Master's degree thesis

LOG950 Logistics

Developing a Supply Chain Framework for Omni-Channel presence: Retailer Omni-Channel Knowledge Framework

Jacqueline Knutsson and Veronica Lofnes Silden

Number of pages including this page: 86

Molde, 15.05.2017

Molde University College
Specialized University in Logistics

Mandatory statement

Each student is responsible for complying with rules and regulations that relate to examinations and to academic work in general. The purpose of the mandatory statement is to make students aware of their responsibility and the consequences of cheating. Failure to complete the statement does not excuse students from their responsibility.

*Please complete the mandatory statement by placing a mark **in each box** for statements 1-6 below.*		
1.	**I/we hereby declare that my/our paper/assignment is my/our own work, and that I/we have not used other sources or received other help than mentioned in the paper/assignment.**	☒
2.	**I/we hereby declare that this paper** 1. Has not been used in any other exam at another department/university/university college 2. Is not referring to the work of others without acknowledgement 3. Is not referring to my/our previous work without acknowledgement 4. Has acknowledged all sources of literature in the text and in the list of references 5. Is not a copy, duplicate or transcript of other work	Mark each box: 1. ☒ 2. ☒ 3. ☒ 4. ☒ 5. ☒
3.	**I am/we are aware that any breach of the above will be considered as cheating, and may result in annulment of the examination and exclusion from all universities and university colleges in Norway for up to one year, according to the Act relating to Norwegian Universities and University Colleges, section 4-7 and 4-8 and Examination regulations** section 14 and 15.	☒
4.	**I am/we are aware that all papers/assignments may be checked for plagiarism by a software assisted plagiarism check**	☒
5.	**I am/we are aware that Molde University College will handle all cases of suspected cheating according to prevailing guidelines.**	☒
6.	**I/we are aware of the University College's rules and regulation for using sources**	☒

Publication agreement

ECTS credits: 30

Supervisor: Bjørn Jæger

Agreement on electronic publication of master thesis

Author(s) have copyright to the thesis, including the exclusive right to publish the document (The Copyright Act §2).
All theses fulfilling the requirements will be registered and published in Brage HiM, with the approval of the author(s).
Theses with a confidentiality agreement will not be published.

I/we hereby give Molde University College the right to, free of charge, make the thesis available for electronic publication: ☒**yes** ☐**no**

Is there an agreement of confidentiality? ☒**yes** ☐**no**

(A supplementary confidentiality agreement must be filled in)

- If yes: **Can the thesis be online published when the period of confidentiality is expired?** ☒**yes** ☐**no**

Date: 15.05.2017

Preface

This master thesis is the final assignment of our master degree at Molde University College and marks the end of our studies in logistics. This research was conducted between October 2016 and May 2017 and covers some of the many topics we have focused on over the past two years as students. There have been many challenges with this research and several moments of frustration. However, it has been both educational and rewarding. This thesis will hopefully reflect our hard work and who we are as students.

We would like to express our sincerest appreciation to our supervisor Bjørn Jæger. He has given us guidance throughout this entire process and provided us with constructive suggestions and recommendations. Furthermore, he has been flexible with his time, and always made time to answer our questions, either by mail or face-to-face communication.

We would also like to thank Moods of Norway for letting us write for them, and providing us with an interesting and highly relevant topic. Moreover, retail director Hans Petter Hübert deserves a proper acknowledgment as he has given us great insights both face-to-face, on Skype and via mail.

Furthermore, we would like to express our gratitude to Steffen Larvoll, who gave us insights into different logistical elements to consider in an omni-channel environment.

Jacqueline Knutsson and Veronica Lofnes Silden
Molde, Norway
May 2017

Summary

The rapid rise of mobile solutions and technological advancements is blurring the lines between physical and online shopping, allowing customers to purchase across multiple touchpoints. This has shaped the need for an omni-channel environment, where customers can have an uninterrupted shopping journey," anytime, anywhere." Through this shopping journey, buyers expect convenient solutions and multiple options for fulfillment, and are disappointed if goods are out of stock or delivered late. Thus, the challenge for retailers is to meet customer expectations across all touchpoints. However, many struggle to succeed due to the lack of comprehensive logistical capabilities and more specifically, inventory visibility. Many have, therefore, invested in technology that allows for a single-view of inventory, and ended up with RFID-technologies as the best solution. However, this technology must be applied skillfully in order to create a successful omni-channel experience. As a result, the following thesis aims to research the logistical requirements of an omni-channel experience and how these requirements can be solved through the use of RFID-technologies.

This thesis was written in collaboration with Moods of Norway and hence, a single-case study was applied. Data was collected with an explorative approach through the use of in-depth interviews, and there were two different respondents. This data provided a better understanding for interpreting secondary sources and gave a deeper insight into the industry.

The results from our interviews showed that RFID-technologies is a crucial tool for omni-channel retailers due to how it improves visibility across multiple touchpoints. Furthermore, we found that RFID-technologies should be used to improve the following business areas: inventory strategy, fulfillment options, returns and customer service. Based on this, we developed the Retailer Omni-Channel Knowledge-framework (ROCK) and analyze Moods of Norway's position in it. It was concluded that they have yet to become an omni-channel brand, as they have a medium performance in the ROCK-framework.

Contents

1.0 Introduction 1
1.1 Objective and motivation 1
1.2 Background 1
1.3 Trends in the apparel industry 2
1.4 Supply chain strategies 3
1.5 Problem statement and research questions 5
1.6 Structure of thesis 5
2.0 Technological background 6
2.1 RFID-technology 6
2.2 RFID-components 6
2.2.1 RFID standards 7
2.3 RFID-trends in the apparel industry 8
3.0 Chapter 3. Theoretical foundation 10
3.1 Supply chain management 10
3.2 Supply chain strategies 10
3.3 Customer touchpoints 10
3.4 Retail sales channels 12
3.4.1 Offline channel 13
3.4.2 Online channel 13
3.5 Multi-channel retailing 15
3.6 Cross-channel retailing 16
3.7 Omni-channel retailing 16
3.7.1 Omni-channel Consumer behavior 18
3.7.2 The omni-channel customer life-cycle 21
3.8 Core competencies of an omni-channel supply chain 22
3.8.1 Supply chain visibility 24
3.8.2 Identifying logistical requirements 24
3.9 First mover strategy 26
4.0 Industry practice 28
4.1 Macy's 28
4.2 Hummel 29
4.3 Lessons from the industry 31

5.0 Research Methodology 33
5.1 Aim and Research Questions 33
5.2 Research design 33
5.3 Research Approach 33
5.4 Research Strategy 34
5.5 Category of case study 34
5.5.1 Exploratory approach 34
5.6 Form of case study 35
5.6.1 Single case study 35
5.7 Data collection 35
5.8 Primary data 35
5.8.1 In-depth interviews 36
5.9 Secondary data 37
5.10 Validity and reliability 37
6.0 Empirical evidence 39
6.1 Empirical evidence 39
6.2 Interview highlights 39
7.0 Findings 42
7.1 Foundation of an omni-channel 42
7.3 Specific requirements 43
7.4 Potential benefit 44
7.5 Summary 45
8.0 The ROCK-framework 45
8.1 Definition of a framework 45
8.2 Background of the ROCK-framework 45
8.3 The ROCK-framework 46
8.3.1 The ROCK-framework explained 46
8.3.2 Quality of the ROCK-framework 51
9.0 Case company: Moods of Norway 52
9.1 Company presentation 52
9.1.1 Current situation 53
9.2 The beginning of Moods of Norway's omni-channel journey 54
9.3 Ship-from-store 55
9.4 Click-and-Collect 56

