referred to as *Organize* (Maeda & Antonelli, 2006). Organization is required to successfully control complexity (Maeda & Antonelli, 2006). By deciding what can be grouped together and creating categories, it is possible to reach a higher level of manageability, as the totality can be dealt with at an aggregated level (Maeda & Antonelli, 2006). The authors argue that if the number of categories is considerably less than the organized number of objects, “a system of many appear fewer”. Thus, simplicity is enhanced when objects, functions, concepts and related buttons are categorized and the number of buttons a person needs to press minimized (Maeda & Antonelli, 2006).

The third law, *Time*, connects simplicity to savings in time (Maeda & Antonelli, 2006). Maeda and Antonelli argue that time savings feel like simplicity and in situations where people are required to wait, life appears unnecessarily complex. They claim that some waiting is subtle whilst other waiting is less subtle and more frustrating. Companies as well as customers seek solutions that are less time-consuming and when service providers solve problems rapidly, this efficiency affects our perceived simplicity of the event (Maeda & Antonelli, 2006). Reduction in waiting time leads to time we can use on other things, thus resulting in an implicit benefit (Maeda & Antonelli, 2006).

The fourth law, *Learn*, states that “Knowledge makes everything simpler” (Maeda & Antonelli, 2006). People need to know how to use an object, for instance a screw that has a simple design still require that the person using it know which direction to turn the screwdriver (Maeda & Antonelli, 2006). Maeda and Antonelli explains that this applies for all object, independently how difficult they are to use. People usually feel that they waste time when learning how to do a task and skip the instructions, but that is generally a more time-consuming method than following directions in the manual (Maeda & Antonelli, 2006).

The fifth law, *Differences*, states that “simplicity and complexity need each other” (Maeda & Antonelli, 2006). The authors argue that if complexity did not exist, people would be unable to acknowledge simplicity. Further, they claim that recognizing contrasts make it easier to identify desirable qualities and appreciate these qualities better. Simplicity is

more highlighted and noticed in markets where the complexity is high (Maeda & Antonelli, 2006). Furthermore, as technology increases in complexity, it will be economically advantageous to adopt a strategy of simplicity that help differentiate a product (Maeda & Antonelli, 2006). However, Maeda and Antonelli argue that finding a balance between simplicity and complexity is difficult to accomplish.

The sixth law, *Context*, stresses the importance of not only having a too narrow focus (Maeda & Antonelli, 2006). Focus is not always desirable and positive (Maeda & Antonelli, 2006). Maeda and Antonelli argue that what you initially experience to be of relevance does not necessarily have the highest importance. A holistic view should be the objective, to avoid missing important things during the design process (Maeda & Antonelli, 2006). The seventh law, *Emotion*, argues that “More emotions are better than less” (Maeda & Antonelli, 2006). Emotions should be considered and may lead to the need for adding more, which might feel contradicting to the first law, *Reduce* (Maeda & Antonelli, 2006). However, the authors mention that the key is to decide the right kind of more and that occasionally, emotions require slightly distancing from simplicity and moving closer to complexity.

The eighth law, *Trust*, emphasizes the need for trust within simplicity (Maeda & Antonelli, 2006). Maeda and Antonelli claim that the technology continuously becomes more and more intelligent and the more knowledge a system can acquire about people the less they need to think. This law incorporates how comfortable people are with sharing information to computers and how tolerant they are with possible misjudgments the computer makes about their desires (Maeda & Antonelli, 2006). Simplicity can be gained, but the willingness to trust and issue of privacy need to be considered (Maeda & Antonelli, 2006). Further, the authors argue that the more knowledge people have about the system, the more control they possess. Thus, to enhance simplicity, effort is needed to understand and learn the system and trust must be placed in the system (Maeda & Antonelli, 2006).

The ninth law, *Failure*, claims that “Some things can never be made simple” (Maeda & Antonelli, 2006). Maeda and Antonelli explains that sometimes simplicity can be elusive, but it is not harmful to seek for simplicity. Failed attempts to accomplish simplicity are opportunities to learn from mistakes and utilize gained insights to shift perspective (Maeda & Antonelli, 2006). Finally, in the last and tenth law of simplicity, *The One*, Maeda and Antonelli clarify that “Simplicity is about subtracting the obvious, and adding the meaningful”. The authors argue that simplicity cannot be achieved by only following laws. Therefore, the tenth law was added, claiming that intuition and intellect is also needed.

### 2.3. Grönroos’ Model of Service Quality

The quality of a product or service is whatever the customer perceives it to be (Grönroos, 2015). To improve the service offering, service providers must define the quality in the same way as customers do. Otherwise, they risk investing resources in wrong things

(Grönroos, 2015). Grönroos' model of service quality is a conceptual framework explaining how customers perceive the quality of services, see Figure 2-2. It can be used to understand features of a service and therefore constitutes a base for developing a service offering (Grönroos, 2000). According to Grönroos (1984), the total perceived service quality is the result from an evaluation process where a comparison between the customer's expectations and the customer's experiences is made. Accordingly, perceived service quality depends on both expected service and experienced service (Grönroos, 1984). Grönroos (2015) argues that in order to obtain good perceived service quality, the experienced quality must meet the expected quality of the service (Grönroos, 2015). Hence, even though the experienced quality alone is good, the total perceived quality can be low if the expectations are too high or unrealistic (Grönroos, 2015). Grönroos (2015) emphasizes the importance of keeping customer promises and suggests promising lower levels of service than actual experiences to avoid dissatisfaction. Furthermore, Grönroos (2015) claims that exceeding the expected service quality is more effective when creating customer loyalty and repurchases than a satisfactory perceived service quality. Hence, from a marketing perspective, it is better to under-promise and over-deliver (Grönroos, 2015).

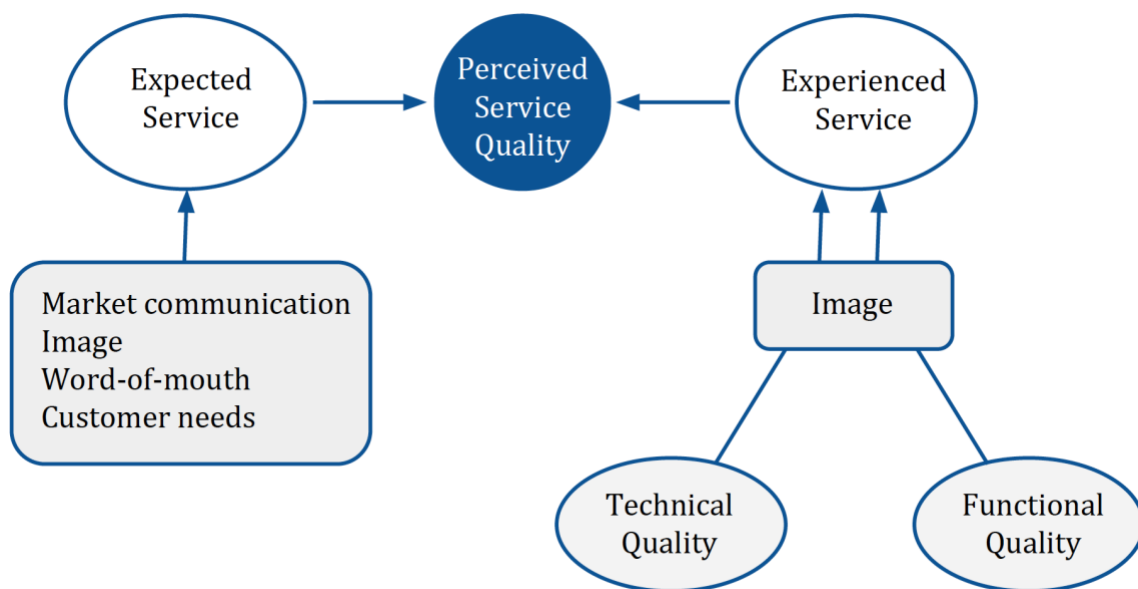


Figure 2-2 Illustration of Grönroos Model of Service Quality, adapted from Grönroos (1984)

The expected quality of a service has a large impact on the customer's perceptions of the service quality (Grönroos, 2015). Grönroos (2015) argues that the customers expected quality of a service can be affected by several factors, both directly and indirectly controlled by the service provider. Factors directly controlled by the service provider include marketing communication such as advertisement, websites and internet communication, and sales campaigns (Grönroos, 2015). However, image, word-of-mouth, social media and public relations are only indirectly controlled by the service provider. Furthermore, customer needs and values also have an impact on the expected service quality. Grönroos (2015) argues that image plays a key role in the customer perception

of service quality and needs to be managed carefully. Grönroos (2015) additionally claims that image is affected by earlier experiences.

Events during the interaction between the service provider and customer can have a large impact on the experienced quality (Grönroos, 2015). The experienced quality of a service can be divided into two dimensions; technical quality and functional quality (Grönroos, 2015). Technical quality can be defined as what the customer receives i.e. the outcome of the service process. In other words, it is the result of the service process and the interactions between the customer and service provider (Grönroos, 1984). Therefore, the technical quality can be assessed rather objectively by the customer. Functional quality on the other hand depends on how the technical quality is transferred to the customer and is accordingly affected by the process (Grönroos, 1984). The functional quality is assessed rather subjectively as opposed to the technical quality (Grönroos, 2015). In the service process, factors such as behaviors, accessibility, attitudes, appearance and employees' performance influence the functional quality (Grönroos, 1984). Additionally, other customers consuming the service at the same time can have both a positive and negative impact on the functional quality and hence how a specific customer perceives the service (Grönroos, 1984).

Moreover, customer's expectations are affected by the corporate image of the service provider, which is vastly dependent on the technical quality and functional quality of their service portfolio (Grönroos, 1984). The corporate image can be viewed as a filter between the technical and functional quality on one side and the total perceived service quality by the customer on the other side (Grönroos, 2015). Grönroos (2015) emphasizes the importance of the corporate image as it can affect the perception of quality in multiple ways. A positive corporate image can compensate a negative experience and consequently still make the customer perceive the service as pleasing (Grönroos, 1984). However, the image will be damaged if mistakes are made often and a negative corporate image might even enlarge the consequences of faults and mistakes (Grönroos, 2015).

Grönroos (2000) argues that in a service context, quality is generally considered as crucial in order to become successful, and for an organization to gain a competitive advantage. However, all too often the technical quality is believed to be the superior quality dimension (Grönroos, 2000). Nowadays, organizations have the ability to achieve almost identical technical quality and provide customers with comparable solutions making it tough to obtain a technical advantage (Grönroos, 2000). Gaining a technical advantage is most likely even more challenging within services than in manufacturing (Grönroos, 2000). Good technical quality by itself will not ensure good perceived service quality (Grönroos, 2000). If the technical quality is perfect but the functional quality is insufficient, the service provider will most probably be unsuccessful (Grönroos, 2000). Grönroos (2000) claims that the technical quality needs to be adequate and at a satisfactory level. However, in situations where several competing organizations have comparable technical quality, the functional quality is decisive for a firm's success

(Grönroos, 2000). Improving the functional quality might increase the offered value for customers significantly and create the required competitive advantage (Grönroos, 2000). Grönroos (2015) highlights the fact that hidden services such as invoicing and complaints handling also have an impact on the perceived service quality. For instance, a claim solved with good results leads to good technical quality. However, if the process is experienced as time-consuming and complicated by the customer, the functional quality is damaged, resulting in a lower total perceived quality (Grönroos, 2015).

According to Zeithaml, Berry and Parasuraman (1985), customers evaluate the quality of services based on the following ten dimensions; reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer and tangibles. These ten dimensions were later reduced to the five determinants; reliability, assurance, tangibles, empathy and responsiveness constituting a base for a model called SERVQUAL (Zeithaml et al., 1985). The SERVQUAL model is a gap model that can be used to measure how customers perceive service quality and identify discrepancies between the expectations of a service and the actual experiences. However, a lot of research studies have been made within the area of service quality, providing different sets of dimensions for evaluating a service (Grönroos, 2000). Grönroos (2000) argues that a condensed but comprehensive list of factors is needed in order for it to be useful for the service provider. Therefore, seven criteria of good perceived service quality have been constructed by Grönroos (2000) based on earlier research. The seven criteria include *Reliability and Trustworthiness*, *Service Recovery*, *Accessibility and Flexibility*, *Attitudes and Behavior*, *Servicescape*, *Professionalism and Skills* and *Reputation and Credibility* (Grönroos, 2000) (see Figure 2-3).

The first criterion, *Reliability and Trustworthiness*, assesses the customer's confidence in the service provider to keep promises and perform according to the customers' best interest, regardless of what has been agreed upon. It means performing the service right the first time at designated time and includes both the service provider's employees and systems (Grönroos, 2000). According to Lovelock and Wright (1999), reliability has been proven to be the most important dimension of quality as a customer will not return to an unreliable service provider. However, it is considered as a challenging dimension to fulfill as customers often are involved in the service production and experience possible mistakes instantly (Lovelock & Wright, 1999). The second criterion, *Service Recovery*, regards the service provider's ability to rapidly and actively take control over the situation and find a new solution in the cases when something unpredictable happens or something goes wrong (Grönroos, 2015).

The third criterion, *Accessibility and Flexibility*, concerns the customer's perception of the accessibility of the service and the service provider's ability to adapt to changing demands and wishes of the customers (Grönroos, 2015). It regards the physical location of the service facility, its operating hours, ease of contact as well as waiting times and operational systems (Grönroos, 2015). The fourth criterion, *Attitudes and Behavior*,

regards how the customers perceive the service employees' concern and interest in helping them and solving their problems in a friendly and spontaneous way (Grönroos, 2015). The fifth criterion, *Servicescape* relates to the customer's perception of the physical surrounding and environment of the service provider (Grönroos, 2015). For instance, if the surroundings contribute to a positive service experience or not.

The sixth criterion, *Professionalism and Skills*, refers to the customer's perception of the service provider's competence that is required to solve their problems and if they manage to do it in a professional way. It includes the knowledge and skills of the service provider's employees, operational systems and physical resources (Grönroos, 2000). The last criterion of good perceived service quality, *Reputation and Credibility*, assesses the customer's perception of the service provider's performance and values. Among others, it concerns if the business can be trusted, offer value for money and stand for good performance and values shared by the customers (Grönroos, 2000).

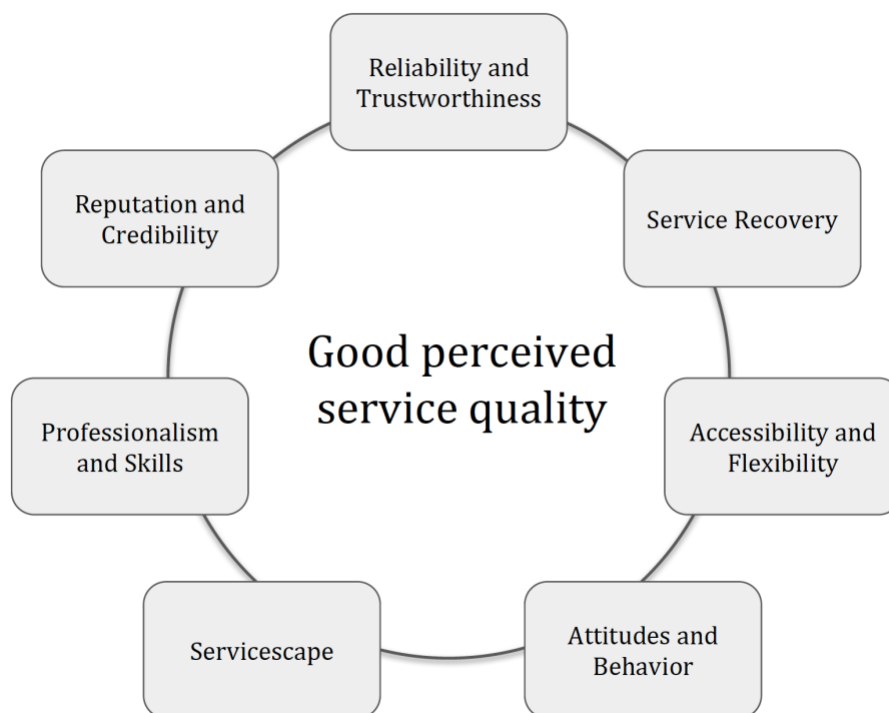


Figure 2-3 The seven criteria of good perceived service quality

The first five criteria, *reliability and trustworthiness*, *service recovery*, *accessibility and flexibility*, *attitudes and behavior* and *servicescape* are process-related and thus related to the functional quality of the service (Grönroos, 2000). Furthermore, *professionalism and skills* is an outcome-based criterion and hence related to the technical quality of the service, while *reputation and credibility* is related to the image of the service firm (Grönroos, 2000). The relevance of the seven criteria for good perceived service quality has been discussed by Grönroos (2000), who argues that the importance of the criteria varies between different industries and that additional dimensions might be needed in some situations. For instance, price could have a large impact on the expected service quality in some industries and therefore be added as a criterion (Grönroos, 2015).

## 2.4. Value Creation Process According to Service Logic

Service providers can suggest value propositions that have potential value to their customers, but service providers themselves are unable to create value for others (Grönroos, 2011). According to Grönroos (2011), real value is created during usage whilst production only generates and leads to potential value. What kind of value and when value occurs during usage is difficult to determine (Grönroos, 2011). Grönroos (2011) argues that it is subtle to grasp when value for a customer is generated since people experience different things as valuable. The value of a car could for instance be the possession, the driving or the physical use that gives the ability to do a certain thing (Grönroos, 2011). Further, value cannot be decided at a discrete event at the end of a process since value is collected or destroyed throughout the service process (Grönroos, 2011).

The value for customers is created by the users during usage rather than during production (Grönroos, 2011). The customers are the users, and hence also the value creators and the ones controlling the value creation process (Grönroos, 2011). Additionally, the customers are integrators of resources and through a self-service process the customers integrate their own resources with resources offered by the service providers (Grönroos, 2011). Multiple value propositions from several firms can be combined with the customer's resources for creating value in use (Skålén, 2016). Further, Grönroos (2011) defines the service providers as value facilitators since they enable the customer to generate value. Skålén (2016) explains that service providers offer value propositions that include various resources, which are used by the customers to create value in use.

The service providers may also become co-creators if they exploit the opportunity to co-create value during direct interactions with the customers (Grönroos, 2011). During interactions, actors have the possibility to influence the flow of each other's processes, since they are participating in a joint process that include both production and usage (Grönroos, 2011). Grönroos (2011) describes the interaction as a "merged coordinated interactive process". When the service providers interact with the customers, they also have the opportunity to acquire knowledge about the customers' value creation process (Skålén, 2016). This knowledge can be utilized to develop the customers' operations and influence the value creation process (Skålén, 2016). Value co-creation could for instance be a host helping the visitors finding their seat or a teacher that describes for a child the difference between two letters (Skålén, 2016). The customer may also become engaged in the service provider's processes and assist it in its own value creation, which is called co-production according to Skålén (2016).

The existence of interactions does not necessarily mean that value co-creation occurs (Grönroos, 2011). The interaction can be illustrated as a platform that enables co-creation of value. However, it is the service provider's actions that decisively determine whether the customer's value creation process is positively or negatively influenced, which result in either value destruction or value co-creation (Grönroos, 2011). Capabilities of the employees that handle the customer interactions are of high importance, as it is essential that the employees manage to identify the customers' needs and requirements correctly (Grönroos, 2011). Homborg, Wieseke and Bornemann (2009) emphasize the importance of frontline employees' abilities to identify a specific customer's hierarchy of needs and its considerable impact on customer satisfaction and customer value.

According to Skålén (2016) the service provider integrates resources both to create value propositions and for innovation. Service providers innovate by integrating new or existing resources into new value propositions or changing already existing value propositions (Skålén, 2016). In the innovation process, customers' input is of high importance since the purpose of innovation is to create new value propositions, that are used by customers to create value in use (Skålén, 2016). Customers may give input regarding existing value propositions, for instance that some might lack a specific resource or that a resource is not integrated in the value proposition in the best possible way (Skålén, 2016). Further, the customers may have ideas for new value propositions such as integrating and linking together resources differently and suggestions for new resources to integrate into current value propositions (Skålén, 2016). Customers can participate in the innovation process both directly and indirectly. Directly participating through innovation groups and indirectly when firms collect their opinions through interactive suggestion boxes or when firms map their customers' processes (Skålén, 2016). Since customers are not limited in the same way as the firm's employees, that have an internal perspective, the customers' ideas are usually more creative and radical but have a greater risk of being unrealistic (Skålén, 2016).

The input from frontline employees also has a key role in the innovation process, since frontline employees interact with the customers and is part of the co-creation process (Skålén, 2016). In other words, they possess the knowledge regarding the customer's value creation process and how the firm's value propositions are used (Skålén, 2016). In addition to production and innovation, marketing and branding is a third process that facilitates the customer's value creation process (Skålén, 2016). Some activities related to marketing and branding aim to explain the existing value propositions and how the customers can use them to create value. In a service context, marketing is generated together with the customers during co-creation (Skålén, 2016). Skålén (2016) explains that this can occur in situations when a customer promotes the firm or when customers help each other use the firm's value propositions to create value. To include customers in the marketing activities, the firm can provide a platform where the customers can

interact or provide customers with their solutions, which they later can promote to other customers (Skålén, 2016).

From a service logic perspective, the resource integration process is when different intangible resources are used to integrate intangible and tangible resources, with the purpose of creating value (Skålén, 2016). To summarize, Skålén (2016) mentions three different processes for resource integration; value facilitation, value-creation and value co-creation (see Figure 2-4). Value facilitation occurs when service providers combine resources into value propositions, which solely takes place in the service provider's private sphere (Skålén, 2016). Value creation occurs when customers combine their own resources with value propositions from various service providers, which solely takes place in the customer's private sphere (Skålén, 2016). Finally, value co-creation occurs when customers and service providers combine resources during interaction, which takes place in a joint sphere (Skålén, 2016). The joint sphere is created when the service provider's private sphere and the customer's private sphere intersect during interactions (Skålén, 2016).

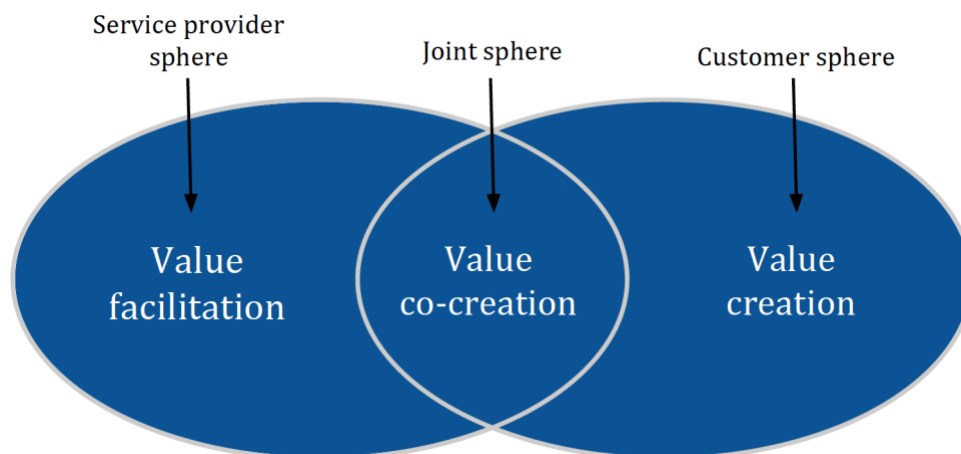


Figure 2-4 Illustration of the Value Creation Process according to Service Logic, adapted from Grönroos and Voima (2013).

## 2.5. Service-Logic Innovations

Agarwal, Selen, Roos and Green (2015) define innovation as “the successful diffusion of new or improved processes or products: be it in the domain of goods, services or a combination thereof”. It is seen as a way to create competitive advantage and sustainable growth (Baunsgaard & Clegg, 2015). The traditional view of innovation has been attribute driven, focusing on the manufacturing perspective (Michel et al., 2008). Innovations emerged from within the firm and were focused around the tangible goods and the features and attributes of the output (Lusch & Nambisan, 2015). However, nowadays new products often contain features of both goods and services. The value perceived by the customer is highly dependent on the service activities that are added to the tangible good (Agarwal et al., 2015). With this ongoing transition from product businesses into service

businesses, companies must understand that any type of innovation requires new ways of thinking, especially in terms of customer thinking, participation and capabilities to create and realize value (Michel et al., 2008). Nowadays, innovation emerges from the joint action of a network of actors, focusing on associated intangible offerings and on the value that is being co-created (Lusch & Nambisan, 2015).

There are big differences between services and products (Lusch & Nambisan, 2015). These differences are easily explained by the characteristics of services and products. The unique characteristics of services are intangibility, heterogeneity, perishability, user participation, simultaneous production and consumption. However, Michel et al. (2008) claim that from a service-logic perspective, no distinction between products and services is needed. Products work as enablers of the service, and offerings as a whole should be considered (Michel et al., 2008). Thus, innovation is defined as “finding new ways of solving customer problems, whether they are fully recognized or completely latent to the customer” (Michel et al., 2008).

According to Agarwal et al. (2015), innovation occurs when value is created, and value is created through a process where the user is benefited or where the customer’s prosperousness increases. It is under the delivery of a service that opportunities for collaboration exist and employees have the possibility to innovate and co-create value with customers (Agarwal et al., 2015). Consequently, it is of high importance not only to consider the features and attributes of the core service, but also the service delivery process (Agarwal et al., 2015). Agarwal et al. (2015) emphasize the importance of having a synergy between customer interface, technological options and other elements to succeed. For instance, if the service provider fails to see that quality is defined by the customer it can lead to poor design, user dissatisfaction and low levels of usage. By interacting with the customer in the service design and delivery process, co-production can develop into co-creation of innovation (Agarwal et al., 2015). In that sense, feedback from the customers and customer involvement is critical for co-design and co-development of services (Agarwal et al., 2015). Furthermore, Allam and Perry (2002) claim that customers can provide input through all stages of the innovation process, which according to Trott (2001) and Hamel and Prahalad (1994) is not easy to do effectively as needs are difficult to express by the customers.

As the service sector encompasses a wide variety of activities and markets, service-logic innovation includes transformations in several aspects (Agarwal et al., 2015). It includes all upstream and downstream activities from how the service is designed and developed to how it is delivered and managed (Agarwal et al., 2015). It is also claimed that service-logic innovation is an interplay between service concepts, delivery systems, client interfaces, and technologies, that often changes the way customers use and view a service (Agarwal et al., 2015). Agarwal and Selen (2009) have a similar view on service-logic innovations and define it as “elevated service offerings” that can include elevations

such as new interfaces, service delivery systems, organizational architectures, marketing propositions or improvements in productivity or performance.

## 2.6. Synthesis

The five major areas included in the theoretical framework of this research were; the service market context, laws of simplicity, service quality, value creation process and service logic innovations (see Figure 2-5). The first area, service market, was studied to understand the characteristics of the service market and the context which the case company and their dealers operate in. Since the service market differs a lot from the manufacturing supply chain, it was considered crucial to understand its characteristics, complexity and importance. Thereafter, simplicity was studied to gain knowledge about the foundation of simplicity and find factors that help to simplify. These factors could be applied to and compared with the order process and return process to simplify these processes, but also to simplify the interactions between OEMs and their dealers.

Furthermore, service quality was reviewed to understand which factors that influence the service quality and how the service quality can be improved. Since Dealer Simplicity is closely related to the service provider's value proposition to customers, understanding how the offering could be developed by improving the perceived service quality was considered relevant. Value creation process according to a service logic was also explored, which explained value creation, value facilitation and value co-creation as well as the customers' and service providers' role in the process. Value co-creation could enhance Dealer Simplicity as service providers positively influence the customer's value creation process (Grönroos, 2011) during co-creation. Finally, the theoretical framework covered service logic innovations, which clarified how service offerings can be developed through innovation.



Figure 2-5 The five areas of literature covered in the theoretical framework

## 3. Method

In this chapter, the methodology used in this study is presented. Firstly, the research strategy and approach is described, followed by a description of the research process and its different phases. Thereafter, the methods used for data collection are presented. Lastly, the quality of the research is evaluated in terms of trustworthiness and authenticity, followed by ethical considerations.

### 3.1. Research Strategy and Approach

Bryman and Bell (2011) explain that research strategies can be of either qualitative or quantitative nature. Qualitative research analyzes individuals' interpretations of their social reality to establish an understanding and compared to a quantitative study, words are emphasized rather than numbers (Bryman & Bell, 2011). In this master's thesis, a qualitative approach was utilized, since the thesis has an explorative characteristic and aims to establish a deeper understanding for how Dealer Simplicity is experienced.

Bryman and Bell (2011) distinguish two different types of research approaches, meaning that it can be of either inductive or deductive nature, or a combination of both. A deductive approach implies that a theory is tested and starts with a hypothesis that is deduced from existing theory, the hypothesis is later confirmed or rejected after a data collection (Bryman & Bell, 2011). An inductive approach on the other hand concentrate on the generation of theories. Firstly, observations are made from which critical findings can be extracted which leads to a theory (Bryman & Bell, 2011). Hammond and Wellington (2012) compare the process of an inductive analysis with an investigation where the relationship between data is established and studied. In comparison to a deductive approach, an inductive approach has more of an explorative nature and is open-ended (Myers, 2020). Bryman and Bell (2011) explain that a deductive approach is frequently used in quantitative studies meanwhile an inductive approach is usually associated with qualitative studies. An inductive approach was deployed in this thesis since the research started with empirical data collection that was followed by identification of relevant theory.

A case study is according to Cooper and Schindler (2011) a powerful research methodology, aiming to obtain multiple perspectives of a single organization, event, process or situation. In a case study, information from the case company is combined with direct observations and interviews, which can be helpful in understanding a particular process (Cooper & Schindler, 2011). In this research, a single case study of a large OEM has been conducted together with a theoretical review, external interviews and site visits due to the complexity of the research subject.

## 3.2. Research Process

The research process of this study adopted an iterative rather than a linear approach. Figure 3-1 below provides an overview on how this research project was conducted, followed by descriptions of what each phase of the research process constituted.

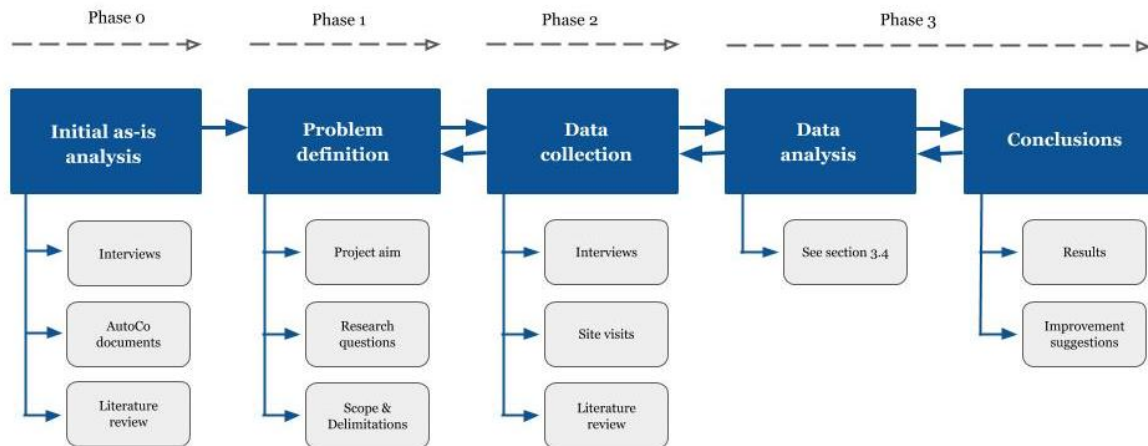


Figure 3-1 Illustration of the research process

During phase 0 the aim was to get familiarized with the case company and the research area. This phase consisted of three separate parts, interviews with AutoCo's employees, documents from the case company and a literature review. The interviews were primarily conducted with AutoCo employees with the ambition to create an understanding for their situation, to what extent Dealer Simplicity is integrated in their way of working and what challenges they are currently experiencing. Moreover, documentations from the case company were studied with the objective to understand the organizational structure, processes, systems, way of working, company concepts and strategies.

During phase 1 of the project, the main focus was on developing a problem definition and gain a deeper understanding of the research problem. After the initial as-is analysis, the project scope was delimited to focus on the order process and the return process, since these processes were expressed to be the most crucial from a Dealer Simplicity perspective. The project aim was formulated and research questions were established. The scope was defined together with the case company supervisors to create a common view of the purpose with this thesis. This phase was considered to be of high importance, to ensure that the thesis dealt with the most critical challenges within the broad context of Dealer Simplicity.

Based upon the findings and project scope set in Phase 1, a majority of the data was collected in Phase 2. The data collection consisted of an empirical study, where the main sources of data was interviews with personnel at AutoCo's dealers and site visits at dealers, and an in-depth literature study. The objective with the site visits was to gain a deeper understanding for the activities and steps in the processes from the dealer's perspective. Moreover, interviews with employees at the dealerships were held to collect

their thoughts and identify the major challenges and improvement areas in the current processes. The literature study elaborated on the initial literature study in Phase 0, and evolved as data was collected.

During Phase 3 the findings were compiled, analyzed and finally, recommendations on improvements and conclusions were drawn. The recommendations were discussed with case company supervisors to understand the required efforts and to prioritize the suggested improvements.

### 3.3. Data Collection

The following sections will describe how the three data collection methods; interviews, site visits and literature review were used and the reasoning behind their selection. In addition to these methods, internal documents provided by the case company were analyzed to understand the context, organizational structure and overall process structures etc.

#### 3.3.1. Interviews

Interviews were conducted iteratively throughout the research project. There are primarily three types of research interviews; unstructured, semi-structured and structured (Gill et al., 2008), whereas the first two are most common for qualitative research (Bryman & Bell, 2015). The conducted interviews can be divided into two rounds with different objectives. In this study, the first round of interviews was of unstructured nature while the second round was semi-structured. Unstructured interviews are usually guided by a list of subjects rather than questions (Gill et al., 2008) and can be useful when exploring new areas that the researcher has limited knowledge within (Bryman & Bell, 2015). Therefore, subjects and some open-ended questions were prepared in advance to prompt a conversation and capture different views of the situation. Furthermore, unstructured interviews and open-ended questions have the advantages of generating personal answers, allowing the interviewee to think freely (Bryman & Bell, 2015), arguing for its relevance for the first round of interviews.

The first round of interviews consisted of 16 interviews with respondents from different departments of AutoCo, with the aim to understand the current situation of the case company, its relationship with dealers and the major challenges they are facing within the scope of Dealer Simplicity. Out of the 16 interviews, nine were carried out through Skype and seven in person. The participants for the first round of interviews can be found in Table 3-1.

Table 3-1 List of AutoCo employees interviewed in the first round of interviews

Interviewee number	Job title	Topics discussed	Length (minutes)
I1	Excellence Leader	Walkthrough of organizational structure and processes, etc.	30
I2	Excellence Leader	Introduction to service market and logistics	30
I3	Excellence Leader and Director Order & Distribution	Review of a value stream mapping of an order process at one of AutoCo's dealers	60
I4	Business Logistics Manager, Commercial Packaging Engineer and Service Center Coordinator	Critical findings from a trainee-period at a dealer. Discussions covered identified challenges and suggestions for master thesis focus areas within Dealer Simplicity	60
I5	Service Center Manager	Mobile Apps in South America and Smart Communication Media	90
I6	Business Analyst	Review of how AutoCo's Service center operates, and introduction to different systems used by the dealers	25
I7	Manager Service Center	Mobile Apps in Asia connected to availability and returns	30
I8	Business Process Dev Order and Return	System and app development in Sweden	25
I9	Manager DIM Process Development	Dealer Simplicity concept and master thesis ideas	60
I10	Manager DIM Process Development	Dealer Simplicity master thesis ideas cont.	65
I11	Head of Innovation and Concepts	Innovation process at AutoCo and introduction to concepts under construction	45

I12	Order and Distribution Excellence Leader	Current return process, its challenges and identified improvement areas	70
I13	Senior Excellence Manager	Intro to VGMS data system and order process from the AutoCo's perspective	45
I14	Order and Distribution Excellence Leader	Introduction to the Order process from AutoCo's perspective and focus areas for improvements	35
I15	Team Manager Supply & Distribution	Introduction to an ongoing supply chain project	55
I16	Senior Project Manager	Introduction to an E2E planning project	60

The second round of interviews was conducted with dealers after the researchers had established an understanding for how the dealers worked with the order process and the return process. The aim with these semi-structured interviews was to understand the dealers' experiences and thoughts on the current processes and relationship with the case company. This round included eight external interviews with personnel responsible for handling the order and return processes at AutoCo's dealerships, see Table 3-2. At this time, the researchers had attained a clearer focus for the thesis and the interviews aimed at gaining more in-depth information on specific areas, making semi-structured a natural choice (Bryman & Bell, 2015). In semi-structured interviews, the researcher generally uses an interview guide consisting of key questions or specific topics to cover (Bryman & Bell, 2015) (Gill et al., 2008). However, it allows the participants to fully express themselves and the interviewers to diverge into different areas depending on the responses (Gill et al., 2008).

The questions in the second round were divided into different areas such as the return process, the order process, the relationship to AutoCo and service quality dimensions. During the interviews, the participants were also asked to exemplify and discuss incidents that the researchers considered to be highly significant for the research. Myers (2020) argues that using a critical incident approach during interviews will provide answers that reveals the importance the interviewee assigns to different events. The interview guide for these interviews can be found in Appendix A. Due to the restraining order to dealers introduced in Week 11 by the case company caused by the COVID-19 virus, five out of eight interviews were conducted through Skype or a phone call instead of face-to-face as planned.

Table 3-2 List of dealers interviewed in the second round of interviews

Dealer	Interviewee number	Job Title	Length (minutes)
A	A1	Foreman, Spare Part Employee	55
B	B1	Spare Part Manager	40
C	C1	Spare Part Manager	80
D	D1	Spare Part Manager	60
	D2	Spare Part Employee	85
E	E1	Spare Part Manager	95
	E2	Support Service Market	40
F	F1	Spare Part Employee, Spare Part Employee	75

Gillham (2008) claims that the quality of interviews will be at risk if they overrun the length of one hour. The interviews performed in this study were therefore designed to last for approximately 45-60 minutes, depending on the interviewee and his or her area of expertise. The first round of interviews lasted for approximately 50 minutes and the second round lasted between 40-95 minutes. Gill et al. (2008) argues that all interviews should be audio recorded and transcribed, as it reduces the risk of bias and makes it possible to re-listen to what was said. Therefore, all interviews were audio recorded with permission of the respondents and notes were taken during the interviews. Only the interviews from the second round were transcribed due to time restrictions. However, a few of the interviews in the first round were partly re-listened to and transcribed. Further, field notes were taken directly after the interviews in the first round which according to Gill et al. (2008) can be helpful during the process of analyzing data. AutoCo employees were responsible for finding respondents for the first- and second round of interviews as they possessed more knowledge about who was relevant for this study than the researchers. At this stage, quickly finding relevant people to conduct interviews with was considered more important than the fact that it could be a risk for bias. The interviews in the first round were held in either Swedish or English, dependent on the preferred language of the participant. All interviews in the second round were held in Swedish. To ensure that gathered data was later interpreted in the same way during the data analysis during the data analysis, both researchers were present at all interviews.

### 3.3.2. Site Visits

Five site visits at AutoCo’s Swedish dealers have been conducted to observe the different activities carried out on site, see Table 3-3. These site visits were conducted with dealers A, B, C, D and F that were interviewed in the second round. According to Cooper and Schindler (2011), gathering data while the event occurs avoids participant filtering and forgetting, increases the understanding of the environmental context and secures information about the processes. To get a comprehensive view on how dealers work, dealers of different sizes, locations and ownerships were visited. The sizes of the dealers varied from S to XL based on the number of used repair parts per year and the dealers were either AutoCo-owned or privately owned. The duration of the site visits varied from approximately 120 to 300 minutes. The aim with the site visits was to obtain in-depth information about the activities performed in the order process and the return process, how information is shared and how dealers experience the current processes. Another aim with the site visits was to verify the information gathered through interviews.

During the site visits, the researchers followed one or two employees at the dealer. The employees at the dealer first described and visualized the steps and activities related to the order process, from when a repair need is identified until the physical repair is performed, including both the physical- and information flow. Thereafter the employees described and visualized the steps and activities related to the return process, from discovering a return need until the credit has been received for the return. During the site visits, the researchers asked clarifying questions to make sure they received a clear picture of the processes. After each site visit, illustrations of the activities required in the order process and the return process were developed and areas for improvement from the dealer’s perspective were identified. The simplified mappings for the five dealers can be found in Appendix A. AutoCo employees were responsible for finding dealers for the site visits based on our specifications as they have established relationships with their dealers and possess knowledge about their sizes and locations.

*Table 3-3 List of dealers visited*

Dealer	Size	AutoCo-owned Yes/No
A	XL	Yes
B	M	Yes
C	S	No
D	M	No
F	L	No

### 3.3.3. Literature Study

Walliman (2010) explains that it is vital to gather and utilize available information and current knowledge within the field of the research through a literature review. The literature study in this thesis is two-folded. The first part of the literature study aimed to collect data related to the research area in order to gain a deeper knowledge about the research field and problem faced by the case company. The literature search was mainly done through Google Scholar and Chalmers Library. In the initial round, keywords such as; aftermarket, service market, service quality, customer loyalty, customer satisfaction, servitization, supplier-dealer relations were used. The second part of the literature study was more in-depth, aiming to identify and support improvements and possible solutions to current challenges within Dealer Simplicity. In the second part, books were also used in the literature study. Keywords such as Grönroos model of service quality, service innovation, service quality dimensions and value co-creation were used to find relevant literature. Further, the snowball sampling technique was used to capture a broader set of research than the keyword search would generate (Lecy & Beatty, 2012).

## 3.4. Data Analysis

Bryman and Bell (2011) state that it is not straightforward how to analyze qualitative data. However, general approaches to qualitative data analysis are often of an iterative nature where the analysis and data collection occur simultaneously (Bryman & Bell, 2011). In this study, a method inspired by the grounded theory was used to guide the analysis of data. The research method grounded theory is beneficial when the researcher seeks to describe and explain in a context-based and process-oriented way a specific organizational phenomenon (Myers, 2020). The main activities and features from grounded theory were included in the process, however they were adjusted to fit this research process. The interviews and site visits were adjusted to the findings discovered in the data analysis.

Coding, as part of grounded theory, generated theories and produced concepts that continuously were challenged by comparing collected data (Bryman & Bell, 2011). As a first step of coding, the transcribed interviews were read by the researchers to get familiar with the data, and a coding structure was developed. Thereafter, two interviews were coded individually by the researchers, by writing keywords in the margin of the transcribed documents. Example of keywords used are “two employees working with the return process”, “DCS difficulties with cancelling orders” “simplicity of the order process”, “intuitiveness of the order process” and “educational support from AutoCo”. The coded interviews were compared and discussed to get a common ground and to ensure uniform coding. The rest of the interviews were coded individually and reviewed by the other researcher afterwards. Secondly, the keywords were analyzed and divided into mutually exclusive themes.

## 3.5. Research Quality

Bryman and Bell (2011) suggests that the quality of qualitative business research can be assessed by the two main criteria *trustworthiness* and *authenticity*. To ensure quality of the research several actions will be taken and different methods will be used. The sections below describe the two criteria and how it was accounted for in this study.

### 3.5.1. Trustworthiness

Trustworthiness includes the four aspects *credibility*, *transferability*, *dependability* and *confirmability*, which originate from the criteria used to evaluate quantitative research (Bryman & Bell, 2015).

*Credibility* refers to what extent the researchers' observations and developed theoretical ideas match (Bryman & Bell, 2015). To ensure credibility in qualitative research, Bryman and Bell (2015) suggest methods such as respondent validation and triangulation. Respondent validation assures validity of individual accounts by providing the participants with the research findings (Bryman & Bell, 2015). The validation can be done either individually for each research participant or collectively to a group of people. In this study, findings and conclusions have continuously been discussed with the case company supervisors for input. Moreover, critical findings from interviews and site visits have been sent individually to the research participants for validation. Triangulation means that more than one source of data is used in a research study which enables cross-checking of data (Bryman & Bell, 2015). In this study, triangulation was used as a validation method as data was collected from multiple sources such as interviews, site visits and previous research.

*Transferability* refers to the extent of which findings of the study can be generalized across social contexts (Bryman & Bell, 2015). Assuring transferability can be difficult in qualitative research as findings tend to be highly dependent on the social context (Bryman & Bell, 2015). However, it is considered an empirical issue, almost impossible to overcome (Bryman & Bell, 2015). Therefore, Bryman and Bell (2015) argue that qualitative researchers should focus on providing a rich description of the studied context instead, leaving the evaluation of transferability to other researchers. Much effort was put on providing a rich description of the researched context in this research study.

*Dependability* connects to what level the researchers' theoretical conclusions can be justified and consequently evaluates the study's reliability (Bryman & Bell, 2011). Procedures are evaluated to assess whether they have been performed in a correct manner or not. Bryman and Bell (2011) suggest the adoption of an auditing method which would require complete documentation of the entire research process with all its phases. In this study, records from the following phases were kept until the end of the research

process; problem formulation, documentation of fieldwork and recordings from interviews. These phases were held accessible for auditing if the need would arise.

*Confirmability* relates to the level of confidence that the findings are based on the participants' words and not influenced of personal values (Bryman & Bell, 2015). All interviews in the second round related to the dealer's thoughts on the current processes were re-listened, transcribed and coded, to make sure that the researchers' interpretations did not influence the findings.

### 3.5.2. Authenticity

While trustworthiness relates to the validity and reliability of the research, authenticity relates to the research's impact on the people and community being researched (Bryman & Bell, 2015). The authenticity criteria can be divided into the five aspects; fairness, ontological-, educative-, catalytic- and tactical authenticity (Bryman & Bell, 2011). Fairness regards how well the viewpoints of different stakeholders are represented in the study (Bryman & Bell, 2015). For instance, the fairness aspect is endangered if only the perceptions of one stakeholder is collected and considered in a study. To mitigate this risk, both internal and external employees at different levels and departments have been interviewed for this thesis work (see Table 3-1). The employees from the case company were responsible for finding interviewees and dealers for the site visits, which could be deemed a risk for bias. However, this risk was considered low as the selected participants included different stakeholders with multiple perspectives.