9.5 Smart fitting rooms and green screens 56
9.6 Omni-channel status 57
10.0 Analysis 58
10.1 Analysis of Moods in regards to the ROCK-framework 58
10.2 Analysis recapped 61
11.0 Discussion 62
11.1 Discussion 62
12.0 Conclusion 65
12.1 Conclusion 65
13.0 Future recommendations and limitations 67
13.1 Future recommendations 67
13.2 Future research 67
13.3 Limitations 68
14.0 References 69
15.0 Appendices 76

Figure List

Figure 1. Channel evolution 3
Figure 2. RFID-components 7
Figure 3. Customer touchpoint phases 11
Figure 4. The omni-channel customer lifecycle 21
Figure 5. Core competencies of an omni-channel 23
Figure 6. Integrating Digital and Brick-and-Mortar 32
Figure 7. RFID implementation 54

Table List

Table 1. Customer preferences 12
Table 2. Channel use at each stage of the decision-making process 19
Table 3. Online versus offline 20
Table 4. Digital Communication Matrix 30
Table 5. Interview overview 37
Table 6. The ROCK-framework 46
Table 7. The ROCK-framework modified 61

Graph List

Graph 1. Media Development 1960-2016 31

1.0 Introduction

Chapter 1 introduces the main goal of this master thesis, followed by a short background description. This description contains information about the characteristics of today's fashion apparel industry and the different channel strategies companies can embrace. Furthermore, we present the problem statement and research questions of the thesis. Lastly, an overview of the various chapters is briefly introduced.

1.1 Objective and motivation

The aim of this master´s thesis is to explore the concept of omni-channel retailing and create a successful omni-channel for Moods of Norway based on both primary and secondary data. This knowledge will focus on how an omni-channel strategy affects traditional logistical operations and highlight how Radio Frequency Identification (RFID) technologies are crucial tools. However, it is worth mentioning that the primary focus has been the usage of RFID-technologies in the downstream part of the supply chain.

1.2 Background

Global rivalry and technological advancements continue to change how companies operate, which forces business leaders to re-think their strategies. The rapid rise of mobile solutions and multiple sales channels enables consumers to purchase products wherever and whenever they see fit. Likewise, they can access information and compare products based on factors such as quality and price, as well as choose between home deliveries, in-store shopping or click-and-collect (Christopher, 2016). As a result of this, retailers are seeing the need to integrate multiple customer touchpoints and deliver an "omni-channel" experience. "Omni-channel retailing" has over the last year received a lot of attention and is dealt with excessively in the fashion retail industry. The word omni-channel originates from the Latin word "omnis", which means "all" or "universal" (Houghton Mifflin Company, 2005). An omni-channel is "an integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping" (Lflogistics.com, 2017). The aim is to remove the barriers between different channels, both online and offline, which means that different channels and touchpoints should be

managed as a unit (Mirsch, Lehrer and Jung, 2016). This implies that the customer should have a seamless shopping experience that allows him or her to shop at their convenience, anywhere at any time (Hübner, Holzapfel and Kuhn, 2016). However, delivering such a shopping experience is easier said than done. An omni-channel strategy is hard to manage due to the significant implications it inflicts on logistical operations, both regarding integration and coordination. As a result, many fashion retailers have realized that technology is necessary to move away from the traditional supply chain, where one operates in silos, towards a highly integrated and technological-driven supply chain. Therefore, many retailers have invested in RFID. The reason for this is that RFID technologies identifies, captures and shares information on an item-level basis which increases visibility and potentially improves logistical operations. Furthermore, it lets the retailer know a product's immediate status, its location and the processes it has completed, which is necessary to meet customer expectations through all the different sales outlets. RFID is therefore considered to be the cornerstone of an omni-channel experience, and several apparel companies are now working hard to become the winner of the "omni-channel race" (Hübert, 2017).

1.3 Trends in the apparel industry

The fashion apparel industry is a significant part of world trade and consists of unique products that are characterized by short lead-time, volatile demand, impulse purchases, short product life-cycles and low sale predictability (Chan, Ngai, & Moon, 2016). These traits have in later years been defined as fast fashion.

Fast fashion is a concept that has emerged over the last 20 years, with a high focus on agility and consumer driven demand. The pioneers within fast fashion are major brands, like ZARA, Topshop and H&M, which started using catwalk trends to interpret designs to provide customers with the latest trends in stores, by a minimum of three to five weeks. This trend forced a shift in the fashion industry, where it went from forecasting future trends to using real-time data to predict consumer needs and preferences (Bhardwaj & Fairhurst, 2009). This shift was made possible by the utilization of RFID-technology, as RFID allows retailers to receive real-time information about which products that leave the store and not.

Today, RFID continues to be a valuable tool within fast fashion. The reason for this is that with new consumer segments, such as Gen Y, new preferences and expectations have been

developed. Today's society is technologically-driven, and customers expect fashion retailers to provide convenient shopping solutions which fit each and every individual's desires. This trend has forced fashion retailers to utilize both offline and online channels by integrating all different customer touchpoints, both digital and non-digital. This change in utilization has led to a shift in the traditional supply chain structure and created new and different supply chain strategies.

1.4 Supply chain strategies

E-commerce nowadays offers much convenience by enabling customers to shop wherever and whenever they want, whether it's at home on a computer or on the move with their smartphones. All transactions are now made possible through different electronic devices, and it is, therefore, no longer necessary to visit the traditional "brick-and-mortar" store. As a result, traditional supply chain strategies are being challenged. Companies have been forced to change their strategies to attract and retain customers regarding logistics, IT-systems, and communication. This has resulted in the extinction of the single-channel strategy, with only one shopping outlet, and made room for more complex strategies. Nowadays, we're therefore talking about a multi-, cross- or omni-channel. These three mentioned strategies have different levels of complexity, with omni-channel being the most challenging to adapt. The figure below illustrates the levels of complexity between the various channel strategies.

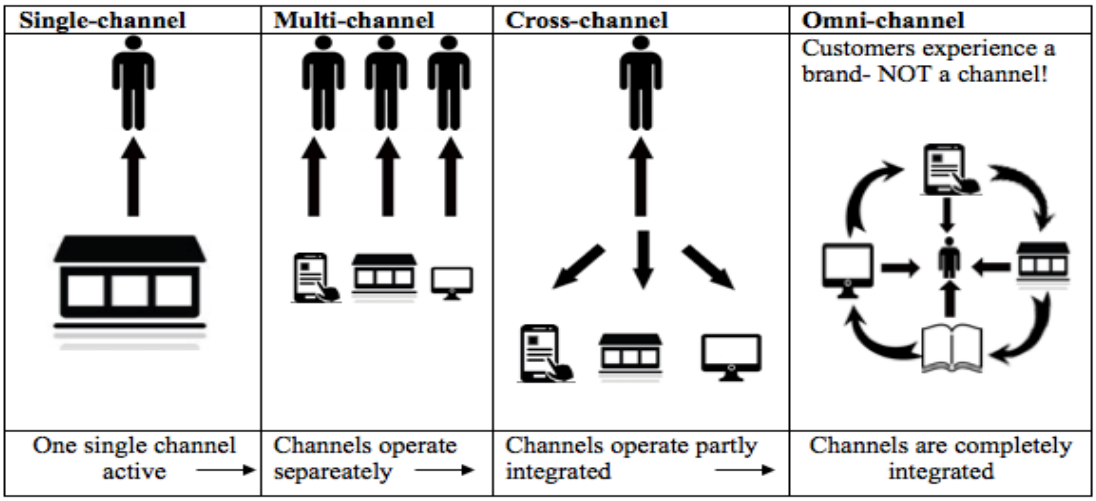


Figure 1: Channel Evolution (Brown, 2016)