The second criteria, ontological authenticity, relates to whether or not the research increases the participants' understanding of the social environment (Bryman & Bell, 2015). Educative authenticity regards whether or not the research helps stakeholders understand the perspectives of other stakeholders (Bryman & Bell, 2015). These two criteria were fulfilled by including people from different settings, enabling stakeholders to see the research context from different viewpoints. While catalytic authenticity considers if the research has worked as a catalyst for the stakeholders to change the environment, tactical authenticity regards if the research has empowered stakeholders to make this change happen (Bryman & Bell, 2015). As this study provides suggestions on improvements to the current setting, ideas for future implementations and the effort and benefits gained for implementing these improvements it can work as a catalyst for all stakeholders.

## 3.6. Research Ethics

Research ethics can be divided into the four main areas; *harm to participants*, *lack of informed consent*, *invasion of privacy* and *deception* (Bryman & Bell, 2011). These ethical principles will be considered throughout the thesis work. These four areas are useful when evaluating ethical issues according to Bryman and Bell (2015). The first area in

research ethics, *harm to participants*, includes many aspects whereas physical harm, stress and harm to self-esteem of the participants in the study are a few of them (Bryman & Bell, 2015). However, some researchers also claim that non-participants should be included in the evaluation of risk of harm (Bryman & Bell, 2015). To minimize the risk of harm in this thesis work, information that could be sensitive such as names and details of the participants is kept anonymous for the university supervisors and in this report. The name of the case company is also kept confidential.

*Informed consent* means that participants should be given enough information to make an informed decision about whether they want to take part in the study or not (Bryman & Bell, 2015). Initially, the case company supervisors were responsible for providing a list of possible participants in this study and booking interviews. Therefore, the aspect lack of informed consent is difficult to evaluate by the researchers. However, the respondents always had the possibility to deny a request. To minimize the risk of lack of informed consent in the later rounds of interviews, the respondents were provided with a description of the aim of the study, why they were asked, and how the data would be used before making the decision. Using descriptions are according to Bryman and Bell (2015) a good way to reduce the risk of informed consent.

The third ethical consideration, *invasion of privacy*, concerns what degree of invasion of privacy that can be tolerated (Bryman & Bell, 2015). To minimize this risk, recording of the interviews was only done with approval from the interviewees. Further, the recordings were only listened to by the researchers of this study. The fourth aspect, *deception*, occurs when researchers hides the truth and presents their study as something other than reality (Bryman & Bell, 2015). The case company supervisors reviewed the information before it is published to ensure that no sensitive information is shared and to confirm that the findings are true.

## 4. Empirical Findings

In this chapter, the findings of the empirical study are presented. Firstly, the concept of Dealer Simplicity in the automotive industry context is introduced, followed by detailed descriptions of the activities included in the order process and return process of AutoCo repair parts as seen from the dealers' perspective. Thereafter, general opinions on the order process and return process related to the number of steps and activities, intuitiveness and simplicity expressed by the dealers are presented. Lastly, challenges related to the interactions in the processes are divided into categories adjusted from Grönroos' dimensions of good perceived service quality; servicescape translated to *system design, information and interaction* is added, *reliability and trustworthiness* includes *service recovery, accessibility and flexibility, attitudes and behavior*, professionalism and skills, further denoted *technical quality*, reputation and credibility further denoted *image*, and the aspect of *value co-creation* are presented.

### 4.1. Dealer Simplicity

Dealer Simplicity is a prioritized strategic area within AutoCo's aftermarket logistics function. However, it is not an adopted concept within the industry or in the academic world, but rather a concept invented by AutoCo. The concept of Dealer Simplicity describes to which extent a service provider's operations facilitate their dealers' businesses. As stated by several dealers interviewed in this study, their main objective and one of the keys for success is to make sure that the end-customers' problems are solved in an optimal way. To achieve this objective, it is critical that the dealers have the possibility to put all their focus and effort on serving the end-customers, thus distractions from other activities and processes need to be minimized. Further, the dealers need access to all necessary and value-adding information and ensure repair part availability at point of need in order to help the end-customers in the best possible way.

The opportunities for action identified by AutoCo, to enhance Dealer Simplicity, can be divided into four focus areas; Availability at point of need, Delivery to repair order, Intelligent information sharing and Simplicity in order and return process. Firstly, AutoCo need to ensure that their services and repair parts are available at the right time and place when demand occurs. Secondly, the right repair parts should be delivered in the right amount at repair part need. To accomplish this, pre-planning, maintenance schedules and information regarding required need of repair from orders and connected vehicles should be exploited. Thirdly, continuous information-sharing is required to reach a high level of Dealer Simplicity. Dealers should be provided with necessary information in a convenient manner. Finally, the order process and return process need to be smooth, intuitive and efficient to ensure that AutoCo's dealers do not spend unnecessary time and effort on non-value-adding activities. If ordering and returning

repair parts is less complicated and time-consuming, dealers have the opportunity to focus more on serving the end-customer.

To reach a high level of Dealer Simplicity, all interfaces between the dealer and the service provider, in this case the OEM, should be easy and intuitive from the dealers' perspective. Information transparency, easy interfaces, convenient support and easy processes are prerequisites for Dealer Simplicity. Further, the right repair parts should be available in the right amount, and at the right time and place. As stated by an employee at AutoCo, Dealer Simplicity requires that firms think about new ways of working, reinvent the current ways of working and implement new solutions. All required actions by the dealer should be obvious to them and no training should be necessary. Visibility and information transparency is of high importance and the service provider needs to ensure that dealers are only provided with relevant information when it is needed to simplify their decision making. Previously, many decisions by AutoCo have caused increased complexity for the dealer. Future decisions by AutoCo need to remove or simplify the activities performed by the dealer. Further, an employee argued that "simplicity drives disruptive innovations" and "creates loyalty". In conclusion, to succeed with Dealer Simplicity, service providers need to acquire a new mindset, identify what the customer's problem is and find an easy solution instead of solely focusing on adding new dimensions and expanding existing solutions.

## 4.2. Context

The automotive industry is a tough and complex industry, with a lot of rarities. All heavy commercial vehicles are different and there are approximately 24 000 repair parts for each vehicle. The dealers' businesses are neither the easiest nor most profitable and consequently, the dealers need to focus on their main activities to make sure everything runs as it should. AutoCo's Swedish dealers vary considerably in size, which results in different ways of working. Some of the dealers are owned by AutoCo while others are privately owned. However, the dealers do not view each other as competitors, independently of the dealer's ownership, and it is most beneficial for everyone to help each other.

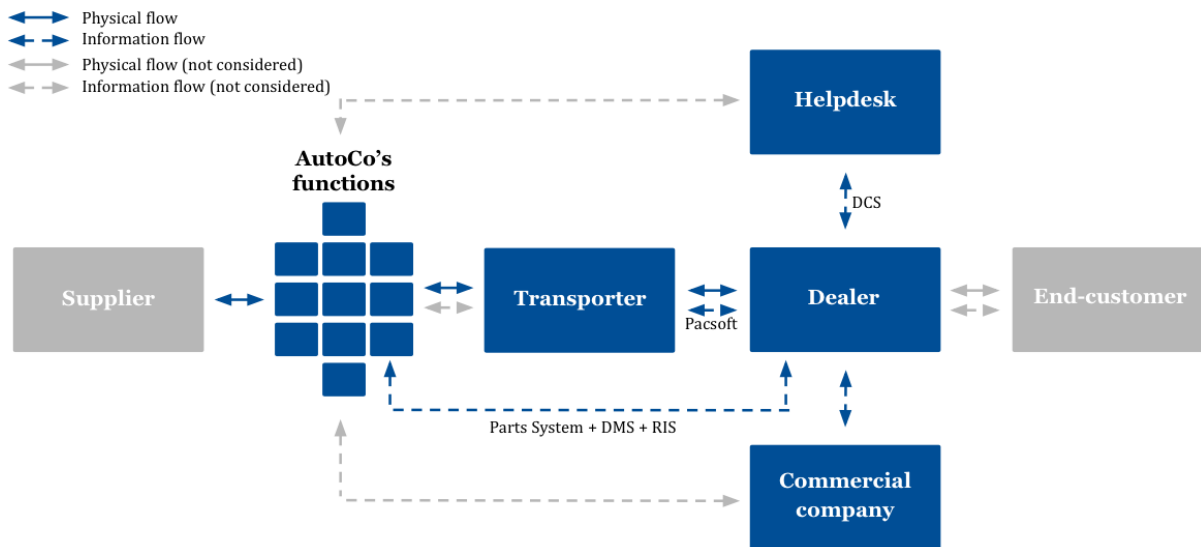


Figure 4-1 Illustration over the service market supply chain at AutoCo

The dealers have the important role as a middleman between AutoCo and the end-customer in the existing supply chain. As the automotive industry is a complex business to operate within, the supply chain is also complex and the physical flow and information flow can appear in several ways. For the purpose of this thesis, a detailed description of the supply chain is not necessary. However, a simplified illustration of the supply chain can be viewed in Figure 4-1, where the scope of this thesis is illustrated in blue. Firstly, AutoCo's suppliers manufacture different parts that are delivered to AutoCo. Secondly, AutoCo's different functions are represented. These functions are responsible for a large range of activities, such as handling orders from dealers, managing inventory levels in the dealers' warehouse, manufacturing and storing parts. Helpdesk and Commercial company are also part of AutoCo's functions. However, they are responsible for handling the major information flows toward the dealers and continuously communicate with other functions within AutoCo as well to receive answers to dealers' questions and solve their problems and therefore illustrated separately from the rest of AutoCo's functions. The third actor, the transporter, manages all transportations between AutoCo and the dealers, both orders and returns. Next actor is the dealer who perform all reparations and operate as a middleman as mentioned above. Finally, in the end of the supply chain the end-customers or owners of vehicles in need of service are found. In this thesis we will exclude the flows to the supplier and end-customer.

The dealers' customers i.e. the end-customers' key desire and concern is to make sure the uptime for their vehicles is as high as possible. Therefore, the end-customers are only interested in having the vehicles' problems fixed when visiting the dealer, and do not care how the problems are fixed. The dealers' objective is accordingly to fix the problems in the fastest most optimal way. To do so, it is critical that the correct repair parts are available at the dealers at point of need. This is especially true when a reparation has been booked and planned for a long time, as it is not an option to call an end-customer and say that the repair parts are not in stock for their planned service. The orders from AutoCo need to be delivered according to the agreement. However, it is not certain that

the right repair parts are available even then, since the end-customers sometimes book a service for what they believe is the problem when in reality the problem is something else. The end-customers also complicate the dealers' work since they occasionally do not show up for their planned repair service or reschedule several times at the last minute.

To operate in the order process and return process, dealers use five different systems; *Parts System*, *Dealer Management System*, *Repair Info System*, *Dealer Communication System* and *Pacsoft*. Between which actors the systems are used are illustrated in Figure 4-1. *Parts System* is AutoCo's own system built in the 80's. The system contains software to handle both the order process and return process. Before, all orders and returns were handled in *Parts System* but nowadays, it is mainly used by the dealers in the return process of AutoCo's repair parts. *Dealer Management System*, further referred to as *DMS*, is a bundled management information system used by all of AutoCo's Swedish dealers. *DMS* contains functionality to manage the needs of finance, sales, parts, inventory and administration of components when running the dealership. The *DMS* system is used by the dealer throughout the order process, and partly in the return process. *DMS* was built upon *Parts System* to facilitate for the dealers. *Repair Info System*, further referred to as *RIS*, is AutoCo's vehicle catalogue containing chassi-unique documentations of all their vehicles. The catalogue is mainly used in the order process to find the correct repair parts for a specific vehicle. *Dealer Communication System*, further referred to as *DCS*, is the system used for communication between dealers and AutoCo's helpdesk. The aim with *DCS* is to have efficient communication, transparency of information, tracking of cases and follow up and measurements of the processes. It provides both service and technical support. *Pacsoft* is the postal company *Postnord*'s system. It is used in the return process to generate barcodes for the packages and book transport for the returns.

There are mainly two types of orders; orders placed by dealers and orders placed by AutoCo. To increase the spare part availability at the dealers, AutoCo and their dealers have a vendor managed inventory (VMI) concept where AutoCo is replenishing the dealers' inventories of the most commonly used repair parts and offer returns with full refund for the repair parts that are not used. However, the dealers are managing their own inventory for all other parts and are responsible for ordering the parts that are needed in time. When dealers want to place an order at AutoCo, they have the alternatives of placing a stock order, day order or so-called Urgency order. The stock order has a lead time of approximately one week whilst a day order usually has the lead time of one day. The Urgency order is intended for the most urgent cases when a vehicle is standing still and cannot be driven. In general, dealers place orders at AutoCo daily, and day orders are the most common due to short lead times. A majority of the dealers have some kind of pre-planning where they review the planned reparations a few days in advance and place orders to ensure repair parts are delivered in time for the planned reparation. If a repair part is available in stock at one of AutoCo's warehouses, only the system *DMS*, including the vehicle catalogue *RIS*, is needed for the order process. However, if the repair part is not available in stock, the communication system *DCS* is needed in addition.

The return process includes the flow of return parts from dealers back to AutoCo. The reasons for a return can be many, such as defects, incorrect or incomplete deliveries, or unused repair parts. Different reasons of returns are denoted with different return codes. As a consequence of the importance of having the right repair parts at the time of repair, many repair parts are ordered unnecessarily and then returned. These returns are denoted code 72 and is the most common reason of return. According to AutoCo, these returns are a waste of resources both in handling the orders, transporting the parts and handling the returns. It may also cause shortages when another dealer is in need of those repair parts, so the consequences of unnecessarily ordered repair parts can be severe.

At most dealers, one or two employees are responsible for returning repair parts and they are the only ones who possess the knowledge of how to operate in the return process. The amount of time dealers spend on the return process varies from week to week and between the dealers as their sizes and routines differ. However, all dealers work with returns every week. On average, the dealers interviewed spend between four hours per week to four hours per day. Some dealers work continuously with the return process throughout the week whilst other dealers have dedicated specific weekdays for returns. At dealers with dedicated days for returns, the activities connected to registration of returns are performed one day, whereas packaging and sending the return parts are performed another day. The reason for splitting up the return process on two days is due to the two days waiting time on return approval from AutoCo.

All dealers have regular contact with helpdesk and a representative from the Commercial company, further referred to as Commercial representative. The Commercial company's main function is sales, they aim to sell as many vehicles and repair parts as possible and provide support to their dealers. Helpdesk is a team of employees that provide support to the dealers with questions related to logistics and repair part orders. For special cases or questions, the dealers also contact a few other employees at AutoCo. These special cases can for instance occur when helpdesk or the Commercial representative are unable to solve the problem or in situations when the dealers wish to speed up the handling of the case or emphasize the case's importance.

Dealers contact AutoCo for all sorts of things in the order process and the return process. Typical situations are when they have questions regarding repair part availability, prices and return codes, or when they need help with orders, correcting mistakes and reporting AutoCo's mistakes. In general, the dealers contact helpdesk first and if they are unable to solve their problem or answer, the Commercial representative is contacted. In special cases, the Commercial representative can be contacted first. How frequently the dealers are in contact with helpdesk and the Commercial representative differs between the interviewed dealers. Some dealers have daily contact with helpdesk while others have weekly contact. The contact with the Commercial representative varies between one to a few times per month for a few dealers whilst other dealers only have contact once every

second month. Dealers contact helpdesk by creating a DCS-case. When the case is urgent, and an answer is required quickly, a few interviewed dealers claimed they firstly create a DCS-case and then calls in to helpdesk.

General information from AutoCo to their dealers are gathered and spread through AutoCo's dealer portal. The dealers need to login and navigate through the portal to access the information. AutoCo also send out individual information in form of a report called PARTS-report to the dealers every week. The report consists of a 28-days list and a follow up of dealer performance indicators. The 28-days list includes all repair parts ordered from one single dealer within the last 42 days. If these repair parts are not used, they need to be returned within 42 days in order to get full refund. Among many others, the follow up of dealer performance indicators includes graphs over sales and stock value, stock health, turnover rate, service index etc. Deviations from target can be identified by AutoCo or the dealer. Furthermore, AutoCo arrange an annual repair part conference for their dealers. During the conferences, AutoCo communicate information to the dealers concerning for instance, AutoCo's strategic objectives and future company goals. The conferences also include discussions with the dealers and the dealers get the opportunity to meet and build relationships with other dealers.

### 4.3. Process Descriptions

In the following section, detailed descriptions of the repair part order process and return process at AutoCo are provided. Firstly, the activities required to place an order are presented, followed by the activities required to return a repair part for the most common reason for return, code 72, are presented.

#### 4.3.1. Activities in the Order Process

The order process includes all activities carried out from the point where a repair need is identified by the dealer to the point where the repair part is in the hands of the mechanic ready to perform the repair service. The order process as seen from the dealer's perspective can be divided into three sub processes, see Figure 4-2; 1. Identify repair need, 2. Order repair parts and 3. Receive repair parts. A comprehensive illustration of the activities in the order process can be found in Appendix B.

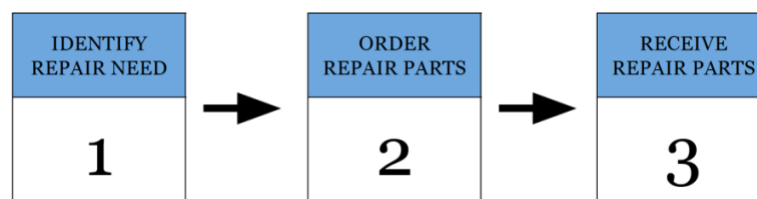


Figure 4-2 The three sub processes in the order process

## 1. Identify Repair Need

The order process is initiated when a customer calls to book a service or drops in at the dealer, see Figure 4-3. A work order for the specific service is created by an employee at the dealer’s customer reception in the DMS System. A diagnosis is performed on the vehicle, either physically at the dealer by a mechanic or verbally over the phone and documented in the work order. Repair parts needed to perform the service are identified from the diagnosis and listed in the work order. AutoCo’s repair info system RIS includes documentations of all their vehicles and can be used to find the right repair parts for the specific vehicle. Vehicles that are from the same vehicle model might not have the same repair parts therefore the dealer needs documentation of current repair parts on the specific chassis-unique vehicle. The pages for the specific vehicle can be reached by pressing on the “book” symbol in the work order. The dealer can see pictures of the vehicle and click their way to the right repair part and paste it into the work order.

1.1 IDENTIFY REPAIR NEED	1.2 CREATE WORK ORDER & PERFORM DIAGNOSIS	1.3 DOCUMENT DIAGNOSIS	1.4 TRANSLATE DIAGNOSIS TO REPAIR PART NEED
Customer calls to book service or drops in to customer reception at the dealer.	Create a work order in DMS. The customer describes experienced problem. If the vehicle is at dealer a mechanic performs a diagnosis as well.	In the work order, a detailed description of the problem is documented.	Identify what articles are needed for the repair. Click on direct link in DMS to use RIS as a tool. Find necessary repair parts and paste them into work order.

Figure 4-3 Activities included in the subprocess Identify repair need

## 2. Order Repair Parts

The second step in the order process is Order repair parts sub-process, see Figure 4-4 and 4-5. The work order now contains a list of repair parts needed to perform the service. Each repair part in the list has a symbol on its right side representing the inventory status of the repair part. Green bend indicates that the repair part is available in stock at the dealer’s warehouse while a red cross indicates that the repair part is not in stock and hence, requires some action. Before ordering a repair part, the dealer must decide what warehouse to order from by reviewing the repair part availability and stock level in each warehouse. By clicking on the “paper and nut” symbol, the system will view the number of ordered repair parts, in-house inventory, reserved repair parts and in-coming repair parts. Further, the inventory status of the repair part for AutoCo’s European central warehouse, Swedish support warehouse and possibly nearby affiliates can also be viewed here. The repair parts that will be ordered from the same warehouse are marked and ordered by right-clicking and choosing the desired transport mode; Flight central warehouse, Road central warehouse or Swedish support warehouse. Pressing “Order chosen parts - AutoCo” will confirm the order for the marked repair parts and their symbols in the work order will switch from red to yellow, indicating that they have been

ordered. Repair parts available at nearby affiliates can also be ordered directly from the work order, instead of through AutoCo. All repair parts in the work order should now have a green or a yellow bend on their right side if ordered correctly. If any of the repair parts was not available in the central warehouse, the Swedish support warehouse or a nearby affiliate, the availability can be checked in the Parts System, or asked for through a DCS-case. For the most urgent cases when a repair part is needed instantly, a case for an Urgency order can be created, also through DCS.

<p><b>2.1</b></p> <p>REVIEW STATUS OF REPAIR PARTS IN WORK ORDER</p>	<p><b>2.2</b></p> <p>CHECK REPAIR PARTS AVAILABILITY</p>	<p><b>2.3</b></p> <p>SELECT WHERE AND HOW TO SOURCE REPAIR PART</p>	<p><b>2.4</b></p> <p>CONFIRM ORDER</p>	<p><b>2.5</b></p> <p>REVIEW STATUS OF REPAIR PARTS IN WORK ORDER (AGAIN)</p>	<p><b>2.6</b></p> <p>CHECK REPAIR PARTS AVAILABILITY (OTHER)</p>
<p>Review list of articles in work order. Symbols identify the stock status of the article. Green bend = in stock. Red cross = not in stock, requires some action.</p>	<p>Press "Paper and nut" symbol to check repair part availability in-house, central warehouse, support warehouse and nearby affiliates.</p>	<p>Mark articles to order with same delivery type. Right click and choose; 1. Flight central warehouse, 2. Road central warehouse or 3. Swedish support warehouse</p>	<p>Press "Create and Send Order" to release order.</p>	<p>Review the list of articles in work order again. Green bend = in stock. Yellow bend = ordered repair part. Red cross = not in stock, requires DCS-case.</p>	<p>If article is not available in central warehouse, Swedish support warehouse or nearby affiliates, check availability in Parts system, or ask for availability through DCS.</p>

Figure 4-4 Activities included in the subprocess Order repair parts (1)

The availability of repair parts not in stock in AutoCo's central warehouse or the support warehouse can be asked for through DCS, which AutoCo's helpdesk manages, see Figure 4-5. The dealer opens the application, enters VIN-number of the vehicle, the repair part, and chooses type of case (1); i. Availability/Question about repair part, ii. Special and iii. Urgency order, and type of case (2). Additional information can be written in a text box. Once the case is confirmed, it must be monitored manually for any updates. No notifications are given if the dealer has not activated mail-notifications.

<p>For green articles go to step 3.9 For yellow articles go to step 3.1 For red articles continue with step 2.7</p>	<p><b>2.7</b></p> <p>OPEN DCS &amp; CREATE CASE</p>	<p><b>2.8</b></p> <p>SPECIFY TYPE OF CASE</p>	<p><b>2.9</b></p> <p>MONITOR CASE</p>
	<p>Open DCS and enter VIN-number.</p>	<p>Choose type of case. (Choose "Emergency order" for Urgency order). Choose delivery: 1. Pickup between dealers 2. Taxi 3. Urgency order</p>	<p>Monitor DCS case to see any updates. There are no notifications, needs to be done manually.</p>

Figure 4-5 Activities included in the subprocess Order repair parts (2)

### 3. Receive Repair Parts

The third sub process in the order process is Receive repair parts, see Figure 4-6 and 4-7. Day orders placed before the cut-off at 5PM are delivered inside of the dealer's warehouse during the night or before 7AM the day after. Personnel at the dealer receives the delivery in the morning, logs into the DMS system and chooses Goods delivery then AutoCo Parts to view a list of expected deliveries. The order and article numbers on each delivery is compared with the order and article numbers in DMS to see that all repair parts have been received. The personnel mark the received deliveries, right clicks and presses "Finish" to confirm the delivery. A delivery confirmation report is automatically printed for each order. A pick list can be generated by marking the deliveries, right clicking and pressing "Pick list". The received repair parts are sorted and placed in the storage location or in a shelf for repair parts reserved for the workshop.

<b>3.1</b> RECEIVE DELIVERY	<b>3.2</b> OPEN GOODS RECEPTION IN DMS	<b>3.3</b> COMPARE ORDER & ARTICLE NOS ON DELIVERY WITH ORDER NO IN DMS	<b>3.4</b> CONFIRM DELIVERY	<b>3.5</b> GENERATE PICK LIST
Deliveries are dropped off inside of the warehouse in the morning. Move the deliveries from the place where it been dropped of.	Open DMS and press "Goods reception" to view list of suppliers and expected/ planned deliveries.	Compare the order- and article nos on each delivery with the order- and article nos in DMS to check that all articles have been delivered.	Right click on every article that matches the order. Press "Finish" to confirm delivery. A delivery confirmation report is automatically printed per order.	Mark the delivered deliveries in DMS and press "Pick list" to generate a pick list.

Figure 4-6 Activities included in the subprocess Receive repair parts (1)

<b>3.6</b> SORT ARTICLES BY PICK LIST	<b>3.7</b> PLACE PICK LIST WITH RELATED ARTICLES IN SHELF	<b>3.8</b> CREATE DCS CASE FOR NOT DELIVERED REPAIR PARTS	<b>3.9</b> PREPARE REPAIR/PACK REPAIR PARTS
Pick up pick list and go to the delivered articles. Sort the delivered articles and place them on the right pick list.	Place both the pick lists and the related articles in a shelf.	Repair parts that are not delivered requires DCS-cases.	If all articles = Green & repair is confirmed, pack the repair parts from stock. Packed articles are marked with a cart in DMS.

Figure 4-7 Activities included in the subprocess Receive repair parts (2)

The final activities in the order process is illustrated in Figure 4-8. When the planned reparation is to be performed, all repair parts are collected and transported to the correct repair station at the workshop. At the repair station the mechanic receive the repair parts and performs the service. Furthermore, the invoice to AutoCo is paid. For unused repair parts that were not needed for the reparation a return is initiated to send back the repair parts and receive a refund.

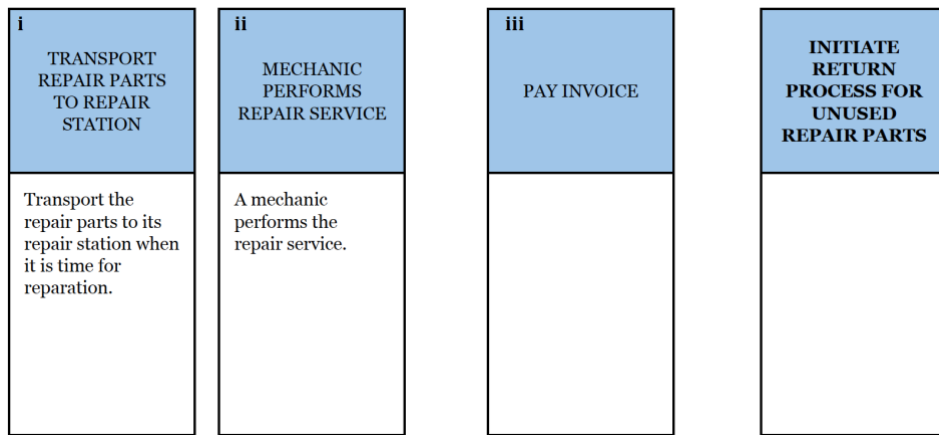


Figure 4-8 Last few steps in the order process

### 4.3.2. Activities in the Return Process

The return process can be seen as a continuation of the order process in the case when the received repair part is not used by the mechanic, damaged or for other reasons. The return process includes all activities carried out from the point where a return need is identified to the point where credit has been received for the returned repair part. Unlike the order process, large variations in the handling of the return processes has been identified for different dealers. However, a generalized illustration of the return process has been developed. The return process of AutoCo’s repair parts looks different for the various reasons of the return, denoted with different codes. All return codes, except code 72, require a DCS-case before the illustrated process of code 72. Thereafter, all return codes follows the same process and require the same activities. This common process for all return codes is described below. The return process as seen from the dealer’s perspective can be divided into four major sub-processes; 1. Request return, 2. Check return approval, 3. Prepare and send return and 4. Check credit, see Figure 4-9. A comprehensive illustration of the activities in the return process can be found in Appendix C.

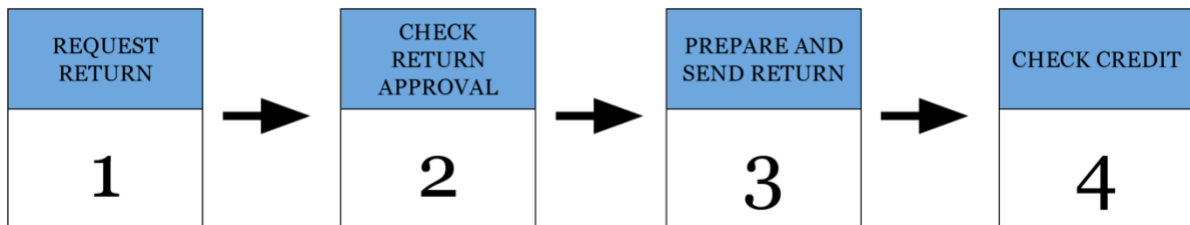


Figure 4-9 The four sub processes in the return process

#### 1. Request Return

The return process for code 72 can be initiated by several reasons; a repair part is not used by the mechanic, the customer does not show up for the booked repair service or the repair part has been ordered twice by the dealer to make sure that it would be delivered in time for the repair, see Figure 4-10. In the first case when a repair part is not

used by a mechanic, the mechanic leaves the unused repair part to the person responsible for returns in the office, who puts the repair part on a special returns shelf in the warehouse. The person responsible for returns also checks the so-called 28-days list to ensure that repair parts ordered for customer reparations where the customer never showed up or double-orders are returned. The 28-days list is provided by AutoCo, and lists all repair part that have been ordered manually by the dealer during the last 28 days, to see if any repair parts need to be returned.

The article numbers of all return parts are written down on a list and brought to a computer. Invoice numbers for the return parts are retrieved from Parts System by pressing D04, entering the article number, pressing enter and finding the specific invoice number for that order in a list of all orders that include that article number. The correct invoice number is written down on the list of return parts. A discrepancy is created in Parts System by pressing C00 and C01, entering invoice number, article number, quantity and return code, see Figure 4-11. One discrepancy report is created per invoice number. The discrepancies are confirmed by first pressing F5 to see a summary of the created discrepancies and then pressing F6 for each discrepancy. Reports of the discrepancies are also printed in this view in Parts System. The stock balance is adjusted in the DMS system by searching for the article number of the repair part, right clicking, pressing balance adjustment, inserting the discrepancy report number as reason for adjustment and pressing confirm. A confirmation report of the stock balance adjustment is automatically printed. The discrepancy reports and stock balance adjustment reports are placed in a folder for returns.

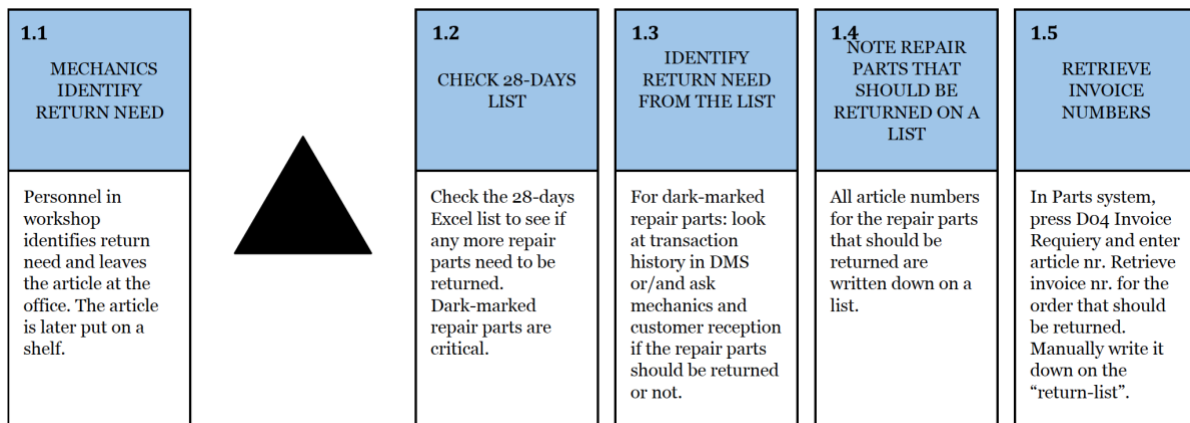


Figure 4-10 Activities included in the subprocess Request return (1)

<b>1.6</b>  CREATE DISCREPANCIES	<b>1.7</b>  PRINT DISCREPANCY REPORTS	<b>1.8</b>  CONFIRM DISCREPANCIES	<b>1.9</b>  ADJUST STOCK BALANCE	<b>1.10</b>  PRINT STOCK BALANCE REPORT	<b>1.11</b>  PLACE REPORTS IN FOLDER
In Parts system, press COO and then CO1 to create discrepancy. Enter name, invoice no, article no, quantity and reason for return (code 72). One discrepancy per invoice no.	Press F5 to view summary of all created discrepancies. Print discrepancy reports, one report for each invoice no.	Enter F6 to confirm the discrepancy. Repeat for each discrepancy.	Open DMS and insert article no. Remove the article and note the discrepancy report no as the reason for the adjustment.	Confirm stock balance adjustment. A report for each adjustment is printed.	Place the discrepancy reports and stock balance adjustment reports in folder.

Figure 4-11 Activities included in the subprocess Request return (2)

## 2. Check Return Approval

The second step in the return process is Check return approval sub-process, see Figure 4-12. Approximately two days after the discrepancy has been created and sent to AutoCo, a return approval for the return part/parts is received. In Parts System, a list of all received return approvals from AutoCo can be viewed by pressing C01 followed by 3. If all return parts registered on a discrepancy are going to the same return destination one return approval is received. Otherwise one return approval per destination, the central warehouse or the support warehouse, is received. The return approvals are reviewed by marking all rows in the list with one and pressing enter. Two copies of each return approval are printed, one to be kept at the dealer and one to be placed in the package together with the return parts sent to AutoCo. The list of return approvals includes return approval number, discrepancy number, quantity and return code. The number of digits in the return approval number indicates return destination for the return part/parts.

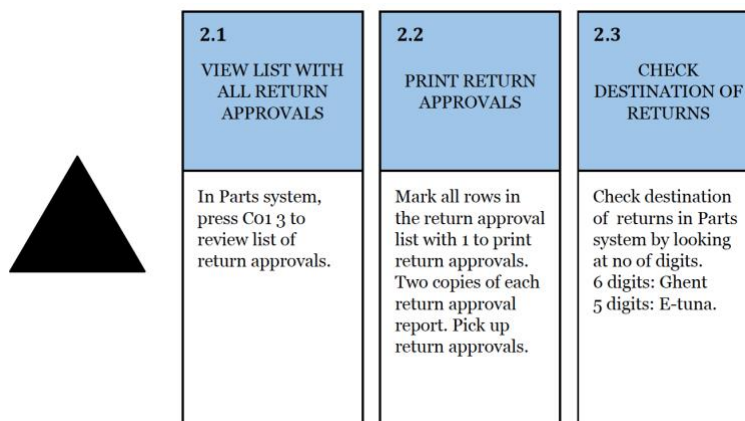


Figure 4-12 Activities included in the subprocess Check return approvals

## 3. Prepare and Send Return

The third step in the return process is Prepare and send return sub-process, see Figure 4-13 and 4-14. The printed discrepancy reports and/or return approvals are brought to the returns shelf in the warehouse and matched together with the return parts. Boxes for the returns are found and any old labels are removed. Returns with the same destination

can be packaged together. The return parts are placed in the boxes, depending on the destination, together with its discrepancy reports and/or return approvals, and the package is sealed. The return is registered in the Postnord system called Pacsoft and a barcode for the transportation is generated by logging in, pressing shipping documents, return goods, filling in approximate weight of the package, type of content, number of pallets and pallet type. If necessary, transportation for the returns are also booked in the Postnord system. A pack flag for each destination is downloaded from AutoCo's dealer portal by pressing service market, original parts, logistics, returns to destination X, and printed. Information about the district number, dealer number, date, approximate weight, case number and return approval numbers for the return parts in the package is written manually on the pack flags. The barcode and pack flag are attached to the package and the packages are moved to the return area for pickup. Prepared returns are confirmed in Parts System by pressing F9 for each return approval. Package IDs stated on the barcodes for the packages is manually written down on one of the reports placed in the returns folder. The package ID makes it possible to track the package if needed.

<b>3.1</b> BRING REPORT/ REPORTS TO WAREHOUSE	<b>3.2</b> MATCH RETURN PARTS WITH REPORTS	<b>3.3</b> FIND BOX	<b>3.4</b> PACK RETURN PARTS AND REPORTS	<b>3.5</b> SEAL THE PACKAGE	<b>3.6</b> REGISTER RETURN IN POSTNORD	<b>3.7</b> BOOK TRANSPORT
Bring a copy of the discrepancy reports and/or return approval reports from the office to the return articles in the warehouse.	Match return articles in shelf with the correct discrepancy report and/or return approval.	Find a box and remove any old labels.	Put return parts in the box together with related discrepancy reports and/or return approvals. Returns with the same destination can be packaged together.	Seal the package.	Go back to office and log in to Pacsoft. Fill in approximate weight, type of content (return approval nr), nr of pallets & pallet type to receive a barcode.	Book transport in Postnord to pick up the return.

Figure 4-13 Activities included in the subprocess Prepare and send return (1)

<b>3.8</b> PRINT/ DOWNLOAD/ PICK UP PACK FLAG	<b>3.9</b> BRING PACK FLAG & BARCODE TO PACKAGE	<b>3.10</b> FILL IN PACK FLAG	<b>3.11</b> ATTACH BARCODE AND PACK FLAG TO PACKAGE	<b>3.12</b> MOVE PACKAGE TO RETURN AREA	<b>3.13</b> CONFIRM RETURNS	<b>3.14</b> WRITE DOWN PACKAGE ID ON OPTIONAL REPORT
Download pack flag by logging in to the dealer portal and choose pack flag for the specific receiver. Print pack flag.	Bring pack flag and barcode to return package.	Fill in district no, dealer no, date, approximate weight, case number and return approval no/nos on the pack flag manually.	Attach the barcode to the package at optional place. Attach the pack flag to the package.	Move package to return area to be picked up.	Log in to Parts system and press F9 to confirm returns.	Write down received package ID from Pacsoft system on optional report in the folder.

Figure 4-14 Activities included in the subprocess Prepare and send return (2)

#### 4. Check Credit

The last step in the return process is the Check credit sub-process, see Figure 4-15. To check if credit has been received for the returned repair parts the dealer need to login to SAP since no notification is given automatically. If credit has been received the related reports are removed from the returns folder and placed further back in the folder or

thrown away. An account and receiver for the credit note is selected in the SAP system so the money can be deposited. The remaining reports in the folder are checked occasionally to make sure there is no returns remaining, for which credit has not yet been received. If the dealer discovers a non-credited return, a DCS case is created for the missing credit and reason of return rejection.

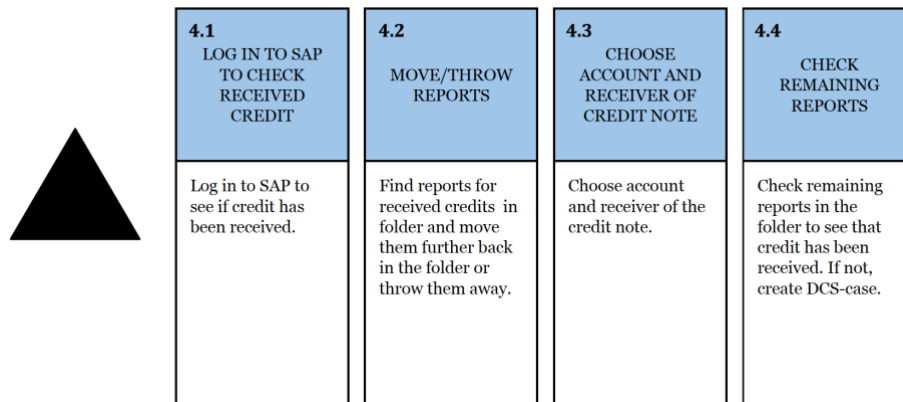


Figure 4-15 Activities included in the subprocess Check credit

## 4.4. Order Process

All dealers were positive about the order process and claimed that it works well as it is designed today. The process of ordering a repair part (Subprocess 2 in the order process, see Figure 4-3 and 4-4) is very basic, smooth and simple. According to respondent D2 “It is only to register the repair part in the work order, one click to order the repair part and then it is delivered”. E1 and E2 also mentioned that the order process has become better and better and that there are less errors now than before. One already implemented improvement, that was mentioned positively by several dealers, was the reduction from multiple systems to only one system (DMS). Furthermore, no specific step in the order process was considered as more or less complicated than another. As long as the order process follows the actual process and the repair part is available in stock, C1 claimed that there are no problems. However, all dealers expressed that the special cases, when a repair part is not available in stock, are complex and very time-consuming. In those cases, the dealer must create a DCS-case to ask for availability or place an Urgency order, monitor the case, wait for answer and chase helpdesk for an answer.

Dealers expressed similar opinions regarding how easy the order process is to learn. A1, C1, D1, D2 and E1 believed that the order process is easy to learn by new employees but claimed that some guidance is needed to place an order for the first time. B2 mentioned that “everyone can order a repair part, but not everyone can order it the right way”, referring to the multiple delivery types in step 2.3 see Figure 4-3 and different order categories. According to A1, the only thing that possibly could be experienced as difficult in the order process is to know where the cut-off times are and to decide which warehouse to order from. After a few years however, the order process is “sitting in the

spinal cord” according to B1, D2, E1, E2, F1. Further, B1 stated that “Everything is not obvious, but you know where to look after working with it for a while”.

When the respondents were asked to rate the simplicity of the order process on a scale from one to ten, responses between five and ten were received. A1 rated it five while D1, D2, E1 and E2 rated it seven to eight out of ten. Both B1 and C1 claimed that it is definitely a ten out of ten when the repair parts are available in a warehouse. However, when a repair part is not available, the simplicity decreases to six or seven out of ten. In terms of intuitiveness, the dealers had different opinions about the order process. Two respondents A1 and F1 rated the intuitiveness as two and four while B1 and D2 rated it seven and eight out of ten.

Overall, the dealers were satisfied with the current order process. Six dealers (A1, B1, D1, D2, E2 and F2) rated their satisfaction as 4 out of 5, with the reasoning that there is still potential for improvement that would make the process even better. C1 rated it as 5 “very satisfied” and claimed that “It is not possible to make the order process that much easier. When the repair parts can be taken from their shelf and sent here, there are no problems”.

## 4.5. Return Process

All dealers agreed that the return process is manageable but not good. According to them, it is complicated (D1, D2), heavy worked and time-consuming (B1, C1). B1, C1, D1, E1 and F1 compared the return process with the order process and concluded that the order process is much simpler and more intuitive. According to all dealers, many steps and systems are required to return a repair part, and even more steps are required if the return is rejected or a mistake is made during the process. F1 claimed that “There are terribly many steps for little value” and D2 questioned the number of steps “Is it really necessary to have so many steps?”. Additionally, F1 mentioned that a total of five systems are used in the return process and without any of the systems, it is not possible to return a repair part. All dealers argued that each step individually is easy. However, the entire process with all its steps and systems combined is complicated. Further, no specific step was perceived as more or less complicated than any other. B1 stated that “Nothing is very complicated in the current process, just the whole damn process”, D2 also stated that “it is the whole chain that is complicated, not a specific step”. F1 claimed that a good structure for the return process is needed for it to be easy. Still, D1 argued that “nothing in the return process is smooth”.

Altogether the small steps such as printing reports, write down article numbers and create discrepancies take time according to D1, D2 and F1. All dealers agreed that a lot of time is put on the return process and that a reduction of steps would be beneficial. F1 claimed that code 72-returns “just take time”. However, C1 mentioned that other return codes are even more complicated and time consuming as they, in addition to the process for code 72, require DCS-cases before creating a discrepancy. C1, D1, E1 and E2 claimed

that the steps included in the third subprocess Prepare and send return (see Figure 4-13 and 4-14) in the return process take up a majority of the time. E2 estimated that 60 percent of the time is spent on the subprocess Prepare and send return and 40 percent on the other three subprocesses.

The fact that the return process is difficult to learn by a new employee was emphasized by A1, C1, D1, D2 and F1. C1 and F1 highlighted the importance of having a structured person handling the returns and claimed that not everyone can handle the returns. Additionally, D1 mentioned that “A new employee would probably question why we do it this complicated”. However, “Once you have learned it and work with it all the time, it works, ok anyway” according to A1. D2 added that the return process sits in the spinal cord after a while and that “I can do it in my sleep”.

A majority of the dealers rated the simplicity of the return process at five or below on a scale from one to ten. A1, B1, D1, D2 and F1 rated it four and five, while C1, E1 and E2 rated it seven and eight. When asked to rate the intuitiveness of the return process, the gradings were lower. Two respondents, B1 and D1, placed it at zero, arguing that it is “not intuitive at all”. The rest of the respondents rated it between two and five, claiming that it is not something that you can figure out on your own. C1 concluded that the return process of repair parts to AutoCo is much more complex and troublesome than a mail-order return.

Overall, despite the many steps and systems, the dealers were neutral or somewhat satisfied with the current return process. Four respondents (B1, C1, D1 and F1) rated their satisfaction as three out of five representing “Neutral” and the other four (A1, D2, E1 and E2) rated it four/somewhat satisfied with the return process. B1 claimed that “I am not satisfied nor dissatisfied since I know how to work with it”.

## 4.6. Functional Quality

In this section, findings of the service dimensions related to the functional quality are presented, including system design, information and interaction, reliability and trustworthiness, accessibility and flexibility and attitudes and behavior.