Here we can see that the single- and multi-channel strategy is rather primitive, where different divisions of the organization operate in silos and therefore does not need to

communicate and coordinate with each other. A cross- or omni-channel on the other hand, demands a high level of integration and coordination since the different divisions should operate in harmony. The level of complexity is high, and especially for an omni-channel strategy, where the customer should be able to move seamlessly through all channels (touchpoints). This means that the customer, in theory, should not experience any differences in for example service, payment or product availability. The different touchpoints must therefore efficiently be able to provide and receive inventory information in real-time so that customers are not promised something that the retailer cannot deliver. Hence, a single view of inventory is critical. Retailers have therefore been forced to look at technologies which allow for this to happen and ended up with RFID as the best solution. *"The advent of RFID as a supply chain traceability technology results from the drive for agility, to respond to increasing product proliferation and demand volatility. An agile or "quick response" supply chain is reliant on the timeliness and quality of shared information. The ability to access real time product information anywhere along the supply chain is a thus a key component of becoming truly agile" (Mangan, Butcher and Lalwani, 2008).* So, by the use of RFID-technologies retailers are now able to accurately and timely capture where products are and when they are expected to arrive. This gives them a superior overview of all touchpoints so that they can all melt into one.
In the future, this will ideally be taken so much further where we will no longer be dependent on a single brand. This somewhat farfetched future also consists of ideas like the usage of RFID in the aftermarket. This approach involves using RFID-technologies in the clothes, which is what is done today. However, in today's situation, the tag is taken off when you purchase the item because of privacy advocates, but what if the store left it on? What if we could have RFID- technologies in our home, in our closet? This would mean that the closet would be able to store information about the items inside. This means that with the help of your future automatic closet, you can see when you bought the item, how worn it is and where you can purchase the same or a similar item. This is one of the many possibilities RFID- technologies offer, and there are still many opportunities that have yet to be discovered. However, these futuristic prospects are not considered further in this thesis as we focus on current challenges in establishing an omni-channel environment for Moods of Norway.

1.5 Problem statement and research questions

Based on the information given above, it becomes apparent that E-commerce and technology have changed the way fashion retailers operate. As digital customer touchpoints are growing fast and convenience continues to be in focus, the need for omni-channel retailing has emerged. However, omni-channel retailing has major inflictions on logistical operations and must, therefore, be properly executed in order to deliver an omni-channel experience. Based on this information, we developed the following problem statement:

How can RFID-technologies improve supply chain performance and create an omni-channel strategy for Moods of Norway?

This problem statement led to the development of the following research questions:

1) Why is RFID-technologies an essential key to successfully creating an Omni-channel?
2) How can real-time visibility support the logistical operations of an omni-channel environment?

1.6 Structure of thesis

This thesis is written in a systematic order and consists of 12 chapters. Above chapter 1 was presented and the remaining parts are organized in the following way: Chapter 2 presents the technological background, which focuses on RFID-technologies and the usage of this technology in the apparel industry. The third Chapter introduces the theoretical foundation for this research, which centers on the concept and logistical requirements of an omni-channel environment. Chapter 4 shows how two different fashion retailers have created their omni-channel strategies, while Chapter 5 introduces the methodological approach used to answer the research questions and problem statement. Chapter 6 contains empirical evidence, which includes the most important discoveries of our in-depth interviews. The seventh Chapter provides a discussion of our findings, while Chapter eight presents the ROCK-framework which we have developed with the help of our research. Chapter 9 gives a company presentation of Moods of Norway, while Chapter 10 analyzes Moods position in regards to the ROCK-framework. Furthermore, this section provides answers to the problem statement and research questions, as well as a discussion and

conclusion. Chapter 11 provides future recommendations and limitations, while the twelfth and final Chapter includes our references and appendix.

2.0 Technological background

This chapter presents the core of RFID-technologies, including the different components. Furthermore, this chapter exemplifies how RFID can and have affected the fashion apparel industry.

2.1 RFID-technology

"RFID can be defined as a strategic technology tool redesigning business processes, cutting costs, and improving the operational performance. It is used for a wide variety of application areas ranging from retail to manufacturing, healthcare, logistics and defense. It may improve the potential benefits of supply chain management through increase of the four factors; efficiency, accuracy, visibility and security" (Ustundag, 2012). RFID stands for Radio Frequency Identification. It is an innovative technology that benefits supply chains substantially by reducing human error and labor, as well as providing more control. Through the use of RFID, companies receive reliable, real-time information related to inventory levels, delivery times and order status, which helps reduce and remove uncertainty and variability in the supply chain. Furthermore, the data provided by RFID can be used to improve forecasting, which leads to fewer out-of-stock situations and higher customer satisfaction (Ustundag, 2012).

2.2 RFID-components

The RFID system consists of a tag, reader, communication network and RFID software. The tag contains of a computer chip and an RF antenna, which wirelessly communicates with the reader before the communication network connects the reader to the information software. The software system collects, synchronizes and communicates with the warehouse systems and stores the information in a database (Wisner, Tan, & Leong, 2014). The picture below illustrates how the different components interact with each other and work together.

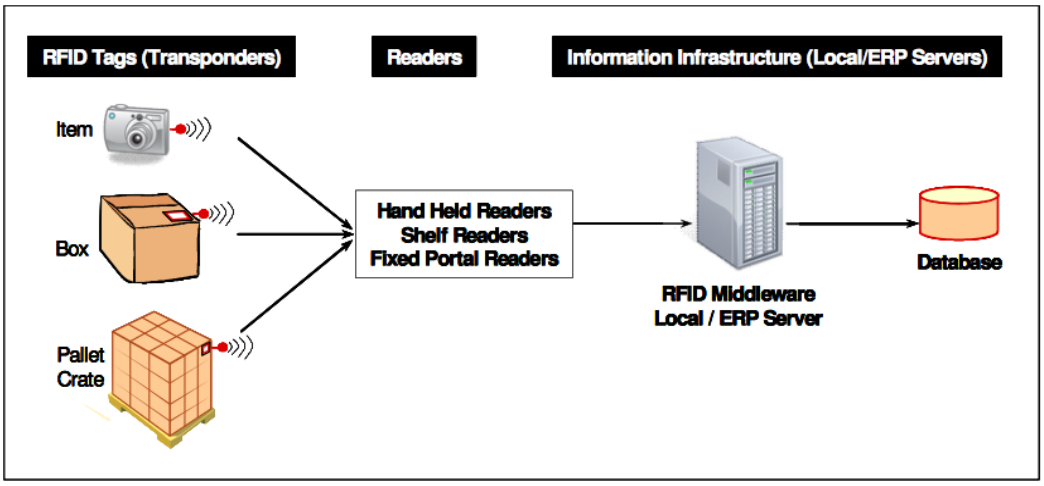


Figure 2: RFID-components (Wisner, Tan, & Leong, 2014)

The key component is the RFID tag, which is why this will be further explored. A RFID tag can store much larger information than the traditional barcode, which is the main reason why the barcode was not sufficient for cross- and omni-channel usage (Jones, 2016). The tag is an integrated circuit consisting of memory, a small CPU/processor and an antenna. There are several types of tags and they are classified as either active, passive or semi-passive. The active tags have a longer range and a power source of their own, and these are the most expensive tags (de Mel, Herath, McKenzie, & Pathak, 2016). These tags can to store more information, up to 128 kilobytes, which is quite a lot compared to the others (Roberti, 2015). Passive tags rely on the radio-frequency energy that is transmitted by the reader to run the circuitry on the chip and reflect the signal back to the reader. This reflection is a weaker signal, meaning that the reader has to be closer to the tag, typically 5 cm to 3 m, to read the signal. This can vary based on the size of the antenna, which is directly related to the size of the tag, where a larger antenna, is equivalent to a larger tag. These tags were traditionally able to store basic information, such as serial number and identification number. These tags are capable of storing up to 1 kb, however, recent development has taken these tags up to 64 kb memory (Roberti, 2015). This development allows the tags to store more information, such as “when” and “where” it was bought.

2.2.1 RFID standards

In RFID, two primary standards are used, namely the EPC standard and the 18000 standard. EPC Global Inc., a subsidiary of GS1, is the creator of the traditional UPC barcode, which has been used for many years. Previously, it was believed that RFID would

replace the UPC barcode, however, this has yet to fully happen. The International Standard Organization (ISO) manages the 18000 standard (Wisner, Tan, & Leong, 2014), while the EPC standard is a commercially driven initiative, mostly dominated by retailers and other large end-users. The ISO is the biggest developer of voluntary international standards, with 163 member countries (Iso.org, 2017). These two standards have the same values and are therefore working hard together, where GS1 members often participate and often serves as chair or secretariat in ISO projects. Because of this, GS1 have adopted several ISO standards and several GS1 standards are ISO-compliant (GS1 and ISO Partnering for Standards, n.d.).

2.3 RFID-trends in the apparel industry

RFID has gained a lot of attention over the past years and has proven to have significant implications on business operations. Many different industries have piloted RFID-technologies, but the apparel sector has perhaps shown the most interest in this technology. Fashion retailers see how RFID can benefit their supply chains substantially, and the main reason for this is that RFID allows retailers to gain control over products on an item-level basis, which results in improved supply chain visibility. Many apparel companies have therefore tried to "crack the code" of RFID, but many have yet to succeed. There are several examples of failed implementations, like J.C Penny Co, who canceled their pilot project after several problems. As a result of the price and stories of failure, the success of RFID has been delayed (Bjork, 2014). However, this has slowly changed. The success story of Zara and their parent company Inditex SA, have created increased and renewed interest in RFID. Zara started their implementation in 2014 and estimated that by the end of 2016, the rollout would be complete. So far, it looks like Zara has had huge success. The reason for this is that Zara learned from the mistakes made by companies like J.C Penny.

The case of J.C Penny was an implementation project of RFID back in 2011-2012, where one of the major problems was that the RF signal interfered with the existing anti-theft sensors. As a solution, they decided to remove the anti-theft sensors. This turned out to be a major mistake, and theft increased dramatically. Because of this, the RFID project was terminated (Bjork, 2014). Zara learned from this and decided to solve this problem before they started implementing. They began their experiments in 2007 and were able to create reusable RFID tags that were attached inside the security tag. By doing this, they removed

the problem that J.C Penny had. Additionally, they were able to remove the tag at checkout and therefore avoid problems with privacy advocates, which had been an issue for the large retailer Wal-Mart, where the tracking device would follow the customer out of the store. These lessons have been a huge success and have enabled Zara to deliver smart and responsive fashion (Bjork, 2014). Zara's success story has over the years inspired others, and many large retailers, such as Nike and Macy's, have followed in their footsteps and invested heavily in RFID.

The current trend within the apparel industry is "omni-channel retailing," and RFID is believed to be the building block of this phenomenon (Hübert, 2016). As an omni-channel strategy is customer-oriented and aims to satisfy the customer at anytime and anywhere, fashion retailers must be able to meet customer expectations at all times. This means that retailers must know a product's immediate status and its location and the processes it has completed; which RFID-technologies allows. Fashion retailers are therefore using RFID to transform themselves from silo-based operations to an integrated system. By doing so, retailers will have a highly interconnected and agile supply chain, which delivers real-time information across all customer touchpoints.

3.0 Chapter 3. Theoretical foundation

Chapter 3 provides a thorough explanation of the theoretical framework of this thesis. This includes literature on customer touchpoints and different types of retail channels. Furthermore, it presents the different supply chain strategies that have been developed by combining different retail channels, such as the multi-, cross- and omni-channel strategy. Omni-channel retailing will be further elaborated, including consumer behavior, requirements on the supply chain and the potential first mover advantage.

3.1 Supply chain management

"Supply Chain Management is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders" (Croxton et al., 2001). Based on this definition, it becomes clear that supply chain management is essential within any company and that the ability to integrate key business processes throughout the entire chain is a necessary mean. Thus, efficient supply chain management is critical for Moods of Norway future success.

3.2 Supply chain strategies

Supply chain strategies are often categorized as either lean or agile, where lean strategies are fitting for a predictable market and agile for a volatile market. In more recent times, a combination called "leagile" have emerged and become a successful strategy. Here the supply is lean upstream to achieve economy of scale, and agile downstream, to be flexible and quickly react towards customer demands (Leung, Cheung, & Chu, 2014). As fashion retailers become more agile and customer touchpoints increase, new supply chain strategies emerge.

3.3 Customer touchpoints

A customer touchpoint is defined as *(…" all of the different ways that your brand interacts with and makes an impression on customers, employees and other stakeholders, whether it is through advertising, a merchandising display or a customer-service call, is a brand touchpoint."* (Davis and Longoria, 2003). Another explains touchpoints as *"any time a*

potential customer or customer comes in contact with your brand- before, during and after they purchase something from you" (Bowen and Ozuem, 2016). Touchpoints can, therefore, be divided into three different categories of experience: pre-purchase experience, purchase experience, and post-purchase experience. The pre-purchase experience focus on touchpoints that affect the customer to buy a product or not. A pre-purchase touchpoint should aim at steering the customer towards your brand and encourage a purchase by shaping brand expectations and perceptions. A pre-purchase touchpoint could, for example, be free samples, direct mail or a visit to the company's website. A purchase experience touchpoint, on the other hand, is those touchpoints who "closes the deal" with a customer. Hence, the purchase experience often happens in-store, where sales personnel assists the customer and presents the value of the brand and products. Furthermore, the sales staff and other customers make you more confident to buy a certain product, which gives validation. The purchase experience is about showing the customer that you deliver the best product or service. Lastly, a post-purchase experience naturally occurs after the sale and aims at increasing brand loyalty. Examples of this would be different types of customer service or newsletters. It is also worth mentioning that the post-purchase experience has the touchpoints, which have received the least attention and focus on an overall basis. However, the post-purchase touchpoints are just as important as the others (Davis and Longoria, 2003). Lastly, the post-purchase experience should include returns. In the figure below, an illustration of some of the possible different touchpoints within each of the three phases is presented.