### 4.6.1. System Design

The dealer management system, further referred to as DMS, is mainly used in the order process. C1 expressed that the system in general is easy to operate in. Further, a majority of the dealers (B1, C1, D1, D2, E1) perceived it as easy to order a repair part that is available in stock in the system. An order is completed by only pressing a few buttons. In regard to the system’s development, A1, B1, D1 and F1 explained that the system has been updated continually and improved in multiple ways e.g. an increased number of options, a more distinct system, no system errors, new functions, pop-up window and columns.

The dealers also experienced some problems with the current DMS system. The system includes left and right clicks, as well as tab clicks, which increases the risk of making mistakes according to D1. The system is not easy or obvious when using it the first time as stated by B1. D1, D2 and F1 expressed that the icons in DMS are not intuitive or obvious, and by only viewing the symbol it is impossible to understand what it represents. For instance, the ordering repair parts operation is illustrated by an icon designed as a toilet paper roll together with a nut. D1 states that without an explanation of the icons an employee new to the system will not be able to place an order. Another issue identified by A1 and E2, is the struggle with cancelling orders in the system. Currently, the dealers create returns instead of cancelling the order before it arrives because it is less complicated.

The repair info system, further referred to as RIS, is used to find the correct repair parts for chassi-unique vehicles. E2 expressed a great desire to keep RIS but to continue updating and improving the system. D1 and E2 both raised the upsides with the advancement of the system. The dealers experienced that the current version of the system was better and easier than previous versions. One appreciated improvement was the connection between RIS and DMS, which enables the dealer to access the chassi-unique vehicle site in repair info system by clicking on a book-icon in the work order in DMS. The required repair parts can be copied from RIS and pasted directly into the work order. Earlier, no connection between the systems existed and RIS did not include chassi-unique vehicles, which resulted in several options for the same repair parts since all repair parts that ever had been assembled on that vehicle-model were viewed.

The system RIS was said by B1 to be smooth when you have learned it, however D2 stated that it takes a considerable amount of time to be fully trained and familiar with the system. Both B1 and D2 explained that the system is not simple for new employees. Moreover, B1, C1, D1 and D2 expressed issues with the current system. Firstly, D2 explained that the system is overall complicated with many categories and subcategories and expressed that "Detective work" is necessary to search and find the repair parts which is time-consuming. D2 continued stating that to find the right repair parts, the dealers must click multiple times in the system and D1 reasoned that it becomes difficult when they are unable to find what they are looking for. Additionally, B1 mentioned that some repair parts of the system are not intuitive and C1 said the system is not always consistent and updated. The same type of repair parts are placed in different categories according to D2 and when a repair part is missing in the system D1 stated that "the dealer is completely stuck". Another issue that B1 raised was that when a repair part is visible on the screen, the article number should be accessible, which is not always the case.

The Parts System is utilized in a large part of the return process. The system was referred to as old and outdated by five dealers (D2, A1, B1, D1, E2), where B1 said that "Parts System is a system from the Stone Age". D2 explained that the system is "obsolete", "old

school” and “in need of a face lift”. Further, A1, D1 and F1 stated that the system is not easy to use for new employees. F1 and A1 explained that you cannot figure out how to operate in the system on your own. For instance, it is impossible for employees new to the system to know that “invoice inquiry” (see Figure 4-10, activity 1.5) and “create discrepancy” (see Figure 4-11, activity 1.6) are needed in the return process. According to D2 “it is the system’s fault that many steps and clicks are required to register returns”. F1 highlighted that the article number is written three to four times before the discrepancy for the return is created. An additional problem in the opinion of three dealers (C1, D2, E2) was difficulties with changing or going backwards in the system when correcting faults. However, both D1 and E2 explained that the functionality in Parts System, that signals when a registered return is too cheap or the invoice number is wrong when creating discrepancies (Figure 4-11, R1.6), works well.

The communication system DCS is utilized both in the order process for repair parts that are not available in stock and the return process for all returns other than code 72. For returns other than code 72, a DCS case including pictures is required, which C1 expressed as complicated since pictures need to be taken with a camera, sent to a computer through email, saved on the computer and uploaded in the case. B1 argued that DCS is rather heavy worked and pictures can only be uploaded one by one. B1 believed that the system is worse from the dealer’s perspective than from helpdesk’s perspective. Further, it is impossible to go back in DCS, so a new case needs to be created at faults. The lack of symbols for updates in DCS and the fact that the dealer needs to click all the way into the case before it is possible to review updates were also mentioned as downsides with the system by D2. C1 explained that the system is not the most optimal one but also expressed an understanding for the situation since it should work for multiple actors.

D1 and D2 expressed opinions common to all systems. D1 explained that the extensive set of clicks and steps in the systems could be easier and that many of them are unnecessary. Additionally, implemented improvements in the systems are not always aligned, and the dealer believes that different departments work with different parts of the system. According to D2, all of AutoCo’s systems are easy to operate in when you have learned them, however they are difficult to learn and complicated before that.

## 4.6.2. Information and Interaction

According to all dealers, one of AutoCo’s weak points is the communication of important information to dealers. In the order process, this lack of information is especially true in situations when something has happened that affects the deliveries. This type of information is usually posted at AutoCo’s dealer portal for dealers to read, which according to dealer F1 is difficult to discover and “could be communicated by AutoCo so much easier”. According to E2, a lot of information is posted in the dealer portal, and the dealers do not have the time to manually go in and check for updates. Furthermore, the dealers are only provided with the information that something has happened but not why

or the severity of the problem. F1 expressed that they only want to know when the problem will be solved and receive information that is relevant for them. E2 believed that helpdesk receives a lot of similar questions from dealers today as a consequence of this dysfunctional information flow. Moreover, AutoCo fails to inform the dealers when an order is split up and delivered from multiple warehouses, so called split-order. This lack of communication at split-orders, when only a few of the repair parts are delivered, sometimes leads to problems as the dealer thinks that some repair parts are missing and starts searching for them. In the return process, there is a lack of information when a return has been rejected. The dealers do not get any information in regard to if and why a return has been declined and can in worst case lose out on large amounts of money if they do not recognize that a return has been incorrectly rejected. If a return has been rejected, the dealer creates a DCS-case to find out why.

In general, dealers are positive to the information related to inventory status provided in the systems DMS and Parts System. It is possible to see the inventory status of repair parts in different warehouses and how many of them that are reserved in both systems. However, A1 mentioned that campaign repair parts, which are ordered in DCS, can be tricky since they do not have access to the inventory status for those repair parts. Most of the interviewed dealers have expressed that DCS as a communication system is working well. However, issues regarding the notifications of updates and the information given in the updates have been expressed by all dealers. For example, it is possible for the dealer to activate email notifications for updates in DCS. However, the dealer receives a lot of emails from DCS every day and the email notifications only state that an update has been made and not what the update is. Therefore, the dealer still needs to login to DCS to see what kind of update that has been made. Also, in most DCS-cases there are multiple employees at the dealers involved in the case, and only the one who created the DCS-case receives updates. For these reasons, all dealers have expressed that it is easy to miss out on important updates and that they check for updates manually instead of through emails.

For availability questions and Urgency orders, the updates in DCS-cases are often limited to “we will get back when we know more” or “maybe we will get an answer in three weeks” according to F1 and C1. All dealers claimed that no transparency into helpdesk’s processes is provided in DCS, such as what the person responsible for the case has done. The five dealers A1, B1, E1, E2 and D1 argued that the information provided in the cases is usually enough and that more information is desired only in special cases. Although, C1 and F1 strongly expressed that these updates are not enough and that a continuous information flow is desired. They would like to know what helpdesk has done, who they have been in contact with and what is happening in their chain. Sometimes, this information is provided when the dealer calls helpdesk, but the information should, according to the two dealers, be accessible directly in the case. This non-transparency makes the dealers question helpdesk’s dedication to help them and the dealers’ end-customers to think that the dealer does not care.

When creating a discrepancy, a return code specific for the reason of return needs to be specified. D1 and E2 mentioned that there are uncertainties regarding what codes there are, and which codes to use for the different cases that are not code 72. Even though the dealers most often know which return code to use, six of them (A1, B1, C1, D1, D2, F1) always ask which code to use (if not code 72) through DCS. The dealers had different understandings regarding what AutoCo require the dealer to do, as D1 stated that a discrepancy is declined if they have not asked for a code through DCS in advance, while E1 and E2 stated that they only ask through DCS in special cases. Asking for return codes is time demanding as pictures and description of the reason for return is needed in the case and the dealer needs to monitor the case manually.

### 4.6.3. Reliability and Trustworthiness

In terms of reliability and trustworthiness, seven of the dealers (B1, C1, D1, D2, E1, E2, F1) felt that they can rely on AutoCo, their employees and systems to keep promises and perform with the customer's best interest at heart regardless of what takes place or has been agreed upon. A1 felt like that is true most often. B1 and D1 expressed that "AutoCo do just about anything to find a repair part" if the repair part is not available in any warehouse and C1 expressed that AutoCo's processes are reliable. However, the dealer expects AutoCo to find the repair parts and deliver in accordance with agreement since it is, as stated by one dealer "our job to find the repair parts, not the customer's". When AutoCo cannot find the repair parts, the customer starts searching, and if the customer finds the repair part before AutoCo, it becomes problematic. F1 stated that "The customer should not have to solve their own problems. We are the ones who must solve it for them to be able to charge as much as we do". Furthermore, E1 claimed that air deliveries from the central warehouse are more reliable than by road. As a consequence, several dealers choose air as delivery type although they have marginal for road transportation, which is not good from either an environmental or a cost perspective.

Most dealers are positive to the VMI-system and consider it to be reliable. However, F1 mentioned that there are great uncertainties whether the repair parts in the stock order will arrive or not and that the stock orders are delivered too close to the planned repair. This uncertainty leads to dealers placing double orders to make sure that the repair part is available at point of need. Another dealer, E2, stated that they fully rely on the VMI-system and never place double orders nowadays, as they only get 50% of the repair part value on the buyback if they order it themselves. E2 also claimed that the VMI-system has improved and that they experienced more problems with the stock orders in the past.

The inventory status of repair parts shown in the DMS system is reliable and most often correct according to A1 and F1. However, they also stated that AutoCo sometimes hide inventory from the dealers to be able to cover possible acute needs for Urgency orders. Therefore, a repair part can be received the day after an Urgency order is placed even

though the stock level is zero according to the systems. Further, if only one repair part is available in stock, the dealer orders from another warehouse, just to be sure that it is available at point of need. When the dealer asks for availability through DCS, the preliminary delivery date is correct in 80 percent of the cases according to F1.

When the dealers were asked to rate their confidence in AutoCo on a scale from one to ten, all dealers rated it six or above. Five dealers rated it ten out of ten, stating that “AutoCo is our everything, we rely on them to one hundred percent” (D2) and that their confidence in AutoCo is huge (A1, E2). However, C1 and E2 rated it at six and eight respectively, with the arguments that it does not feel like AutoCo are fully working with their errands and that there is a potential for improvement that would increase their confidence.

When the dealers were asked about AutoCo’s service recovery, six of the dealers felt that AutoCo immediately and actively takes action to take control of the situation and find new solutions when somethings goes wrong or when something unpredictable has happened. B1 and F1 claimed that AutoCo takes responsibility when something has gone wrong, addresses the problems as fast as they can and always do their best. The other two dealers, A1 and E1, stated that AutoCo does not always act immediately and actively to take control over the situation and that their commitment differs from case to case. All eight respondents however mentioned that AutoCo does not discover when something has happened unless the dealers inform them. In the case when not all repair parts are delivered, the dealers are responsible for creating new orders as no new orders are created by AutoCo. D1 claimed that “When AutoCo does something wrong they always stand up for us, but it does not help if it is 50 miles to the support warehouse. It still takes too long”. F1 also raised the problem that when there has been a stock balance error in the support warehouse, the order is automatically converted from the delivery type “Swedish support warehouse” to “Road central warehouse“ instead of “Flight central warehouse”, which increases the lead time by two days. This increase in lead time causes problems if the dealer lacks repair parts when needed for a planned reparation.

#### 4.6.4. Accessibility and Flexibility

Most of the dealers (B1, D2 E1, E2, F1) believed that AutoCo offer good accessibility and adapts their opening hours, physical location, employees and systems to meet their needs as a dealer. B1 said “I have never experienced any problem, not a single time has it been impossible to get hold of them”. However, D1 and A1 disagreed with the five dealers and A1 explicitly expressed inaccessibility during evenings. E1 and D1 clarified that the responsiveness is usually good and fast, but the response time is longer during evening and weekends. F1 and E2 acknowledged AutoCo’s effort to be as available for their dealers as possible. Moreover, E1 and E2 showed appreciation for AutoCo’s opening hours and action service which together offer accessibility during all hours of the day. AutoCo are also flexible and sometimes answer after opening hours as stated by D1.

Meanwhile, C1 explained that occasionally when the responsiveness is not fast enough, all employees at the dealer contact multiple people at AutoCo which results in increased priority. Since it helps to go outside the regular structure, even though unnecessary resources are used, C1 continues doing it in critical situations when answers are needed.

AutoCo's accessibility in terms of repair parts is expressed to be extremely good by C1, likewise E2 said AutoCo's dealers are spoiled in that sense. Furthermore, C1, D1 and E2 highlighted the benefits with day orders which allows the dealers to place an order during the afternoon and receive delivery in the night or early morning. Day orders were indicated as a great competitive advantage. Moreover, the physical location of AutoCo and their warehouses was considered acceptable by all dealers, even though the most optimal location for the dealers would be across the street. Obviously, the relocation of the Swedish support warehouse was beneficial for some dealers, less beneficial for others and indifferent for some others.

E2 claimed that the response time for cases in DCS differs depending on what the time is. Similarly, D2 expressed uncertainty in response time through DCS from AutoCo affecting the accessibility negatively. The dealers are unaware of when they will receive an answer since it can differ between one hour to days. One day with absence of updates can be problematic according to E2. D1 explained that the response time for questions regarding return codes is usually one hour. F1 commented DCS's accessibility by explaining that normally dealers do not need to chase helpdesk for answer. However, at special occasions the response time is longer when helpdesk is knee-deep in work.

E2 mentioned the severe consequences in situations when the response time on cases for Urgency orders are too long. E2 continued stating that dealers cannot wait for answers if a vehicle is standing still in the workshop and that it becomes tough when the dealer's customer calls and they have no reply. In these situations, the dealer starts chasing and calling helpdesk to get an answer. C1 expressed that Urgency orders are not in all cases treated like an Urgency order and should be handled more urgently.

In DCS, replies for inquiries about case-status are given quickly according to B1. D2 and E2 stated that the Commercial representative is easily accessible and replies as fast as possible. When discussing the two days waiting time for automatic acceptance of return approvals, many of the dealers believed it was unnecessary. Eliminating these two days was viewed as favorable. A1 also mentioned the excessive response time for other codes than 72 that require a DCS-case as frustrating when you already know which code to use. C1 explained that sometimes there are special events like demo runs which empty AutoCo's Swedish office. The dealer has an understanding for the situation however it is still complicating for the dealers. The dealers are able to contact a European office but since they do not have any relation with those employees, they wish they had better support during these events. Another special situation discussed by C1 was new vehicle launches. The repair part availability and support in finding repair parts are sometimes

insufficient and too slow at these occasions. A desire for better preparation before launches exist.

#### 4.6.5. Attitudes and Behavior

The existing relationship between the dealers and AutoCo was expressed as good by several dealers. All dealers strongly agreed that the contact persons at AutoCo are concerned about them and interested in solving their problems in a friendly and spontaneous way. D1 stated that “We turn to different people, but everyone is committed”. F1 agreed with D1 but meant that the contact persons are only engaged and committed when the dealers are committed. F1 exemplified a situation when F1 raised a problem and AutoCo quickly generated an action plan constituting of 20 points on how they are working with the question. The next time they were in contact, AutoCo had already started working on 15 of the 20 points and had plans for the remaining five, which F1 highly valued. Further, B1 stated that “They always do their best to help us” and D2 that “AutoCo does everything to help and facilitate for their dealers. I have never experienced bad treatment or poor service”.

Dealer B1, D1 and F1 mentioned that it is beneficial to have an established contact with a few people at AutoCo, as it increases the willingness to help each other from both parts. However, F1 claimed that it is their own engagement and interest that has created a relationship and that AutoCo has never taken an initiative to build a relationship. D1, D2 and F1 argued that they have good contact with the people at helpdesk. D2 claimed that all employees at helpdesk are helpful and accommodating, and that they have never experienced any contradiction or unwillingness to cooperate. F1 agreed that helpdesk are engaged and involved today but said that they were not six years ago “It was counter-work at that time”. F1 experienced a lot of problems with helpdesk in the beginning and claimed that assertiveness against them was needed before their relationship was established. Furthermore, F1 had to get angry at them four times before they took the problem seriously.

All dealers experienced that AutoCo acts with great confidence in them. Six dealers (A1, C1, D1, D2, E1 and E2) rated their confidence as ten on a scale from one to ten. The dealers argued that AutoCo should have confidence in them as “The dealers have created AutoCo. Without us, there is no AutoCo.” and “We are AutoCo”. However, B1 rated their confidence as six out of ten and stated that “I do not believe that AutoCo trust us to a hundred percent. They question things, they have not been out here, they have not seen the reality.”. Furthermore, C1 stated that “It feels like their confidence in us differs depending on the situation”.

## 4.7. Technical Quality

In general, ordered repair parts are delivered on time and in good condition according to most dealers. C1 claimed that “It does not help if they deliver golden sprayed packages. The main thing is that the repair parts are delivered on time and in good condition, which they are. The ordinary works just fine and it is fantastic that it can be like that.” Further, D1 claimed that AutoCo is at the forefront with their vehicles and that they have good quality. Only one or a few times per year, repair parts are not delivered as planned according to D1. However, it is “terrible” and “very hard” when it happens. F1 stated that repair parts on stock orders are not always delivered but did not mention how often it happens. Problems related to the repair part availability for new vehicles have been expressed by multiple dealers. Repair parts for new models do not always exist and may not be available even two years after the release. E2 claimed that this is a severe problem as “A new vehicle should not stand in a workshop just because repair parts are missing, it should be on the road driving”. The process of searching for these repair parts is complicated and time-consuming, and AutoCo should be better prepared for the releases and be aware of the possibility that something unexpected may happen.

Returns are often approved as expected according to the dealers, however D1, D2 and E2 claimed that returns sometimes are mistakenly rejected. It can burst at many places in the return process as there are many intermediaries such as transport etc. When AutoCo and the dealer disagree, it is word against word and the dealer does not receive credit for the returned repair part unless they can prove that it is AutoCo or an intermediary’s fault. However, D2 claimed that it does not happen often and is acceptable the few times it happens. E2 however expressed that AutoCo are too strict with the returns and that a return is rejected if the bag is dirty even though the repair part is as new.

With regards to AutoCo’s professionalism and skills, all respondents believed that AutoCo, its employees, operational systems and physical resources have the knowledge and skills required to solve their problems in a professional way. B1 stated that “AutoCo always solve problems and deliver” and D2 “AutoCo has always managed to come up with solutions to help us”. A1, C1 and E2 meant that their contact persons have the required knowledge and skills to solve problems related to the order process and the return process. However, C1 mentioned that they do not have the required knowledge of associated systems such as non-stock repair parts or invoice handling to AutoCo. C1 has experienced problems with the invoice handling for four years and they have still not been able to solve the problem. Further, E2 claimed that AutoCo want to help but does not always have the time, and that it does not feel like they have the required competence when it takes multiple days to find a solution. C1 experienced that the competence of the employees at helpdesk varies and that the case is treated differently depending on the receiver of the case.

All dealers claimed that AutoCo employees come to visit every now and then, but according to B1, AutoCo are shocked every time by how difficult everything is and how much the dealers need to know. “They think that everything is easy all the time. They do not know how everything works.”. Furthermore, C1 stated that “AutoCo does not always understand our grassroots problem. They think that the problem is something, but it is too far from the reality to be true. Sometimes they do not understand who our customers are and how they work” “Sometimes we have different perceptions of reality”. For instance, AutoCo requires that a broken repair part is returned within 24 hours after delivery, which is impossible according to the dealers as they do not have the time, possibility or need to open all packages within the time limit. In addition, the dealers are not allowed to return broken packages, making it unreasonable to open all packages. Furthermore, AutoCo want the dealers to pre-plan and order repair parts three days in advance of a planned service, which is impossible as most customers drop in according to A1.

The dealers were asked to rate how satisfied they were with AutoCo as a business partner on a scale from one “very dissatisfied” to five “very satisfied”. A majority of the dealers (A1, B1, D1, D2, F1) rated five/very satisfied with AutoCo as a business partner while E1 and E2 rated four/satisfied and C1 a three/neutral arguing that they are in both ends of the scale.

## 4.8. Image

During discussions regarding AutoCo’s image with C1, D1, E2 and F1, all believed that AutoCo’s operations are reliable and that they offer enough value for money. AutoCo stands for good performance and values shared by their dealers. C1 said that AutoCo lives and acts in accordance with their values. Further, F1 argued that AutoCo has a good reputation and are considered as reliable, followed by appraising their continuous ongoing work for improvement. E2 positively commented AutoCo’s image as well by saying that their products are good from both a quality and security aspect. Also, E2 believed that AutoCo tries their best, it is well-known that the brand is strong, and they have a sustainable mindset which is of high importance in the world we are currently living in. Further, D1 stated that overall, they have the same culture. However, the dealers might be more service minded than AutoCo. According to D1 and F1, AutoCo’s largest competitor, is still one step behind AutoCo when it comes to their solutions and releasing new vehicle models. Additionally, C1 mentioned that many of AutoCo’s competitors have much longer lead times than one day and will therefore never take large market shares.

Besides selling heavy commercial vehicles, AutoCo also sells buses through one of their brands. However, this operation is separated, and both the order process and the return process differ between heavy commercial vehicles and buses. Both C1 and F1 claimed that there are a lot of problems with things related to the processes connected to buses. Similarly, E2 said that the heavy commercial vehicle side and bus side does not work in a

comparable way and the bus side is considerably worse than the heavy commercial vehicle side. E2 continued stating that for the dealers AutoCo's buses and heavy commercial vehicles are both AutoCo, "AutoCo as AutoCo". It is difficult to separate them and only evaluate one side. Furthermore, AutoCo also sells articles that complement their vehicles such as trailers through a system called VehicleShop. E2 explained that "What is not working is AutoCo's VehicleShop" and everything but VehicleShop is working smooth. E2 reasoned that it is a bit surprising that AutoCo supports a system like VehicleShop and expressed that "AutoCo's repair parts play in the elite series, where it works well. The other (VehicleShop) are in division three or four from time to time. This affects AutoCo. After all, it is AutoCo who built it up".

## 4.9. Value Co-Creation

All dealers stated that they learned the processes from their predecessor at the dealer. They followed and shadowed a skilled employee to understand the necessary steps, routines and systems used. Learning and being trained by the right person in the order process is crucial according to F1. B1, C1 and F1 explicitly said that no education was given by AutoCo in order to learn how to operate the order process and return process. Both D2 and E1 have created own reference guides. As a new employee, D2 wrote a reference guide to ensure that the entire process was remembered and no steps in the process were skipped. E1 created own reference guides and manuals for the return process and which return codes to use. These guides are exploited by approximately 20 connected affiliates during education. The same affiliates have their own support to contact regarding question about the processes and logistics-related issues.