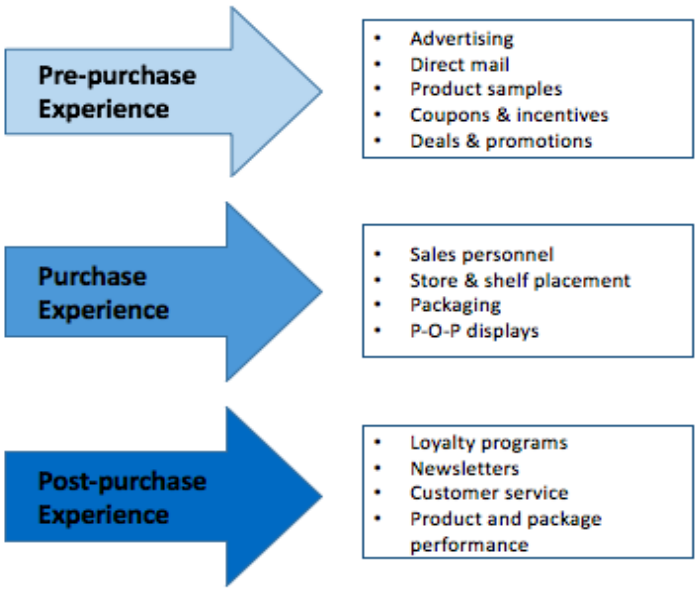


Figure 3: Customer touchpoints phases (Davis and Longoria, 2003)

It is also worth mentioning that every brand has a minimum of 30 touchpoints and some have as much as 100 (Davis and Longoria, 2003). However, as the different touchpoints help create different channel structures, it is not the number of touchpoints that help determine which structure a firm has, but the level of coordination and integration of the various touchpoints.

A study of 3000 U.S shoppers, illustrated "how", "when" and "where" customers wanted to interact with a certain company. Here it was shown that not all touchpoints were as popular as we presumed. It was discovered that customers want a dialogue, not just a pushing monolog of advertisement. From this study, it was discovered that 47% wanted to receive promotions of coupons when they were in a store or near it, instead of being bombarded every day. By targeting customers this way, the customer becomes aware of the offers before they go in the store, yet not before they have already made up their mind about shopping, which can give higher baskets through add-on sales. Add-on sales are often achieved through click-and-collect since the customer has to pick the item up in-store (Warner, n.d.). Further, in the study, it became apparent that several factors that increased the likelihood of having a preferred retailer. These were factors such as the ability to buy online and then make returns at the store and the ability to buy online and pick up at the store. The final results and main factors are illustrated in the model below

62%	Ability to buy online and then make returns at the store
47%	Push coupon/promotion to smartphone when I'm in a store or close by
44%	Ability to buy online and pickup in store
41%	Availability of an application designed for a tablet
40%	Option to conduct one-click checkout online
37%	Ability to complete a purchase in store using mobile device
36%	Availability of a mobile application for a smartphone

Table 1: Customer preferences (Warner, n.d.)

From this, we can also see that technology and mobile devices are in focus, which strengthens the fact that technology and omni-channel retailing goes hand-in-hand and that this is the future (Warner, n.d.).

3.4 Retail sales channels

A channel is explained *as "a customer contact point, or a medium through which the firm and the customer interact and where interaction involves two-way communication between*

retailer and customer, rather than a traditional one-way communication process" (Vecchi and Buckley, 2016).

Fashion retailers nowadays are working hard to combine and integrate different touchpoints in an ideal way and are as a result coming up with new types of retail sales channels (Kersmark and Staflund, 2015). The following section will present this in more detail.

3.4.1 Offline channel

An offline channel represents the physical environment of a brand and is often referred to as a "brick-and-mortar" store (Frazer and Stiehler, 2014). Here, the customer is given a shopping experience that incorporates all senses of the human body, such as smell, touch, sound and lighting. Furthermore, an offline channel offers face-to-face interaction, which many customers prefer in a decision-making process. Additionally, the offline store offers a convenient way of returning goods and efficiently provides information on what the customer can be offered in return. An offline channel is also able to provide the product immediately after purchase, while an online channel creates some waiting time, generally a few days.

Even though offline channels are receiving competition from online channels, it is important to keep in mind that the physical stores have served consumers for centuries and that many are still reluctant to new technological devices and advancements. The brick-and-mortar store will, therefore, continue to play an important role for any brand.

3.4.2 Online channel

"Online generally refers to a digital data communications network, the Internet and its smaller private cousins, intranets, being primary examples." (Dziuban et al., 2015) An online channel can, therefore, be explained as any action performed over a digital communications network. Online shopping, on the other hand, is expressed as *"the process consumers go through to purchase products or services over the Internet"* (Vecchi and Buckley, 2016). Since the shopping experience passes through the Internet, the customer is given the opportunity to shop anywhere, at any time (Frazer and Stiehler, 2014). A high level of convenience is therefore offered and is perhaps the biggest benefit of an online channel, compared to that of an offline channel. However, there are more attractive

elements. Customers shopping online avoids standing in line, as well as they are able to save time and money, by removing the travel distance from their homes to the stores. Moreover, the customer is offered an even broader product assortment (Vecchi and Buckley, 2016). Additionally, the online channel often present much more information about both products and the different services that are offered, and one can also see how others have rated and reviewed a certain product, which can sometimes help "close the deal." Another element is that customers can compare prices and quickly find the best deal available. Furthermore, the development of online channels has led to a new shopping concept called "webrooming", which is the process where consumers gather information online and end up buying the product in a physical store (Flavián, Gurrea and Orús, 2016). The reason why this shopping behavior has developed is due to the need for uncertainty reduction. By being able to research products online, customers are able to make offline purchases with a much higher level of confidence.

3.4.2.1 Mobile channel

One of the most significant developments of the online channel is the mobile channel. By mobile channel, the authors refer to devices which are portable, such as smartphones, tablets and PCs. However, the most important mobile device is by far the smartphone. Several apparel companies are now targeting customers with smartphones by for example offering electronic coupons as the customer enters the store or by offering "goodies" when a customer is getting close to a physical store. Some offer simpler solutions, such as "free Wi-Fi in stores" (Brynjolfsson, Hu and Rahman, 2017). Smartphones also make it possible for the customer to research products online while looking at it in a physical store, which has led to the development of a concept called "showrooming." Showrooming happens when the customer goes into an actual store to collect information about a product, while at the same time using mobile devices to receive even more information about different prices and offers (Burgess, 2016). This often lead to the customer buying the product online instead of in stores, because they perhaps found an even better price offer online. Additionally, with today's fast deliveries, the customer might not mind waiting a day or two extra, if it means that he or she can save some money on it.

The mobile channel offers many opportunities, and many researchers have looked at the possibility of creating mobile apps in order to offer even more channels to the consumer (Verhoef, Kannan and Inman, 2015). By offering a custom-made app, consumers will most

likely prefer to use it, instead of scrolling through different websites looking for the best offer. By having an app, companies can help promote their products and steer the customer away from competitors (Verhoef, Kannan and Inman, 2015). Hence, the mobile channel has opened up new possibilities and has become a highly important channel.

3.4.2.2 Catalog channel

The catalog channel has for many years been considered as an offline channel since it allowed customers to purchase products via regular mail or telephone. There was, in other words, no need for an internet connection. Nowadays, companies have moved away from the traditional catalog and over to electronic ones. However, some still operate with physical catalogs, such as H&M. The difference now is that customer can browse the catalog offline but is forced to go online if they want to purchase a product. Online they will have to fill out a form (just like they used to with regular mail), making the catalog an online channel. The catalog channel is still important, as it appeals to the older generation, which has used this channel for many years. It is, therefore, a customer touchpoint that many companies continue to facilitate. However, there are several negative aspects of the catalog channel, especially for the company. A catalog is expensive to make and distribute, in addition, the content outdates rather quickly (Kersmark and Staflund, 2015). A catalog is also unable to continually change prices, which often does not benefit the consumer. Furthermore, the old fashion catalog is in need of employees who handle this exclusively. These are some of the reasons why more and more are moving away from physical catalogs, and over to electronic ones.

3.5 Multi-channel retailing

A multi-channel strategy occurs when online and offline touchpoints are used in parallel or simultaneously. Multi-channel retailing therefore includes the sale of products via brick-and-mortar stores, catalogs and the Internet (Laseter and Rabinovich, 2012). According to Berman and Thelen (2004), multi-channel retailing gives customers the opportunity to shop trough more than one channel. However, the channels are not integrated, which means that the different channels operate in isolation and that customers cannot trigger interaction between the different channels. Furthermore, a multi-channel is grounded on the notion that customers have their desired ways of interacting with a company. Some

might prefer an offline channel, such as a physical store, while others may prefer an online channel, like a website or an app. Therefore, the different channels are in some way competing against each other, and customers must choose one channel when purchasing a product. This also means that the different channels may have separate management and strategies.

Today, the multi-channel strategy is somewhat fading away because consumers use multiple channels to research and purchase a product. More companies are, therefore, trying to have the same content and opportunities across all channels to present a united front to their customers. This has led to a new channel category, called cross-channel retailing.

3.6 Cross-channel retailing

The cross-channel approach combines numerous different channels for the same purchase. The customer might for example research a product at one touchpoint (like a catalog), buy them at another (website) and lastly pick-up the product at a third and final touchpoint, (such as a brick-and-mortar store) (Berman and Thelen, 2004). The "click-and-collect" concept is a prime example of cross-channel retailing, whereas the customer both research and purchase a product online, but pick it up in a brick-and-mortar store. The cross-channel strategy allows for interaction between channels that are somewhat integrated, and is, therefore, a more advanced strategy than the multi-channel approach. In a cross-channel environment, different channels do not compete against each other but are harmonizing together.

As of today, most retailers have a cross-channel strategy. However, many believe that this is no longer fulfilling for the average customer's needs. Because of this, retailers are trying to adopt a strategy which centers around the customer, and not some particular channel. This has led to the adoption of a brand new phenomenon, called omni-channel retailing.

3.7 Omni-channel retailing

An omni-channel is *"an integrated sales experience that melds the advantages of physical stores with the information-rich experience of online shopping" (Lflogistics.com, 2017)*

Another explanation is that an *"omni-channel can be defined as a synchronized operating*

model in which all of the retailer's channels are aligned and present a single face to the customer, along with one consistent way of doing business" (Kamath and Saurav, 2016). A third and final definition sees "*omni-channel management as the synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels is optimized*" (Verhoef, Kannan and Inman, 2015). Based on these three definitions, one can say that an omni-channel strategy is an improvement and evolution of the cross-channel strategy. The primary goal is to provide a seamless and personalized experience for the connected customer across all different channels, where some of them are physical, but most are digital (Treadgold and Reynolds, 2016). Omni-channel retailing is in many ways similar to the cross-channel approach since both aim to provide a good customer experience regardless of which channel the customer prefer. However, an omni-channel experience differentiates from a cross-channel because the customer can move seamlessly between both digital and non-digital touchpoints. Furthermore, both cross- and multi-channel strategies tend to take an "inside-out" approach, where the focus lies in the distribution of internal offers going out to the market, whereas the omni-channel has an "outside-in" approach, where the focus is the actual needs and wants of the market. In other words, omni-channel retailing has a customer-driven approach, where retailers truly get to know their customers. The aim is to be able to respond dynamically to today's so-called "non-stop" customers, which are always considering what to buy next and from whom it is most beneficial to buy from. This makes them "jump" between different channels (or different retailers), hence, it is crucial to be able to serve customers at all times and keep popular and in-demand products. With the ever-increasing digital technologies, the average customer demands easy and convenient solutions, but also a shopping experience which is exciting and entertaining. The customer should through their seamless experience be able to "pause and resume" their shopping at any time, however, and wherever they see fit. This means that all the different touchpoints at all times should have updated information about the customer's purchase history and other relevant information. A big part of the omni-channel strategy is to get to know the customer better. By taking advantage of the collected data from all different channels and other retailers, a company can easily understand where efforts exist in the customer experience, remove it and continuously improve the shopping experience. In other words, omni-channel retailing is all about eliminating efforts from the customer's side. Furthermore, a successful omni-channel should give the impression that all the different channels represent a single face or brand towards the customer. The aim is

to educate and empower the customer instead of having channels that compete against each other, to get credit and honor for the sale (Carroll and Guzmán, 2015). To be able to do this, there has to be consistency between all channels and to achieve consistency, a high level of integration must exist. When this is fulfilled, and a successful omni-channel strategy is reached, customers will experience better service and a higher level of convenience, which hopefully establish loyalty and trust. This again gives an increased customer base, higher sales numbers and a larger market share, which is the overall goal of any fashion retailer.

3.7.1 Omni-channel Consumer behavior

"Consumer behavior is a discipline dealing with how and why consumers purchase (or do not purchase) goods and services" (Ling, D'Alessandro and Winzar, 2015).
Previously, consumers gathered all their information in a traditional brick-and-mortar store, which is also where they made their final purchase decision. As times have changed, the traditional brick-and-mortar store is facing intense competition from online stores, and in some cases, they are losing the battle. Because of this, several companies have started to move towards an omni-channel orientation (Rodríguez-Torrico, San José Cabezudo and San-Martín, 2017).
In an article written by Rodríguez-Torrico et al. (2017) two forms of purchase behavior are defined: impulsive and contemplating behavior. Impulse behavior is explained to occur when "*a consumer experiences a sudden, often powerful and persistent urge to buy something immediately" (*Rodríguez-Torrico et al., 2017*).* Contemplative behavior, on the other hand, is defined as "*a buying action undertaken with a problem having been previously recognized." (*Rodríguez-Torrico et al., 2017*).* Further, in the study, there are highlighted two consumer traits. These are impulsiveness and "need-for-touch." "Need-for-touch" (NFT) is defined as *"A preference for the extraction and utilization of information obtained through the haptic system." (* Rodríguez-Torrico et al., 2017*).*
These two consumer categories with different consumer traits indicated different personalities, where the new mobile channels make the consumer more vulnerable to impulse purchases. In this analysis, it was tested several hypotheses where they state that the mobile channel will be more used by high impulse consumers while the NFT is more likely to use the omni-channel online process. To confirm the hypothesis, they tested the frequencies of the channels used in the decision-making process to determine

differentiation between the two channels.

Table 2
Channel use at each stage of the decision-making process.

Decision-Making stages	Online	Mobile
Search for information	78.69%	21.31%
Evaluating alternatives	81.42%	18.58%
Purchasing	82.78%	12.22%
Payment	85.90%	14.10%
Returns	85.71%	14.29%
Feedback	83.11%	16.89%

Table 2: Channel use at each stage of the decision-making process (Rodríguez-Torrico et al., 2017)

From the table, it becomes clear that the online channel is still the most used channel. However, we can see that the mobile channel is mostly used for the first two categories, which are "search for information" and "evaluation." From the table, we also see that consumers are not entirely comfortable with purchasing and paying on the mobile channel. Furthermore, they were able to confirm their hypothesis and confirm that the mobile omni-channel process is most often engaged by impulsive consumers, as this might suit their more urgent needs better than the online channel (Rodríguez-Torrico et al., 2017). This gives positive outlooks for the future in the development of omni-channel regarding the future consumer, which is called Gen Y. Gen Y is defined as *"people born in the 1980´s and early 1990´s"* (BusinessDictionary.com, 2017). On the other hand, Fernandez (2009) states that marketers view Gen Y as those who are born between 1977 and 1994. The previous generation, the so-called "baby boomers", were the largest consumer segment in the US, despite that the Gen Y´s have emerged as a large force with growing spending power, which in 2010 was measured to 200 billion dollars annually (Martin & Turley, 2004). The Gen Y´s have grown up with both technology and branding, and they, therefore, respond differently to this, compared to the previous generations (Lazarevic, 2012). This is also supported by another study done by Pantano (2015), which focus on online and offline shopping behavior. In this study, only 10 % of the respondents were between 15 and 29 years, which means that the majority of the respondents fall under Gen X or baby boomers. These represent quite a large group, who have been part of the greatest technological development so far in history. This means that they might not respond as positive to technology and might not be as comfortable buying online. This theory is supported in the study, where it became apparent that only 16.8 % shop online regularly while 30.3% state that they shop offline, meaning traditional brick and mortar stores.