C1, D1 and F1 could not say if there existed any references guides, instructions or summarized descriptions of the order process or return process provided by AutoCo. D1 continued stating that there probably are some reference guides on the dealer portal that could be usable even though they are old, since many functions in DMS are the same as they always have been. However, D1 stated that the old reference guides are not used since the dealers need to search for them on the portal, and that a new employee learns quicker by shadowing another employee. Further, A1 mentioned that there exists an e-learning from AutoCo, however the dealers need to search for it and currently they do not use it. C1 explained that they have requested a DMS-manual including exercises. Dealers received a quick tutorial ten years ago when DMS was implemented and they still work in the same way in the system. C1 also expressed that they want information from AutoCo regarding how the processes are supposed to work and how the dealers should operate in them. In some cases, it is ambiguous what the dealer should do, for instance when an order is missing. C1 believed that due to this ambiguity and lack of understanding for how the processes are constructed to work, dealers might create excessive work for employees at AutoCo.

All dealers have established their own routines and systems to handle the return process, whilst the order process is handled similar although small differences exist. D2 argued that the dealers lack the help of AutoCo to easily handle the return process for AutoCo's repair parts. All dealers use the same systems in the return process, however the order of the steps in the systems and the routines outside of the systems differ between dealers. D2's own tools and structure facilitate the operations in the systems and help them keep control until credit is received. D1 emphasized the importance of their own tools and said that their own tool mitigates the risk of losing large amounts of money by functioning as support to monitor credit. Dealer F has created a system to communicate internally about orders. Further, Dealer A has created a system for the return process that supports the internal communication and helps keeping control. D1 explained that the dealers should not have to create own processes to handle the 'original' processes.

C1, D1 and E2 expressed appreciation for the annual repair part conference. D1 explained that the conferences are significant and that a network of contacts is established with AutoCo and other dealers during the conferences. Dealers share information between each other and create relationships, which makes it easier to contact each other afterwards. E2 also mentioned the benefits with meeting people during conferences to create deeper relationships. In addition to the conferences, E2 explained that previously, AutoCo arranged more educations at their headquarter. C1 also commented the conferences and said that they are great since dealers discuss problems, review performance measurements and receives information about their performance.

The 28-days-list included in the weekly PARTS-report is great and useful for returns according to C1 and D2. D2 claimed the list is a good support to make sure repair parts are returned before it is too late and minimizes the risk of forgetting. Otherwise the repair parts they store in their warehouse elevator are easily missed. The PARTS-report also comprises graphs and performance indicators regarding how healthy the warehouse is. C1 argued that it is difficult to understand how to make use of the information, thus they need help from AutoCo with that. C1 also stated that the dealers are not as controlled by gross profits and KPI as AutoCo and the information is therefore less valuable and not used.

Improvements in RIS are possible to suggest in the system according to B1, C1 and D2 but C1 and D2 have never used the function. C1 acknowledged that they are not good at reporting faults or expressing complications in the system, so in some sense they have themselves to blame for defects in the system. B1 further explained that the person giving the feedback and messages in RIS can decide which people that are able to view it and expressed positivity towards the function. Furthermore, in the system DMS, D1 clarified that the dealers can ask for improvements since AutoCo has a specific group working with enhancing the system. However, D1 experienced that it is difficult for the dealers to get their demands fulfilled since all suggestions needs to be motivated by money saving and

the prioritization depends on the amount of money saved. The list includes a lot of suggestion on improvement.

C1 stated that “unfortunately, there is not much improvement work being driven together” and “many questions drown in the paper mill”. C1 also mentioned that the dealers’ suggestions for improvements are only accepted if they save money, similar to what D1 expressed about improvements in DMS. Additionally, C1 explained that AutoCo’s ability to intercept problematic areas and issues mentioned by the dealers is weak. The dealer feels like AutoCo ignores problems communicated outside of the structure they have set for feedback and gets a sense of hopelessness when mentioning problems. This structure makes it administratively demanding to report problems and give feedback, it takes too much time, time that the dealer does not have. E2, that has access to an own support shared by multiple affiliates, explained that generally the support takes the dealers’ suggestions to AutoCo and discuss them during meetings. E2 indicated that “it is usually us who work in the reality, that maybe not get our opinions heard by AutoCo”. C1 stated that AutoCo has promoted “one AutoCo, one network”. AutoCo aim for them and the dealers to be transparent with each other and cooperate to help “the world of AutoCo”. However, C1 explained that they experience in most cases that it is easier to collaborate with other dealers than AutoCo.

AutoCo constantly tries to advance themselves and their dealers according to B1. B1 also declared that AutoCo send people to the dealers with purpose to find problematic areas. Moreover, D1 affirmed that the Commercial representative calls from time to time to ask for opinions and their views. The Commercial representative sometimes visits the dealers to help them improve by holding courses about logistics. During the courses, area experts from AutoCo also participate and support. Another support provided by AutoCo is the connected vehicles that help the dealers with the diagnosis (see Figure 4-3, activity 1.2). When discussing connected vehicles, F1 explained that they use information from connected vehicles. D1 use some information, although they mostly rely on a mechanic to identify the problem with the vehicle. The use of connected vehicle is increasing with time at dealer D1.

# 5. Analysis and Discussion

The purpose with this thesis is to suggest improvements to enhance Dealer Simplicity. To fulfil this purpose, challenges and opportunities related to Dealer Simplicity in the intersect between AutoCo and their dealers are acknowledged and analyzed. These challenges and opportunities are identified both within the order process and return process, and in the interactions between AutoCo and their dealers. To guide this, the following three research questions were formulated; What characterizes the concept of Dealer Simplicity within the automotive industry context? What interactions and activities in the order process and return process are not in line with the Dealer Simplicity concept and thereby degrades the dealers' ability to add value to and serve the end-customer? How can the interactions and activities in the order process and return process be improved to enhance Dealer Simplicity? Further, this thesis departs from service quality, value creation process, service innovation and service logic.

Dealer Simplicity can be enhanced by ensuring repair part availability at point of need, excellent information-sharing and simple processes. The major opportunities for improvement for AutoCo were found in the return process. In a shorter time aspect, we suggest minor improvements with a focus on developing the systems and providing dealers with educational support in the processes and systems. In a slightly longer time aspect, we suggest improved connectivity between the systems, implementation of notifications, improved information-sharing and conferences, online platforms and improved connected vehicles. Lastly, we claim that the optimal solution from a Dealer Simplicity perspective is to remove Parts System, implement a mobile application for DCS, a notification center, track and trace of packages, provide more information transparency and revoke the different order types.

In the following sections, a discussion of the empirical findings from the case study and the theoretical framework, and answers to the research questions are presented. Firstly, the concept of Dealer Simplicity and its relation to prior research areas is discussed, followed by general thoughts on the order process and return process, functional quality dimensions, technical quality, image and value co-creation. However, the expected quality, that is a part of total perceived service quality in Grönroos' Model of Service Quality, will not be addressed. This is followed by answers to each of the three research questions. Finally, accounts for limitations of this study and suggestions for future research are summarized.

## 5.1. Dealer Simplicity

Dealer Simplicity describes to which extent a service provider's operations facilitate their dealers' businesses. We argue that Dealer Simplicity consist of three cornerstones; simple processes, excellent information-sharing and availability at point of need. According to

one of AutoCo's employees "Simplicity creates loyalty". In the automotive industry, a high level of complexity exists, which can be acknowledged by the fluctuating demand and the vast amount of repair parts a vehicle consists of. In markets with high complexity, simplicity is more noticeable, and adopting a strategy of simplicity can help differentiate a company's offering and be economically beneficial as stated by Maeda and Antonelli (2006). Further, Maeda and Antonelli (2006) claim that products and services that make people's lives simpler will be bought and loved. This stresses the importance of actively working with Dealer Simplicity. To enhance Dealer Simplicity, service providers need to change their value propositions and what they offer to their customers. The value propositions can be developed by increasing the technical quality and the functional quality, to improve the perceived service quality. The technical quality is outcome-related (Grönroos, 1984) and is of high importance to achieve Dealer Simplicity, as it is critical to have repair part availability at point of need. The functional quality is connected to the process and concerns for instance behaviors, accessibility, attitudes and appearance (Grönroos, 1984). To enhance Dealer Simplicity, the processes should be smooth, intuitive and efficient, thus functional quality is of high importance. Improvements in functional quality can considerably increase the offered value to customers and in situations where the technical quality is almost equal between firms, the functional quality decides the firm's success (Grönroos, 2000).

Value co-creation, where service providers positively influence the customer's value creation process (Grönroos, 2011), could also enhance Dealer Simplicity. The service provider may obtain knowledge during interactions that can be used to improve their value propositions (Skålén, 2016) to dealers and simplify the dealer's operations. One of AutoCo's employees also mentioned that Dealer Simplicity requires the firm to think about new ways of working. Consequently, innovation that aims to discover new solutions (Michel et al., 2008), is essential to reach a high level of Dealer Simplicity.

## 5.2. Order Process

Even though there is a VMI partnership between AutoCo and their dealers, the dealers place orders multiple times every day. Furthermore, at most dealers, there are many employees placing orders. The fact that a lot of orders are placed every day and many employees are involved, highlights the importance of having a smooth and simple order process. All dealers expressed positivity towards the current order process and claimed that no step is more or less complicated than another. E1 and E2 claimed that the process has improved during the years, which may be due to the reduction of systems, from multiple to only one system (DMS).

As seen in figure 4-3, the process of ordering repair parts at AutoCo slightly differs depending on whether or not the repair part is available in a warehouse or not. If a repair part is available, the process (with an emphasis on subprocess 2, activity 2.1-2.6) is considered to be very basic, smooth and simple. In fact, B1 and C1 rated it as ten out of

ten in terms of simplicity. On the other hand, when the repair parts are not available, B1 and C1 rated it six out of ten. Considering the order process in total, the simplicity landed between seven and eight. It is clear that all dealers think that the order process is simple when the repair parts are available in a warehouse, but more complex and time-consuming when the repair parts are not available. Hence, it can be concluded that the additional activities 2.7-2.9 required when a repair part is not available are most complex and are the ones which improvement work should be focused around. Keeping higher inventory levels at AutoCo and thus reducing the occurrence of non-stock would not be feasible. However, we claim that AutoCo could facilitate for their dealers by providing an estimation of when the repair parts will be available, to reduce the need of chasing helpdesk for answers (affecting activities 2.6-2.9).

Many of the dealers expressed that the order process is easy to learn by new employees but requires some guidance the first time it is used. The only potential difficulties for new employees seemed to be placing an order in the right way and learning cut-off times and which warehouse to place the order from in activity 2.3 of the order process. Therefore, we suggest AutoCo to clarify icons and provide short descriptions of icons when the mouse is over it in bubbles, as it would have a positive impact on the learning process for new employees in the order process. Furthermore, we claim that clarifying cut-off times and lead times for the different delivery alternatives would be beneficial for the dealers.

To summarize, the dealers are somewhat satisfied with the current order process and do not wish to perform any major changes to it. In regard to the systems, we suggest AutoCo to keep DMS and RIS but continue improving them. From a Dealer Simplicity perspective, there does not seem to be much potential for improvement with regards to the activities required when a repair part is available in a warehouse, that would reduce the time spent and increase the simplicity of the process in a shorter time aspect. However, when looking in a longer time aspect, we claim that the most optimal solution would be for dealers to state which day and time they require a repair part and let AutoCo handle the rest. Such solution would reduce the dealers' time spent on ordering parts, AutoCo's transportation costs and the number of Urgency orders, considerably.

### 5.3. Return Process

As a consequence of the criticality of having the right repair parts available at the point of need, a lot of repair parts are ordered unnecessarily. In fact, a share of approximately 80 percent of the repair parts ordered by the dealers are returned for different reasons. On average, the interviewed dealers spend between four hours per week to four hours per day of efficient working time on the return process, which corresponds to 10 to 50 percent of one employee's working week respectively. A majority of the returned repair parts are ordered unnecessary, or ordered-by-mistake, denoted code 72. These returns are pure waste according to AutoCo and the concept of Dealer Simplicity since they do not bring any value to the dealers or AutoCo, but only take up time and money that should

be spent on serving the end-customer. Maeda and Antonelli (2006) argue that savings in time feel like simplicity and customers search for solutions that are less time-consuming. Therefore, in order to enhance Dealer Simplicity, we argue that the resources wasted on the return process need to be reduced. This reduction can mainly be done by reducing the number of returns and streamlining the return process. The former can be done by improving the information flow from AutoCo to dealers, which in turn reduces the unnecessary placed orders, and the latter by removing wastes e.g. waiting time in the process.

The return process is according to the dealers manageable but not good. It is complicated, heavy-worked and time-consuming. As no activity is considered to be more or less complicated than another, the complexity can be explained by the number of activities and systems in the process. In total, five different systems and approximately 33 activities are required to operate in the return process, compared to the order process that require one system and 25 activities at most (usually 21). The number of activities and systems were questioned by D2, and F1 claimed that there are terribly many activities for little value. Not only do the high numbers of activities and systems make the process time-consuming and complicated for the dealers, but also difficult to learn by new employees according to the dealers. C1 and F1 emphasized the importance of having a structured person handling the returns, claiming that not everyone can handle the return process. In addition, it is easy for the dealers to forget the activities required. Therefore, only one or two employees at the dealers possess the knowledge to handle the return process. In the definition of Dealer Simplicity, it is claimed that all required actions by the dealer should be obvious and no training should be necessary to learn how to operate. However, the fact that it is difficult to learn and not everyone can handle the process indicates that the return process is the opposite of simple. This difficulty puts them in a vulnerable situation if one of the persons responsible for returns is absent, as the pile of return article grows and there is no one who can provide backup. Therefore, we suggest AutoCo to provide educational support and a simplification of the return process. These suggestions will be further discussed in sections 5.7 and 6.1.

In fact, A1, B1, D1, D2 and F1 rated the simplicity of the return process below five on a scale from one to ten, while C1, E1, E1 rated it at seven and eight, arguing that every activity by itself is simple. However, the process as a total is complicated. The intuitiveness of the return process was also rated below five by all dealers, and as zero by B1 and D1, which further affirms the complexity of the process. Therefore, we suggest a reduction of the number of activities and systems, as it would not only be beneficial for dealers but also for AutoCo, who would reduce the workload on helpdesk. A discussion regarding which activities in the return process to either remove or modify can be found in section 6.1.

A majority of the dealers claimed that the process of returning repair parts on codes other than 72 is even more complicated and time-consuming. When dealers return repair parts

for other reasons than over-ordering, the dealer needs to create a DCS-case in addition to the return process shown in figures 4-10 to 4-15. As there are many intermediaries involved between AutoCo and the dealer, the delivery process can burst in many places, resulting in defects etc., and the dealers have an understanding for that. However, the problem is that dealers are the ones who receive excessive work in these situations. Therefore, we suggest AutoCo to simplify the DCS-case process for these returns. One possible solution would be to remove the DCS-requirement and let the dealers return the articles without a DCS-case, or to improve the response time on DCS-cases, making the process less time-consuming. However, we argue that the major improvement work should be focused around code 72, as it simplifies the process for all return codes.

## 5.4. Functional Quality

In this section, the service dimensions related to the functional quality are discussed, including system design, information and interaction, reliability and trustworthiness, accessibility and flexibility and attitudes and behavior.

### 5.4.1. System Design

In the definition of Dealer Simplicity, it is concluded that the order process and return process should be smooth, intuitive and efficient. A lot of the activities in the processes are performed in systems, hence simplifying and improving the systems would enhance Dealer Simplicity. In general, the systems include extensive sets of clicks and activities that sometimes are redundant, as expressed by D1. Maeda and Antonelli (2006) argue that thoughtful reduction is the simplest way to achieve simplicity. By organizing and creating categories, the complexity can be controlled and a system of many can appear fewer (Maeda & Antonelli, 2006). Therefore, we suggest that all systems are more or less modified with the objective to reduce the number of activities and the number of clicks in each activity to enhance Dealer Simplicity. Overall, the systems are difficult to learn according to D2, which signals that they are not intuitive. Thus, we believe that by improving the interfaces and making the systems more intuitive, the dealers will be able to operate with greater ease in the processes. Below, we discuss the DMS system, the RIS system, the Parts System, and the DCS system. All improvement suggestions related to the system design can be found in Table 5-1.

The DMS system is overall a good and simple system as stated by the dealers. However, the system holds the three major drawbacks of requiring many clicks, being ambiguous and having non-intuitive icons and having a too complicated sequence of activities for cancelling orders. To simplify operation of the DMS system, we recommend reducing the number of clicks and activities to the most essential. Further, we believe it would be beneficial to clarify the icons and buttons in the system to make it easier for new employees to understand what activities that are needed to place an order. The system's icons should also be replaced with icons that better illustrate their function. Finally, a

consequence caused by difficulties with cancelling orders may be that dealers do not cancel orders and hence unnecessary orders and returns are sent. To mitigate this risk, we propose that a function allowing the dealer to cancel placed orders before they are handled at AutoCo should be installed.

The system RIS has been updated a few times. The update that connects the systems RIS and DMS has reduced the number of activities. Furthermore, the update related to chassis-unique vehicles provides the dealers with information that simplifies the identification of required repair parts and the decision-making process regarding which repair parts to order. Both of these updates have been positive from a Dealer Simplicity perspective, as the order process has become easier. However, RIS's main issues are perceived to be that there are too many categories and subcategories, too many activities and excessive time required to find the right repair part. Therefore, we suggest improving RIS's structure to facilitate the dealer's search for repair parts. New functions, such as search boxes, where dealers can type the name of the repair part and find the correct article number could be installed. Additionally, to make it less time-consuming to find correct repair part, the article number should be accessible when the repair part is visible on the screen. Furthermore, the dealers stated that the system is neither intuitive, consistent nor updated. We claim that it is necessary to improve the system to achieve consistency throughout the system by ensuring that the same repair parts are always found under the same categories for all vehicles i.e. not switching categories for repair parts between vehicles.

Most of the dealers highlighted many problems with Parts System. The system was referred to as outdated and difficult to learn as it includes many clicks, and sometimes the same steps are repeated several times. It is neither an easy interface, simple to operate in nor intuitive. Since the system contains many issues, we argue that it would be advantageous to rebuild almost the entire system, or the best option, to remove Parts System and use another system that is already used by the dealers. To simplify for the dealers, the current system DMS could be expanded to cover the activities in Parts System as well. When developing the functionality for handling returns in DMS, it is important to make the required activities more intuitive with illustrative icons and use more descriptive names on the buttons and tabs to guide the dealer in the return process. For instance, by changing "create discrepancy" to "request return" or similar, making all activities intuitive. Furthermore, removing activities such as finding the invoice number at discrepancies would simplify the process. Another mentioned issue with Parts System was difficulties with changing or going backwards to correct faults. Such functionality should be integrated into the DMS-solution. Implementing these improvements in Parts System would as mentioned also be an alternative solution, however not the optimal one.

The major drawbacks of DCS as stated by the dealers are related to the time-consuming activity "adding pictures" to cases, going backwards in the system and reviewing updates in cases. Consequently, we suggest developing an app that is connected to DCS, enabling

pictures to be sent directly from the phone which they have been taken with. Additionally, a function allowing the dealers to go backwards should be implemented in DCS. We also believe that new updates in DCS-cases should be more visible to the dealer by, for instance, providing a symbol next to cases with new updates, or summarizing new updates on cases under a specific tab. Clicking on the update could take the dealer to the case, where all previous information in the case is viewed.

*Table 5-1 Improvement suggestions related to System Design*

SYSTEM	IMPROVEMENT SUGGESTIONS
<b>DMS</b>	<ul style="list-style-type: none"> <li>• Reduce the number of clicks and activities</li> <li>• Clarify icons and buttons by providing related descriptions</li> <li>• Make the icons more intuitive and self-explaining</li> <li>• Add a new function to simplify the action of cancelling orders</li> </ul>
<b>RIS</b>	<ul style="list-style-type: none"> <li>• Implement a search function for repair parts in form of a search box</li> <li>• Make article numbers accessible when the repair parts are visible on the screen</li> <li>• Ensure consistency throughout the system</li> <li>• Make sure same repair parts are found under the same categories for all vehicles</li> </ul>
<b>Parts system</b>	<ul style="list-style-type: none"> <li>• Remove Parts system and integrate the functionality to handle returns into DMS</li> <li>• Provide illustrative icons and descriptive names on tabs and buttons</li> <li>• Remove the number of activities required</li> <li>• Make it possible to go backwards in the system to correct faults</li> </ul>
<b>DCS</b>	<ul style="list-style-type: none"> <li>• Create a DCS mobile application</li> <li>• Make it possible to go backwards in the system</li> <li>• Provide symbols that indicate that a new case-update has been made in that case</li> <li>• Provide a special tab in DCS listing the cases with new updates</li> </ul>

## 5.4.2. Information and Interaction

Communicating important information out to dealers is considered by the dealers to be one of AutoCo's weakest points. One of the main problems experienced by the dealers is that information is distributed through multiple channels such as the dealer portal, DCS and mail, and is not easily accessible by the dealers. This contradicts the concept of Dealer Simplicity, as one of the cornerstones of Dealer Simplicity is efficient communication and excellent information-sharing. Only relevant information should be communicated by AutoCo to dealers. This way of sharing information can result in important information getting lost, extensive time spent on searching for information and extra workload on helpdesk. Therefore, we suggested that AutoCo should provide the most important information in a special tab on the dealer portal, and an approximation of when the problem will be solved. Such tab would be beneficial for both AutoCo and their dealers, as the dealers would save time searching for the information, and AutoCo would receive less questions through DCS.

A majority of the dealers claimed that there is not enough information transparency, and updates in the channels must be monitored manually as no notifications are given. According to Dealer Simplicity, information should be visible and transparent. To minimize the risk of missing important updates and the time put on monitoring DCS, it is suggested that notifications should be given. For instance, notifications could be provided through e-mails with the wished information, pop-up windows on the computer showing the update and giving a sound, or through a mobile application for DCS where cases could be created, and notifications would be given. However, not all dealers use mobile phones with applications at work yet, as many of the employees are from the older generation and do not possess the technical knowledge required for an application. However, in the future, a mobile application for DCS in addition to the suggested improvements would be superior. Furthermore, AutoCo should focus on providing more general information such as what repair parts that will be delivered on a stock order, that AutoCo has received a return and if and why a return has been rejected to the dealers through DMS and Parts System.

To summarize, multiple actions could be taken to improve the information and interaction and thus, enhance Dealer Simplicity. Firstly, small implementations such as a tab in the dealer portal summarizing the most important updates and pop-up windows for updates in DCS should be prioritized. In a slightly longer time aspect, a notification center in the computer where information from all channels are gathered would be beneficial. In a longer time aspect, AutoCo should strive to provide all information and handle interactions through one system. A summarized list of the improvement suggestions related to information and interaction can be found in Table 5-2 below.

Table 5-2 Improvement suggestions related to Information and Interaction

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"><li>• Create a special tab in the dealer portal where the most important information for the dealers is gathered</li><li>• Provide an approximation on when problems connected to repair part supply will be solved in the dealer portal</li><li>• Provide notifications for case-updates in DCS</li><li>• Improve the email notifications for updates in DCS by adding detailed information of the update</li><li>• Implement pop-up windows and sound notifications for updates in DCS</li><li>• Create a DCS mobile application</li><li>• Provide information concerning processes and operations through DMS and Parts system</li><li>• Create a notification center on the computer gathering all information from the different channels</li></ul>

### 5.4.3. Reliability and Trustworthiness

All dealers expressed great confidence in AutoCo, their employees and systems, and stated that they always perform their best, deliver in time and provide reliable information. B1 and D1 expressed that AutoCo do just about anything to find a repair part that is not available in stock. However, they stated that they have high expectations on AutoCo and expect that the repair parts will be delivered in accordance with the agreement. On a scale from one to ten, the dealers placed their confidence in AutoCo at an average rating of nine. Still, C1 and E2 claimed that there is potential for improvement that would increase their confidence. These high ratings indicate high reliability and trustworthiness towards AutoCo as a service provider, which Lovelock and Wright (1999) argue is the most important dimension of good service quality, as customers will not return to a service provider that is considered unreliable. Therefore, it is of high importance to perform the service right the first time and at designated time.

Most dealers find the VMI partnership AutoCo have with their dealers reliable and well working and claimed that the system has improved over the years. However, one dealer expressed unreliability towards the VMI-system and stated that there are uncertainties whether or not the stock order will arrive and that the orders are delivered too close to the planned repair. In the automotive industry context, where it is crucial that repair parts are available at the time of reparation, this uncertainty is a major problem. As a consequence, dealers place double orders to make sure that repair parts are available at point of need, which not only increases the workload on the dealers and AutoCo, but also degrades the accessibility of the repair parts for other dealers. This uncertainty, leading

to unreliability, can be explained by a lacking information flow. If the dealers would be informed of what parts that will be delivered and what time, this would no longer be a problem as they would have the chance to only order the crucial parts. Hence, to increase the dealers' reliability and trustworthiness in AutoCo, we suggest that AutoCo should establish a better information flow to dealers. Implementing track and trace of packages could be one solution (see Table 5-3).

A majority of the dealers claimed that AutoCo immediately and actively take action and control over the situation and find new solutions when something has gone wrong. However, A1 and E1 did not agree with this. Lovelock and Wright (1999) claim that maintaining a high reliability and trustworthiness is challenging, as customers are involved in the service production and thereby experience mistakes when they happen. In a complex industry like the automotive industry mistakes are inevitable and do occur at times. The service provider's ability to take control over a situation when something unpredictable happens at these times is covered by the service quality dimension service recovery. Something that proves the opposite of service recovery is the fact that AutoCo never discover that something has gone wrong unless the dealer informs them. When AutoCo fails to identify mistakes, dealers get extra work to inform AutoCo and a feeling of uncertainty that may lead to double orders. To improve service recovery and thus, reliability and trustworthiness, we suggest that AutoCo should work more proactively and pay attention to deviations and inform dealers in these cases. The dealers should not have to do the extra work when AutoCo has made a mistake.

*Table 5-3 Improvement suggestions related to Reliability and Trustworthiness*

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"> <li>• Establish an improved information flow including information such as what parts will be delivered what time</li> <li>• Implement track and trace of packages</li> <li>• Work more proactively and inform dealers in case of deviations</li> </ul>

#### 5.4.4. Accessibility and Flexibility

To reach a higher level of Dealer Simplicity, services and repair parts need to be available at the right time and place in the right amount. Overall, the dealers experienced that AutoCo offer good accessibility and adapt to meet their needs. Dealers have the opportunity to contact AutoCo all hours of the day and claimed that they usually are easy to get hold of. AutoCo's repair part accessibility is also high, as the dealers can receive their orders within a day. Grönroos (2015) emphasizes the importance of Accessibility and Flexibility to achieve high service quality and characterize it as one of the seven criteria for good perceived service quality. If the dealers cannot easily access the service,

the level of Dealer Simplicity would decline and make the dealers less satisfied. Although dealers perceive their accessibility and flexibility as good, there are some areas where AutoCo lack in their accessibility. A summarized list of improvements can be found in Table 5-4.

In DCS, the dealers need to check the system for updates continuously. The response time for cases differ, which creates an uncertainty and affect the accessibility negatively. We suggest AutoCo provide dealers with an estimated time when the case will be handled, to reduce the uncertainty in response time and increase the dealers' perceptions about AutoCo's accessibility. Providing an estimation would also save time for the dealers since they do not need to check the system for updates to the same extent. Moreover, the response time for Urgency orders were expressed by E2 as occasionally too long and C1 believed that some Urgency orders should be handled more urgently. C1 also explained that they contact multiple people at AutoCo, which increases the priority of the case, but at the same time uses excessive resources both at the dealer and AutoCo. To solve this problem, we imply that AutoCo should focus on reducing the response time for Urgency orders. Further, it would be beneficial to skip using different order types such as stock orders, day orders and urgent orders and instead letting the dealers state when they need the repair part, leaving AutoCo to decide how urgent the cases need to be handled.

At special occasions, such as vehicle launches and events for AutoCo's employees, C1 explained that the accessibility can be worsen. We claim that AutoCo need to improve their preparation before these special occasions to ensure adequate accessibility. Lastly, one factor that degrades AutoCo's accessibility according to many dealers is the two-days waiting time for return approvals. Return approvals are generated automatically and the waiting time is caused by the systems that need two-night runs, which updates the system. Grönroos (2015) states that the waiting times affect the accessibility as well. Further, Maeda and Antonelli (2006) express that reduction in waiting time can be translated to time that can be spent on other things. We argue that redesigning the systems to ensure return approvals are given immediately would result in an increased accessibility.

*Table 5-4 Improvement suggestions related to Accessibility and Flexibility*

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"> <li>• Provide estimated time of handling for DCS-cases</li> <li>• Reduce response time for Urgency orders</li> <li>• Revoke different order types and allow dealers to state desired date of order delivery</li> <li>• Improve preparation before special occasions</li> <li>• Provide return approvals immediately</li> </ul>

### 5.4.5. Attitudes and Behavior

All dealers strongly agreed that all of their contact persons at AutoCo are concerned about them and interested in solving their problems in a friendly and spontaneous way. Maeda and Antonelli (2006) claim that emotions are important to consider in their seventh law of simplicity and that emotions can sometimes require moves towards complexity. The dealers claimed that they have established a relationship with AutoCo over the years and expressed that it is beneficial to have a relationship as it increases their willingness to help each other. However, one of the dealers experienced some problems with helpdesk before the relationship was established. Still, dealers claimed that AutoCo has never taken the initiative to build a relationship. The importance of attitudes and behavior for good perceived service quality is emphasized by Grönroos (2015). The fact that a relationship improves the attitudes and behavior of AutoCo could be a problem, as new employees at dealers might get worse service from AutoCo. To improve attitudes and behavior, we suggest that AutoCo should organize events and conferences where the dealers get the opportunity to meet helpdesk and establish a relationship (see Table 5-5).

*Table 5-5 Improvement suggestions related to Attitudes and Behavior*

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"><li>• Organize events and conferences to build relationships</li></ul>

## 5.5. Technical Quality

Overall, dealers are very satisfied with AutoCo as a business partner. A majority of the dealers stated that they are very satisfied while two dealers were satisfied and one dealer was neutral, neither satisfied nor dissatisfied. How satisfied dealers are with AutoCo could be connected to total perceived service quality, since according to Grönroos (1984), perceived service quality is the result of an evaluation process where the customer compare their expectations and experiences. In turn, the experienced service can be divided into technical quality and functional quality (Grönroos, 1984) and if the customers are satisfied in general, both the technical quality and the functional quality are most likely rated high by the dealers. Thus, it seems like dealers feel that their needs are fulfilled by AutoCo and that the technical quality, that refers to the outcome and result of the service process and what the customers receive (Grönroos, 1984), can be considered sufficient in most cases.

The optimal outcome of the order process from a dealer's perspective is that all required repair parts are received in good condition at point of need. Many dealers stated that the repair parts are delivered on time and in good condition. D1 stated that only a few times have the repair parts not been delivered according to the agreement. C1 argued that

delivered packages sprayed in gold would not contribute or help, but the ordinary delivery is enough. The fact that dealers receive what they request and that the result is pleasing, indicates that the technical quality is satisfying. This is aligned with Grönroos (2000) statement that technical quality needs to be at an adequate level and that a good technical quality would not necessarily be sufficient for a customer to experience a good service quality if the functional quality is insufficient.

However, repair part availability for new vehicles has been expressed as an issue by several dealers. E2 argued that “a new vehicle should not stand in a workshop just because repair parts are missing, it should be on the road driving”. The fact that dealers are unable to acquire repair parts lowers the technical quality massively, since the result is an unsolved problem which causes the new vehicle to stand still. To improve the technical quality, we argue that AutoCo need to be better prepared for vehicle launches to ensure that dealers can help their end-customers. An extensive repair part availability should exist and be secured before a new vehicle model is launched.

The optimal outcome of the return process from a dealer’s perspective is that repair parts are returned within the limits of the agreement and credit is received correctly. Returns are in general approved as expected, although D1, D2 and E2 argued that occasionally, returns are mistakenly rejected. At disagreements concerning returns, dealers lose if they cannot prove that it is another intermediaries’ fault. Mistakenly rejected returns lower the technical quality, since the dealer does not receive credit. Therefore, we suggest that AutoCo should work on trying to figure out whose fault it is in the situations where they consider rejecting a return because of some damage and instead trust their dealers and not blame them for the damage.

All dealers believed that AutoCo, its employees, operational systems and physical resources have the knowledge and skills that is required to solve their problems in a professional way, which indicates high technical quality. However, E2 mentioned that sometimes it takes multiple days to find a solution and, in those cases, it does not feel like they have the required competence. Furthermore, one dealer claimed that AutoCo do not always understand who the dealers’ customers are, how they work and that their perceptions of reality differ. This lack of understanding for the dealers’ situation and businesses influences the technical quality negatively. Without an understanding for the customers, AutoCo may set unrealistic demands on their dealers. For instance, the dealers need to return broken repair parts within 24 hours, which is impossible as the dealers do not have time to open all packages within the time limit to ensure they are not broken. In addition, the dealers are not allowed to return broken packages i.e. they are not allowed to open the packages. Therefore, we argue that AutoCo should gain more knowledge about their customers and their reality to provide realistic solutions and set viable requirements which in turn would improve the technical quality. A list of suggestions to improve technical quality can be viewed in Table 5-6 below.

Table 5-6 Improvement suggestions related to Technical Quality

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"> <li>• Ensure extensive repair part availability before vehicle launches</li> <li>• At potential rejections on returns, engage in trying to figure out whose fault it is and trust the dealers</li> <li>• Acquire more knowledge about customers and their situation</li> </ul>

## 5.6. Image

A majority of the dealers believed that AutoCo stand for good performance and values, and that their operations are reliable, which indicate that AutoCo have a strong image. The dealers considered AutoCo to be in the frontline with their solutions and that it offers shorter lead times than its competitors, which makes it superior. Image is according to Grönroos (2015) a key factor in regard to customer perception of service quality. Grönroos (2015) argues that the corporate image may affect the perception of quality in multiple ways and a positive image can compensate a negative experience, which emphasizes the importance of the good image AutoCo possess. When the corporate image is good, the service quality is affected positively, which in turn may enhance Dealer Simplicity. The dealers mentioned that the operations connected to buses are worse than the heavy commercial vehicle brand and VehicleShop does not work well. The dealers stated that they see AutoCo as a whole, and all their brands and the systems they support affect their reputation and image. Consequently, the operations related to the bus brand and VehicleShop affect the corporate image negatively. For AutoCo to improve their corporate image, we suggest that they should focus on the bus brand and VehicleShop (see Table 5-7).

Table 5-7 Improvement suggestions related to Image

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"> <li>• Improve operations connected to the bus brand and VehicleShop</li> </ul>

## 5.7. Value Co-Creation

Many of the dealers stated that AutoCo does not provide any education about how to operate in the two processes and C1, D1 and F1 claimed that they did not know if AutoCo have created any reference guides, e-learnings or similar. However, D1 believed that old references guides existed and A1 argued that AutoCo have created an e-learning, but the dealers need to spend time searching for them. Furthermore, D2 and E1 explained that

they have created their own reference guides to remember the processes and learn how to operate. C1 indicated that in some situations, it is unclear what actions to take and therefore dealers might create excessive work for themselves and AutoCo. According to Grönroos (2011), the service providers may become co-creators if they exploit the opportunity to co-create value during direct interactions with their customers. During interactions, the service providers participate in a joint process and are able to influence the customers' value creation process (Grönroos, 2011). By explaining the value propositions i.e. goods and services and how they can be used to create value, firms can facilitate customer's value creation process (Skålén, 2016). If reference guides and e-learning exist, they are not easily accessible and most likely old, and thereby not used by the dealers. Therefore, we argue that AutoCo currently fails to seize and exploit an opportunity to co-create value. A list of improvement suggestions related to value co-creation can be found in Figure 5-8.

We suggest that AutoCo should educate and help the dealers in their learning process to co-create value. By providing the dealers with educational support, AutoCo would also be in a position where they can influence how their dealers create value. Further, Maeda and Antonelli (2006) state that everything becomes simpler with knowledge and that people need to know how to use an object or tool. Therefore, it is often less time-consuming to follow a manual than finding an own way to complete a task (Maeda & Antonelli, 2006). Hence, we believe educational support would minimize the workload for both AutoCo and their dealers since the dealers would only make the necessary activities for each action stated in the manual. The educational support could include reference guides, e-learning and physical courses. The reference guides could explain how the processes are designed to work and how the dealers should operate. The support should be easily accessible to increase the chances of dealers using the support.

All interviewed dealers have established their own structures for the processes, especially for the return process. D2 expressed that the dealers lack support from AutoCo on how to handle the process and they have own tools that facilitates and help them keep control over the process. Further, D1 stated that dealers should not be required to create own processes to handle the 'original' process. Skålén (2016) claims that service providers can gain knowledge about customers' value creation process at interactions. Customers may give input regarding resources the value propositions lack and new resources to integrate in the existing value proposition (Skålén, 2016). We argue that AutoCo should be more aware of this uncertainty the dealers experience in how to handle the processes, in order to create tools and systems to support the dealers' value creation process. If AutoCo improved their ability to absorb the dealers' needs and issues during interactions and listen to the customer's input, they could improve their value propositions and remove the customers' need to complement the value proposition from AutoCo. To improve this ability, we suggest AutoCo to utilize repair part conferences more, increase interactions and forward the received input to R&D and/or involve dealers in innovation teams.

During the annual repair part conference, dealers meet employees from AutoCo and interact. The dealers also claimed that they discuss problems with each other, share solutions and establish a network of contacts. Further, the repair part conferences contain a lot of information given from AutoCo to their dealers regarding future company goals and strategic objectives. Grönroos (2011) explains that interactions can be seen as a platform enabling value co-creation to occur. These interactions are opportunities for AutoCo to acquire knowledge about the dealers' value creation process and their hierarchy of needs, which later can be used to increase value co-creation and for innovation. Furthermore, Skålén (2016) claims that marketing together with customers can occur when customers help each other use the firm's value propositions to create value. Skålén (2016) also stated that the customers can be involved in marketing activities if the firm provides a platform where they can interact. The repair part conference could be seen as a platform and a situation where marketing is generated together with customers. However, we argue that these conferences could be utilized more to co-create value if AutoCo allocated more time to listen to their dealers than the opposite. Furthermore, it would be beneficial to arrange more conferences where all dealers are invited. Additionally, we argue that AutoCo could provide the dealers with an online platform for them to discuss problems and help each other.

There is not much improvement work that is driven together by AutoCo and the dealers. C1 argued that AutoCo's ability to sense and grasp problems expressed by dealers is weak and if problems are communicated outside AutoCo's structure for improvement suggestions they are ignored, which leaves the dealer with a feeling of hopelessness. Further, C1 said that the regular structure for giving feedback is too time demanding. Skålén (2016) emphasizes the importance of customer input to the innovation process, since the customers are the ones using the firm's value proposition to create value. Customers can both directly and indirectly participate in the innovation process (Skålén, 2016). The dealers could contribute with ideas that are more outside the box as they are not limited by an internal perspective and therefore generally have more creative ideas (Skålén, 2016). Therefore, we argue that it is a severe problem that AutoCo do not absorb input given by dealers and it is a major drawback for AutoCo's innovation process. The customer's feeling of hopelessness concerning giving feedback and the time-consuming process for feedback, could be extremely harmful for AutoCo since dealers might stop expressing their opinions and giving input. Thus, we suggest AutoCo should improve their ability to sense and grasp problems, and develop their structure for customer input, making it is less time-demanding for the dealers.

B1 claimed that AutoCo continuously tries to improve and visit dealers to search for issues to solve. Additionally, D1 said that the Commercial representative ask for opinions and arrange courses where experts participate to educate dealers within different fields. These situations are examples where AutoCo co-create value with their dealers by educating and explaining how to operate and use value propositions. It also shows that

AutoCo aim to gather input from customers. Furthermore, both D1 and F1 use information from connected vehicles. However, D1 mentioned that they still mostly rely on a mechanic to perform the diagnostics. According to Grönroos (2011) co-creation can occur when production and usage are performed simultaneously. In this case, production of information from the connected vehicles and usage of that information is performed simultaneously and thereby co-creation may occur. We believe that if AutoCo helped dealers utilize the information and improved the connected vehicles with more detailed information, the information could be used in a larger extent which would be beneficial.

*Table 5-8 Improvement suggestions related to Value Co-Creation*

IMPROVEMENT SUGGESTIONS
<ul style="list-style-type: none"> <li>• Provide educational support such as reference guides and e-learnings</li> <li>• Improve the ability to sense customers' needs and problems</li> <li>• Utilize conferences to co-create value and allocate more time to interactions</li> <li>• Forward feedback to R&amp;D and involve dealers in the innovation process</li> <li>• Arrange more conferences where all dealers are invited</li> <li>• Create an online platform for dealers to interact with each other</li> <li>• Develop the structure for customer feedback</li> <li>• Improve connected vehicles to provide dealers with more detailed information</li> <li>• Help dealers utilize information from connected vehicles</li> </ul>

## 5.8. Answers to Research Questions

In this section, answers to the three research questions of this study are summarized.

### 5.8.1. RQ1: What characterizes the concept of Dealer Simplicity in the automotive industry context?

The main objective with Dealer Simplicity is to support the dealers, enabling them to focus on serving the end-customer. In the automotive industry context, it was found that the cornerstones of Dealer Simplicity include repair part availability at point of need, excellent information-sharing and simple processes. Having the repair parts at point of need is a prerequisite for serving the end-customer and therefore seen as the most important attribute. However, excellent information-sharing and simple processes are considered almost as important, as searching for information and operating in processes are non-value-adding activities that hinder the dealer from focusing on the end-customer.

### 5.8.2. RQ2: What interactions and activities in the order process and return process are not in line with the Dealer Simplicity concept and thereby degrade the dealer's ability to add value and serve the end customer?

General aspects more related to the activities of the order process and return process were explored, including the number of steps and systems required, and the intuitiveness and simplicity of the processes. It was concluded that the return process is not in line with Dealer Simplicity as it includes a lot of activities and systems and requires extensive manual work. However, the order process was considered to be simple and smooth, and more in line with the concept of Dealer Simplicity. In addition, the current interactions were evaluated by the dimensions system design, information and interaction, reliability and trustworthiness, accessibility and flexibility, attitudes and behavior, technical quality, image and value co-creation. The major opportunities for improvement identified were related to system design, information and interaction and value co-creation. None of the systems are working optimally from a Dealer Simplicity perspective, but Parts System is the biggest deviation. Currently, AutoCo provides information through multiple channels, not easily accessible by the dealers and there is not enough information transparency. AutoCo and their dealers fail to co-create value as they do not provide any educational support to their dealers, efficiently capture improvement ideas or fully understand the dealers' reality.

### 5.8.3. RQ3: How can the interactions and activities in the order process and return process be improved to enhance Dealer Simplicity?

To succeed with Dealer Simplicity, service providers must acquire a new mindset, and find simple solutions to the challenges experienced by the dealers. The major opportunities for improvement where OEM can support their dealers were found in the return process. In a shorter time aspect, minor improvements with a focus on developing the systems and providing dealers with reference guides and/or e-learnings are suggested. In a slightly longer time aspect, the improvements are expanded to include connectivity between the systems, implementation of notifications, improved information-sharing and conferences and courses, online platforms and connected vehicles that provide opportunities for value co-creation are suggested. Lastly, the most optimal would be to remove Parts System, implement a mobile application for DCS, implement a notification center, track and trace of packages, more information transparency and revoke the different order types.

## 5.9. Limitations and Future Research

This master thesis has focused on a single case company in the automotive industry service market and their customers on the Swedish market. Therefore, the challenges and opportunities for improvement could be specific for the context researched. To evaluate whether the findings in this research are applicable within other settings, and if so, to what extent they can be applied on a larger scale, future research is required. Future studies could be performed within other industries, companies and markets to examine simplicity for customers. Comparison between findings could then be conducted to identify differences and similarities within various settings and the context's influence could be evaluated. Further, future research could be of a more theoretical nature and aim to develop a general concept called Customer Simplicity.

Furthermore, additional rigor could have been added to the study by investigating the feasibility of the improvement suggestions and the effort required for implementation. Hence, implementations of this master's thesis' suggested improvements and the corresponding effects of such implementations could be another area for future investigation. Providing an implementation plan and assessing which factors that are most critical from a Dealer Simplicity perspective could further support companies to enhance Dealer Simplicity and prioritize implementations. Likewise, it would be of interest to investigate differences between various dealers by involving more dealers in the research and make customer segmentations. The dealers' demands, experienced challenges and opportunities might differ depending on size, geographical location ownership and culture, which would emphasize the importance of such research.

This research is primarily based on the dealers' perspective, and the perspective of AutoCo is only partly considered. Additional research could place further emphasis on AutoCo's perspective, providing improvement suggestions that take into account how feasible and resource-demanding the suggestions are for AutoCo. The research could aim to simplify for both AutoCo and their dealers, extending the concept to simplify the collaboration. A holistic view could moreover include additional actors such as transporters to simplify for all actors and the operations in the entire supply chain. Finally, an identified area for future research is to limit the study to one of the cornerstones of Dealer Simplicity within the automotive industry, for instance simple processes, to find an optimal state.

## 6. Recommendations

This chapter provides the recommendations to AutoCo that enhance Dealer Simplicity. Firstly, the suggestion improvements related to the activities in the return process are presented. Thereafter, the recommendations related to the interactions, not directly related to any specific activity in the processes, are gathered in different solution-kits.