	Categories	%
Online Orientate	Regularly Sometimes Never	41.4 22.1 36.5
Offline Orientate	Regularly Sometimes Never	40.6 26.4 33.0
Online Buy	Regularly Sometimes Never	16.8 35.4 47.8
Offline Buy	Regularly Sometimes Never	30.3 38.3 31.4

Table 3: Online versus offline (Pantano, 2015)

In this study, the main object was to gain insight into consumer's omni-channel shopping behavior. The study proved that 41.4% of the respondents orientate online regularly, compared to 40,6 % that orientate offline (Pantano, 2015). It turned out that younger consumers have better knowledge about the online channels, which is supported by Lazarevic's (2012) statement above. From this study, there were also found a correlation between education level and online shopping. This was further supported by Statistics Norway (2017), which show that people with higher education are the most frequent online shoppers. 85% of those who have a university or college degree have shopped online the past year, whereas only 69% of those with a high school degree have shopped online. Another interesting factor is that those with higher education shop more frequently online as well as using a much larger amount of money. Statistics show that 30% of online shoppers with higher education bought for more than 10 000 kroner over a period of three months, whereas only 10% of online shoppers within the lower education category spent more than that. Based on the numbers presented, there seems to be a positive correlation between E-commerce and higher education, and statistics show that more are pursuing and finishing a bachelor's or master's degree than ever before (ssb.no, 2016). As a result of this, an omni-channel presence becomes even more important. These statistics supports Pantano's (2015) conclusion, where she states that the omni-channel fashion shopper is below 50 years old, have a high income and are highly educated. Another interesting result from this study is that one can say that the online channel and mobile channel are merging into one.

3.7.2 The omni-channel customer life-cycle

The omni-channel customer life-cycle represents the multiple touchpoints a customer goes through before reaching a final purchase. There are many different life-cycles, as consumers have different shopping behaviors and preferred touchpoints. However, the figure below aims to illustrate how a typical omni-channel customer's life-cycle may look like.

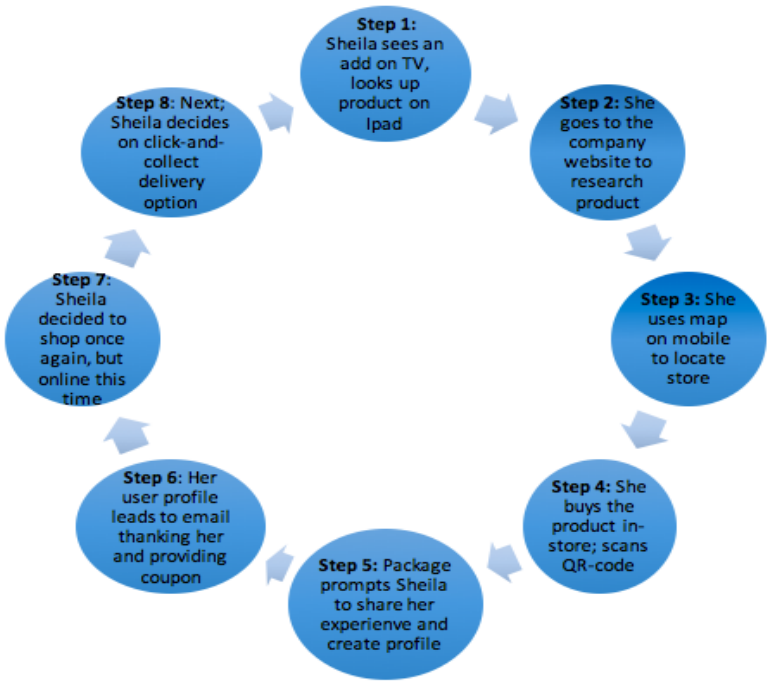


Figure 4: The omni-channel customer life-cycle (Nichols, 2015)

From the figure, one can see that the omni-channel life-cycle consists of eight different steps. Step 1 occurs when Sheila sees a commercial on TV, which triggers an interest and makes her look up the product on her IPad. This leads her to step 2, where she visits the company website and researches the product. Next, she uses her phone to find the location of the store, before visiting the store and buying the product. Additionally, Sheila scans a QR-code in-store. Furthermore, the product package encourages Sheila to share her experience and create an online profile with them. This registration gives her a coupon, which again leads to a new purchase. However, this time she decides to buy a product online and pick it up in the closest store. From this explanation, we find that a typical omni-channel life-cycle consist of a customer who uses multiple touchpoints, however, gets the same service level and information across all different channels.

3.8 Core competencies of an omni-channel supply chain

An omni-channel supply chain is customer-oriented, making the consumer "the new boss" (Sabri, 2015). This new boss desires convenience and the opportunity to shop across all channels at anytime and anywhere. As a result, logistical operations have been challenged, and supply chain structures have been forced to change. Supply chains have for a long time operated in silos, which means that different channels and members of the supply chain have functioned separately, often with own routines and information systems. Now, however, this is changing due to the emerging omni-channel environment. The need for effective coordination and communication of inventories is crucial, and RFID-technologies enables this. RFID is essential to an omni-channel supply chain. However, it is the benefits it delivers that are considered to be the core competencies of the new, customer-driven supply chain. As mentioned in Chapter 2, RFID is a crucial tool due to how it improves efficiency, accuracy, security and visibility (Ustundag, 2013).

1) Regarding *efficiency***,** RFID helps automate logistical operations, which leads to decreased labor costs and a faster supply chain. The way RFID allows for this is by simplifying control processes and decreasing manual operations. This happens through the use of either a) handheld readers used by personnel, or b) shelves or platforms equipped with RFID readers and antennas (Ustundag, 2013). Alternative a is often used for inventory counting, and several retailers have experienced that handheld RFID readers reduced inventory counting with several hours. Some even said that they reduced it by as much as 40 hours (Hübert, 2016) Alternative b is for those who equip an exit gate with RFID readers and antennas so that shipment processes are automatically controlled, which yet again reduces or removes the need for personnel. From these examples, we see that RFID improves efficiency.

2) Improved *Accuracy*, on the other hand, is *(… "related to the process quality measured by error rates"* (Ustundag, 2013). There are four types of typical errors of manual processes affecting accuracy to consider: transaction errors, shrinkage errors, inaccessible inventory and randomness of the supplier (Wang, 2014). A transaction error refers to errors such as delivery, scanning or wrongful identification of a certain object. Shrinkage errors, on the other hand, refers to situations that often reduce inventory, such as shoplifting, employee theft or wrongful paperwork. These errors are important to remove since they can directly affect sales, and thereby profits. The third factor is inaccessible inventory, which naturally are those products that the supplier cannot find because they are

either lost or misplaced (Wang, 2014). Lastly, we find errors that occur due to the randomness of the supplier. The randomness of the supplier refers to permanent loss or surplus of physical inventory caused by suppliers. (Ustundag, 2013).
The three last errors modify the physical store, while the first (transaction errors) affect the information system. This creates a gap between actual inventory and the information system, which is a problem (Ustundag, 2013). However, by the use of RFID all of these errors can be reduced or removed since RFID automates manual operations and provides information about the operations that are being automated.
3) The third factor of benefits of RFID is *security.* Fashion retailers often experience that products are stolen or damaged, which directly affects sales. Many companies utilize RFID in their security tags so that all stolen products sets of an alarm when taken out of the store area. RFID, therefore, help companies reduce shoplifting, which is of interest for any retailer. Furthermore, if products still should be stolen, RFID informs retailers about this at the next inventory control, giving them the opportunity to correct their storage and perhaps increase security.
4) The fourth and final factor is *visibility*, which refers to "*(…) the traceability of products or components throughout their flow from the manufacturer to the final destination"* (Ustundag, 2013). However, visibility somewhat includes all of the factors above (efficiency, accuracy and security), since visibility focus on getting full control over the different areas of the supply chain. This is illustrated in the figure below.