### 6.1. Restructuring the Return Process

Reducing the number of activities and systems required to operate in the return process is essential to reach a higher level of Dealer Simplicity. From the exhaustive number of activities in the return process, the third subprocess (see Figure 4-13 and 4-14) is most time-consuming according to the dealers. Participant E2 estimated that 60 percent of the time is spent on the third subprocesses Prepare and send return, and that 40 percent are spent on the other three sub-processes Request Return, Check Return Approval and Check Credit. The activities in the process are linked, and consequently changes in one activity affects multiple other activities. Below, suggestions on improvements related to the activities in the return process that would simplify the process are presented. The suggestions are divided into three categories; low-, medium- and high effort. The suggestions presented in low effort are separated from each other and can be implemented individually or collectively, whilst the medium and high are packaged solutions.

#### **Low effort**

1. Provide return approvals immediately. Currently, dealers need to wait for two days to receive a return approval for code 72. Removing the two days would create a more continuous process, reduce the manual work as the need for printing papers disappears, reduce inventory levels at the dealer and enable the inventory balance to be adjusted directly to minimize the risk of selling a repair part that should be returned.
2. One discrepancy report for all return articles. Currently, one discrepancy is required per invoice number. Registering all repair parts on one discrepancy would reduce the number of discrepancies and thus reduce the paperwork.
3. Automatically selected account and recipient of the credit note. Currently, the dealer needs to choose account and receiver for each credit note (activity 4.3).
4. Return all return parts to the same destination. Currently, return parts are returned to both the central warehouse and the support warehouse. Sending all return parts to the same destination would completely remove activity 2.3 and halve the rest of the work in the following activities (3.3-4.4) as only one package

is needed instead of two. Further, it would reduce the time to receive credit notes and be more environmentally friendly.

5. Notifications for received return parts and rejected returns. Currently, the dealers do not receive any notification if or when a return has been rejected and must monitor it manually. Receiving notifications would reduce the paperwork and the time spent on activities 4.1-4.4.
6. Order number-driven discrepancies. Currently, the discrepancies are invoice-number driven, and retrieving invoice numbers is very time-consuming. Using order numbers that are written on the return articles would be simpler, remove activity 1.5 and reduce the risk of making mistakes.
7. One return paper to AutoCo. Currently, dealers attach the discrepancy or return approval reports to the returned package. Only the pack flag should be needed.
8. Provide opportunity to return split orders. Currently, split orders that are under limit cannot be returned. Orders are placed toward one warehouse and should be possible to returned to one warehouse as well.

### **Medium effort**

The same systems are used as before, including Parts System, DMS and Pacsoft. However, the systems are improved and hold the functionality to communicate with each other. Parts System is developed to include the functionality to monitor returns. For instance, by providing the dealers with a list of all return parts, their article numbers, order numbers, invoice numbers, when the return was sent, received by AutoCo, approved or rejected by AutoCo and when credit has been received. Such functionality reduces the paperwork considerably since the printed reports are not needed and thus, activities 1.7, 1.10 and 1.11 are removed. The return approvals are immediately received when a discrepancy has been created, and hence reducing the total lead time of returns with two days. When the return approvals are confirmed (activity 3.14), a pack flag, already filled in with the required information, is automatically printed for the return (removing activities 3.8-3.10). Alternatively, a button "Generate pack flag" could exist that would generate a pack flag for the marked return approvals. Preferably, all return parts are returned to the same destination, removing activity 2.3 and halving the work in the following activities. The stock balance is adjusted automatically when a return is confirmed in the Parts System.

### **High effort**

Only one system, DMS, is required to operate in the return process. In DMS, the dealers are provided with a list of all ordered repair parts that have been listed on a work order and not been sold. The repair parts that are near the return-limit of 42 days for code 72 are flagged in some way, similar to the 28-days list. Suggestively, there are symbols on the right side of the repair parts indicating the return status. For instance, a green bend could indicate that the repair part meets the requirements for return as it has not exceeded the 42 days and is not under limit, whereas a red cross could indicate that it

does not meet the requirements. It is also possible to filter the list and see the return status for a repair part by searching for its article number. In the list, it is possible to see necessary information for each repair part, such as the number in stock, in work orders, and last date for return. The dealer marks the articles to return, chooses return code in a list and confirms the return, similar to the activities of ordering a repair part, and a return approval for code 72 is automatically generated. In addition, transportation for the return can be booked in DMS as well. The stock balance is automatically adjusted and pack flags and barcodes with already filled in information are automatically printed. The return parts can be packed in a box and sent. Preferably, all return parts are returned to one destination.

## 6.2. Improvement Suggestion-Kits

To enhance Dealer Simplicity, multiple actions can be taken. Below, three packages of solutions with different levels of effort are provided. Firstly, minor improvements that can be implemented in a shorter time aspect are presented. The solutions are separated from each other and can be performed individually or collectively. Secondly, solutions that require more effort and integration of the systems are presented. Lastly, solutions that affect the systems and ways of working are presented.

### **Minor improvements**

- *Improve DMS* by making the icons more intuitive and self-explaining. Provide descriptions of buttons and icons when holding the mouse over it to guide the user through the system. Make it easier to cancel orders before they are handled by AutoCo to reduce the number of returns. Provide clarifications of cut-off times and lead times for the different delivery alternatives in DMS, to reduce the risk of making mistakes and simplify the order process for new users.
- *Improve RIS* by ensuring consistency throughout the system. Article numbers of the repair parts shown in the system should be easily accessible and the same repair parts should be found under the same categories for all vehicles. Implement a search function where dealers can search for repair parts and easily find the correct article number.
- *Improve Parts System* by providing illustrative icons and descriptive names on the tabs to guide the user through the system. Make it possible to go backwards in the system to correct faults.
- *Improve DCS* by providing symbols that indicate that a new update has been made in the case. Make it possible to go backwards in the system to correct faults.
- *Improve the information sharing* from AutoCo to dealers by creating a special tab in the dealer portal where the most important information for the dealers is gathered. In addition, an approximation of when the problems will be solved should be provided in the dealer portal to minimize the workload on helpdesk.

Improve the email notifications for updates in DCS by adding detailed information of the update in the email.

- *Provide reference guides* and/or e-learnings that are easily accessible by the dealers.

### **Moderate improvements**

- *Create connectivity* between the systems. See how in section 6.1.
- *Reduce the number of DCS-cases* by providing an approximation of when repair parts that are not available in stock will be available again in DMS. Remove the requirement on DCS-cases in the return process for returns that are not code 72.
- *Remove the need for monitoring DCS-cases* by implementing pop-up windows and sound notifications for updates. Provide a special tab in DCS listing the cases with new updates. Provide estimated time of handling for DCS-cases to reduce the uncertainty in response time and need for chasing helpdesk to receive updates.
- *Co-create value* by offering more conferences and courses where multiple employees from each dealer are invited and focus on interactions during the conferences. Create an online platform for dealers to interact and share solutions and information to help each other use the value propositions from AutoCo. Improve the firm's ability to sense problems and collect customer input. Create a function for customer feedback that is less time-consuming for the dealers. Improve connected vehicles to provide dealers with more detailed information and help the dealers utilize that information.

### **Major improvements**

- *Remove Parts System* and integrate the functionality to handle returns into DMS instead. Restructure the whole return process.
- *DCS mobile application* that includes functionality to create DCS-cases and provide notifications on updates in cases.
- *Notification center* on the computer gathering all information from the different channels.
- *Track and trace of packages* providing the dealer with ETA and time stamps on distribution points, both for order and returns. AutoCo should monitor the track and trace and inform dealers in case of deviations.
- *Information transparency* from AutoCo by providing updates concerning processes and operations such as what repair parts that are included in an incoming stock order, when AutoCo has received a return, and if and why a return has been rejected.
- *Revoke order types* for dealers by only providing AutoCo with information on required delivery day. AutoCo chooses delivery type.

## 7. Conclusions

The service market can be a major source of revenue and profit and offer higher economic benefits than the initial sale of the product. Dealer Simplicity is a new concept that aims to support and simplify the work for dealers, to enable them to focus on serving the end-customer. By enhancing Dealer Simplicity, OEMs can capture a greater share of the potential that exists on the service market and increase customer satisfaction and loyalty of both dealers and end-customers. The aim with this thesis was to provide improvement suggestions to enhance Dealer Simplicity. The repair part order process and return process have been investigated from an end-to-end perspective at a case company within the automotive industry to recognize challenges and opportunities for Dealer Simplicity. These processes constitute the main intersect between OEMs and their dealers. It has been concluded that the most important attributes of Dealer Simplicity within the automotive industry are repair part availability at point-of-need, convenient information-sharing and simple processes.

Multiple challenges in the interactions and activities in the order process and return process at the case company were identified, whereas the major opportunities for improvement were found in the return process. The challenges within the return process were mainly a consequence of a large amount of activities and outdated systems, making the process time-consuming, complex and difficult to learn by new employees. Furthermore, as a consequence of a lacking understanding of the dealers' reality, opportunities for value co-creation are missed. To enhance Dealer Simplicity, suggestions on three different strategic levels are provided; minor, moderate and major improvements. To capture minor improvements, the focus should be on developing the systems and provide dealers with reference guides and/or e-learnings. For moderate improvements, implement connectivity between the systems, provide dealers with notifications regarding DCS-cases, improve their information-sharing toward dealers, improve and arrange more repair part conferences and courses, create an online platform for dealers to interact with each other and improve connected vehicles to provide dealers with more detailed information. For major improvements, remove Parts System and restructure the whole return process, implement a mobile application for DCS, provide a notification center to gather all information to the dealers from different channels, track and trace of packages providing ETA and time stamps on distribution points both for orders and returns, provide more information transparency and revoke the different order types.

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# Appendix A - Interview Template

## Introduction, Dealer specific questions

- How many employees works at this affiliate?
- How many employees are working with the order process and the return process?  
Are the same people working with both processes?
- How long have you been working with the order process and the return process for AutoCo repair parts?
- Did you receive any education on how to work with these processes when you started? From who?
- What are your biggest strengths as a dealer?
- What are your biggest challenges as a dealer?
- What is the share of planned reparations in relation to express-customers?

## Order process

- What are your general opinions on the current order process?
- On a scale from 1-10, how easy would you say that the order process is? Why?
- On a scale from 1-10, how intuitive (or easily understood) would you say that the order process is? Why?
- What do you experience as smooth in the current order process? Any specific steps or activities?
- What do you experience as complicated in the current order process? Any specific steps or activities?
- What is most time-consuming in the order process?
- How satisfied are you with the order process as it is designed and works today?  
*1=Very dissatisfied, 2=Dissatisfied, 3=Neutral, 4=Satisfied & 5=Very Satisfied*

## Return process

- What are your general opinions on the current return process?
- On a scale from 1-10, how easy would you say that the return process is? Why?
- On a scale from 1-10, how intuitive (or easily understood) would you say that the return process is? Why?
- What do you experience as smooth in the current return process? Any specific steps or activities?
- What do you experience as complicated in the current return process? Any specific steps or activities?
- What is most time-consuming in the return process?
- How satisfied are you with the return process as it is designed and works today?  
*1=Very dissatisfied, 2=Dissatisfied, 3=Neutral, 4=Satisfied & 5=Very Satisfied*

## Dealer-OEM relationship

- How would you describe your relationship to AutoCo?

- Who do you communicate with at AutoCo and how?
- What type of relationship do you have with those people?
- How often do you communicate with them and how easily accessible are they?
- When you contact AutoCo, what is usually the case? Can you give an example on what you have discussed during these occasions?
- On a scale from 1-10, how much confidence would you say that you have for AutoCo in their role of OEM? What is the motivation for your response?
- On a scale from 1-10, how much confidence would you say that AutoCo have for you in the role of dealer? What is the motivation for your response?

### **Critical Incident Technique (CIT)**

- Could you tell me about a situation where AutoCo has solved a problem that occurred, in a favorable way that exceeded your expectations?
- Could you tell me about a situation where AutoCo has solved a problem that occurred, in an unfavorable way that did not reach your expectations?

*Follow up questions for CIT:*

- *What led up to the situation?*
- *What did or did not he or she do that was especially effective or ineffective?*
- *What were you thinking and feeling at that moment?*
- *What was the outcome?*

### **Quality dimensions**

- Do you experience that AutoCo's employees have the skills and knowledge to meet your requirements from an OEM?
- How do you experience the response from AutoCo's employees? Are they engaged, interested and involved in finding solutions to your problems?
- Do you feel that AutoCo offer good accessibility and flexibly adapts to meet your needs as a dealer? By that we mean, for example, their opening hours, physical location, employees and systems.
- Do you feel confidence in AutoCo, their employees and their systems? Do they keep what they have promised and act on your best to the greatest possible extent?
- Do you feel that AutoCo acts quickly to take control of the situation and find solutions in cases where something has gone wrong or something unpredictable has happened? Can you give an example?
- Do you feel that AutoCo's operations are reliable and that they offer enough value for money? Do you feel that AutoCo stands for good performance and values shared by you?

### **Summary questions**

- How satisfied are you with AutoCo as an OEM? What is the motivation for your response?

1=Very dissatisfied, 2=Somewhat dissatisfied, 3=Neutral, 4=Somewhat satisfied & 5=Very Satisfied.

- Based on what we have discussed today - If you get to choose three things to change, what would it be?
- If you get to choose three things to remain the same, what would it be?

# Appendix B – Order Process Activities

<b>1.1</b> IDENTIFY REPAIR NEED	<b>1.2</b> CREATE WORK ORDER & PERFORM DIAGNOSIS	<b>1.3</b> DOCUMENT DIAGNOSIS	<b>1.4</b> TRANSLATE DIAGNOSIS TO REPAIR PART NEED	<b>2.1</b> REVIEW STATUS OF REPAIR PARTS IN WORK ORDER	<b>2.2</b> CHECK REPAIR PARTS AVAILABILITY
Customer calls to book service or drops in to customer reception at the dealer.	Create a work order in DMS. The customer describes experienced problem. If the vehicle is at dealer a mechanic performs a diagnosis as well.	In the work order, a detailed description of the problem is documented.	Identify what articles are needed for the repair. Click on direct link in DMS to use RIS as a tool. Find necessary repair parts and paste them into work order.	Review list of articles in work order. Symbols identify the stock status of the article. Green bend = in stock. Red cross = not in stock, requires some action.	Press "Paper and nut" symbol to check repair part availability in-house, central warehouse, support warehouse and nearby affiliates.


<b>2.3</b> SELECT WHERE AND HOW TO SOURCE REPAIR PART	<b>2.4</b> CONFIRM ORDER	<b>2.5</b> REVIEW STATUS OF REPAIR PARTS IN WORK ORDER (AGAIN)	<b>2.6</b> CHECK REPAIR PARTS AVAILABILITY (OTHER)	For green articles go to step 3.9 For yellow articles go to step 3.1 For red articles continue with step 2.7
Mark articles to order with same delivery type. Right click and choose; 1. Flight central warehouse, 2. Road central warehouse or 3. Swedish support warehouse	Press "Create and Send Order" to release order.	Review the list of articles in work order again. Green bend = in stock. Yellow bend = ordered repair part. Red cross = not in stock, requires DCS-case.	If article is not available in central warehouse, Swedish support warehouse or nearby affiliates, check availability in Parts system, or ask for availability through DCS.	

<b>2.7</b> OPEN DCS & CREATE CASE	<b>2.8</b> SPECIFY TYPE OF CASE	<b>2.9</b> MONITOR CASE	<b>3.1</b> RECEIVE DELIVERY	<b>3.2</b> OPEN GOODS RECEPTION IN DMS	<b>3.3</b> COMPARE ORDER & ARTICLE NOS ON DELIVERY WITH ORDER NO IN DMS
Open DCS and enter VIN-number.	Choose type of case. (Choose "Emergency order" for Urgency order). Choose delivery: 1. Pickup between dealers 2. Taxi 3. Urgency order	Monitor DCS case to see any updates. There are no notifications, needs to be done manually.	Deliveries are dropped off inside of the warehouse in the morning. Move the deliveries from the place where it been dropped of.	Open DMS and press "Goods reception" to view list of suppliers and expected/ planned deliveries.	Compare the order- and article nos on each delivery with the order- and article nos in DMS to check that all articles have been delivered.


<b>3.4</b>  <b>CONFIRM DELIVERY</b>	<b>3.5</b>  <b>GENERATE PICK LIST</b>	<b>3.6</b>  <b>SORT ARTICLES BY PICK LIST</b>	<b>3.7</b>  <b>PLACE PICK LIST WITH RELATED ARTICLES IN SHELF</b>	<b>3.8</b>  <b>CREATE DCS CASE FOR NOT DELIVERED REPAIR PARTS</b>	<b>3.9</b>  <b>PREPARE REPAIR/PACK REPAIR PARTS</b>
<p>Right click on every article that matches the order. Press "Finish" to confirm delivery. A delivery confirmation report is automatically printed per order.</p>	<p>Mark the delivered deliveries in DMS and press "Pick list" to generate a pick list.</p>	<p>Pick up pick list and go to the delivered articles. Sort the delivered articles and place them on the right pick list.</p>	<p>Place both the pick lists and the related articles in a shelf.</p>	<p>Repair parts that are not delivered requires DCS-cases.</p>	<p>If all articles = Green &amp; repair is confirmed, pack the repair parts from stock. Packed articles are marked with a cart in DMS.</p>

<b>i</b>  <b>TRANSPORT REPAIR PARTS TO REPAIR STATION</b>	<b>ii</b>  <b>MECHANIC PERFORMS REPAIR SERVICE</b>	<b>iii</b>  <b>PAY INVOICE</b>	<b>INITIATE RETURN PROCESS FOR UNUSED REPAIR PARTS</b>
<p>Transport the repair parts to its repair station when it is time for reparation.</p>	<p>A mechanic performs the repair service.</p>		

# Appendix C – Return Process Activities

<p><b>1.1</b></p> <p><b>MECHANICS IDENTIFY RETURN NEED</b></p>		<p><b>1.2</b></p> <p><b>CHECK 28-DAYS LIST</b></p>	<p><b>1.3</b></p> <p><b>IDENTIFY RETURN NEED FROM THE LIST</b></p>	<p><b>1.4</b></p> <p><b>NOTE REPAIR PARTS THAT SHOULD BE RETURNED ON A LIST</b></p>	<p><b>1.5</b></p> <p><b>RETRIEVE INVOICE NUMBERS</b></p>
<p>Personnel in workshop identifies return need and leaves the article at the office. The article is later put on a shelf.</p>		<p>Check the 28-days Excel list to see if any more repair parts need to be returned. Dark-marked repair parts are critical.</p>	<p>For dark-marked repair parts: look at transaction history in DMS or/and ask mechanics and customer reception if the repair parts should be returned or not.</p>	<p>All article numbers for the repair parts that should be returned are written down on a list.</p>	<p>In Parts system, press Do4 Invoice Requery and enter article no. Retrieve invoice no for the order that should be returned. Manually write it down on the "return-list".</p>

<p><b>1.6</b></p> <p><b>CREATE DISCREPANCIES</b></p>	<p><b>1.7</b></p> <p><b>PRINT DISCREPANCY REPORTS</b></p>	<p><b>1.8</b></p> <p><b>CONFIRM DISCREPANCIES</b></p>	<p><b>1.9</b></p> <p><b>ADJUST STOCK BALANCE</b></p>	<p><b>1.10</b></p> <p><b>PRINT STOCK BALANCE REPORT</b></p>	<p><b>1.11</b></p> <p><b>PLACE REPORTS IN FOLDER</b></p>
<p>In Parts system, press Co0 and then Co1 to create discrepancy. Enter name, invoice no, article no, quantity and reason for return (code 72). One discrepancy per invoice no.</p>	<p>Press F5 to view summary of all created discrepancies. Print discrepancy reports, one report for each invoice no.</p>	<p>Enter F6 to confirm the discrepancy. Repeat for each discrepancy.</p>	<p>Open DMS and insert article no. Remove the article and note the discrepancy report no as the reason for the adjustment.</p>	<p>Confirm stock balance adjustment. A report for each adjustment is printed.</p>	<p>Place the discrepancy reports and stock balance adjustment reports in folder.</p>

	<p><b>2.1</b></p> <p><b>VIEW LIST WITH ALL RETURN APPROVALS</b></p>	<p><b>2.2</b></p> <p><b>PRINT RETURN APPROVALS</b></p>	<p><b>2.3</b></p> <p><b>CHECK DESTINATION OF RETURNS</b></p>	<p><b>3.1</b></p> <p><b>BRING REPORT/REPORTS TO WAREHOUSE</b></p>	<p><b>3.2</b></p> <p><b>MATCH RETURN PARTS WITH REPORTS</b></p>
	<p>In Parts system, press Co1 3 to review list of return approvals.</p>	<p>Mark all rows in the return approval list with 1 to print return approvals. Two copies of each return approval report. Pick up return approvals.</p>	<p>Check destination of returns in Parts system by looking at no of digits. 6 digits: Ghent 5 digits: E-tuna.</p>	<p>Bring a copy of the discrepancy reports and/or return approval reports from the office to the the return articles in the warehouse.</p>	<p>Match return articles in shelf with the correct discrepancy report and/or return approval.</p>

<b>3.3</b> FIND BOX	<b>3.4</b> PACK RETURN PARTS AND REPORTS	<b>3.5</b> SEAL THE PACKAGE	<b>3.6</b> REGISTER RETURN IN POSTNORD	<b>3.7</b> BOOK TRANSPORT	<b>3.8</b> PRINT/ DOWNLOAD/ PICK UP PACK FLAG
Find a box and remove any old labels.	Put return parts in the box together with related discrepancy reports and/or return approvals. Returns with the same destination can be packaged together.	Seal the package.	Go back to office and log in to Pacesoft. Fill in approximate weight, type of content (return approval no), no of pallets & pallet type to receive a barcode.	Book transport in Postnord to pick up the return.	Download pack flag by logging in to the dealer portal and choose pack flag for the specific receiver. Print pack flag.

<b>3.9</b> BRING PACK FLAG & BARCODE TO PACKAGE	<b>3.10</b> FILL IN PACK FLAG	<b>3.11</b> ATTACH BARCODE AND PACK FLAG TO PACKAGE	<b>3.12</b> MOVE PACKAGE TO RETURN AREA	<b>3.13</b> CONFIRM RETURNS	<b>3.14</b> WRITE DOWN PACKAGE ID ON OPTIONAL REPORT
Bring pack flag and barcode to return package.	Fill in district no, dealer no, date, approximate weight, case number and return approval no/nos on the pack flag manually.	Attach the barcode to the package at optional place. Attach the pack flag to the package.	Move package to return area to be picked up.	Log in to Parts system and press F9 to confirm returns.	Write down received package ID from Pacesoft system on optional report in the folder.



<b>4.1</b> LOG IN TO SAP TO CHECK RECEIVED CREDIT	<b>4.2</b> MOVE/THROW REPORTS	<b>4.3</b> CHOOSE ACCOUNT AND RECEIVER OF CREDIT NOTE	<b>4.4</b> CHECK REMAINING REPORTS
Log in to SAP to see if credit has been received.	Find reports for received credits in folder and move them further back in the folder or throw them away.	Choose account and receiver of the credit note.	Check remaining reports in the folder to see that credit has been received. If not, create DCS-case.



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