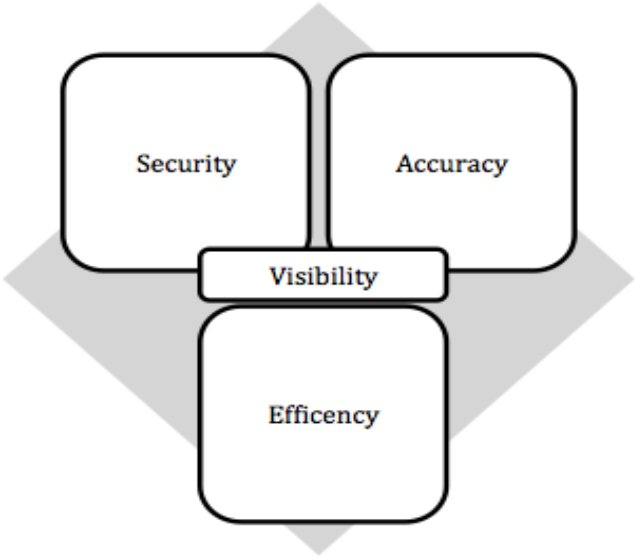


Figure 5: Core competencies of an omni-channel

By having full control, one can optimize supply chains and react if unexpected situations occur. RFID enables companies to receive real-time data which removes uncertainty, contributes to increased visibility and therefore product availability. This results in fewer out-of-stock situations, which keep customers satisfied and reduces possible losses of revenue. (Ustundag, 2013).
Visibility is seen as the most important benefit of RFID, and therefore, visibility will be further elaborated in the sub-chapter below.

3.8.1 Supply chain visibility

Supply chain visibility is a commonly used term within logistics and is defined as *"capturing and analyzing supply chain data that informs decision making, mitigates risk, and improves processes"* (Tohamy, n.d.). Another author defines supply chain visibility as *"the identity, location and status of entities transiting the supply chain, captured in timely messages about events, along with the planned an actual dates/times for events"* (Francis, 2008). From these definitions, it becomes clear that visibility is about gaining control and having full information about what's going on at all points of the supply chain. As previously mentioned, RFID improves visibility by enabling companies to monitor events across the supply chain. Furthermore, RFID produces data that companies can analyze to make strategic decisions to gain a competitive edge. We can, therefore, say that visibility and RFID go hand-in-hand.

3.8.2 Identifying logistical requirements

From the two previous sub-chapters, we learned that RFID-technologies enables visibility, which is a core competence of any omni-channel. However, to deliver on omni-channel measures, further actions must be taken. According to Lierow, Janssen and Schulte (2015), retailers must *"focus on brilliant execution across five key elements:*
What IT solutions will be required?
What value-added services will the supply chain support?
How much inventory to hold – and where?
How will replenishment/fulfillment be handled?
How will goods flow to the customer – and back?"

For the purpose of this thesis, the authors will concentrate mostly on the supply chain requirements that support customer expectations across all different touchpoints, and we will, therefore, focus on the three following elements: replenishment strategies, fulfillment options and returns.

Replenishment strategies can be divided into two categories: allocations and inventory policies. Allocations refer to where products should be placed. With an omni-channel strategy, consumers have multiple options for receiving a product, which means that retailers might not want to ship all products to store, but perhaps keep some at the distribution center. In other words, it means that retailers must know where to place products to meet consumer demands (Kurtsalmon.com, 2016). Another option is not to keep the products at all, but just buy it when needed. Amazon is a prime example of this solution, where they do not keep inventory, but provide a link to someone who has the inventory. Nevertheless, this is not a viable option for Moods of Norway since they design their products. However, it can be possible to link partner stores who carries Moods of Norway as well as other brands (e.g. Brandstad), which is not the current situation. Inventory policies, on the other hand, is all about stock levels and having the right product at the right time and place. With several different touchpoints, retailers must ask themselves how much and where to stock their inventory.

The second factor, *fulfillment options,* are the different ways that retailers can complete an order from a customer (Peragine, 2009). Omni-channel retailing has indeed influenced fulfillment options and created new possibilities for consumers. A prime example is the "click-and-collect" and "ship-from-store", which we will explain later in this thesis. However, these fulfillment options often demand smaller and more frequent orders. Distribution centers may, therefore, have to send smaller quantities as well as sending products more frequently to support all the new fulfillment options (Grackin, 2015). In-store experiences are yet another fulfillment option which influences supply chain logistics. As omni-channel customers demand the best possible solutions offers, therefore, sales personnel must at all times be able to suggest the most suitable options. Example wise, if a customer were to ask for a sweater in size medium, the sales personnel must be able to locate one quickly. However, different fulfillment options are not easily established, leaving retailers with a lot of logistical barriers to break.

Returns are of great concern for logistical operations. For many years, retailers have seen returns as a negative thing. However, in an omni-channel environment, returns are considered perfectly natural. By being available through all different channels, retailers

have allowed consumers to make their homes become fitting rooms. Customers are now ordering clothes, trying them on at home and then returning them if they don't like it, just like they would do in an actual store. Even though this is good for the customer, it creates trouble for retailers. If many clothes are going out of the store and being returned, retailers have more products in stock. It is, therefore, important to register that the products have been returned, so that they can be available for new customers. Retailers must consequently have routines and technology that easily communicates this across all channels (Rogers, 2015).

From this sub-chapter, it becomes clear that omni-channel logistics must rely on technology to function optimally to be able to communicate across all channels. As already presented in Chapter 2, RFID technology is seen as the cornerstone of any omni-channel and can therefore also be considered as a requirement in the supply chain.

3.9 First mover strategy

"A first-mover advantage exists where an organization is better off than its competitors as a result of being first to market with a new product, process or service" (Johnson, Scholes and Whittington, 2008).

There are many possible ways to achieve a competitive advantage in any business, however, being a first mover might be one of the most recognized successful strategies. The omni-channel strategy is a relatively new and in addition to that, few fashion retailers have successfully managed to create an omni-channel presence. This means that there is the potential of becoming a first-mover.

A first mover strategy can result in several competitive advantages. The most significant benefit of being a first mover is the opportunity to create a lasting impression on consumers and establish solid brand recognition. Furthermore, one gets the opportunity to "lock-in" strategic partners and consumers. By doing this, the market available for "late-movers" shrinks, which makes it less attractive for competitors to adopt the same strategy. In order to lock-in and secure consumers and partners, switching costs becomes an important factor. By switching costs, the authors refer to costs which come from switching from one supplier to another (Afuah, 2009). The first mover should create high switching costs, to increase entry barriers for its competitors. If the switching costs are high, the new

entrant will have few potential customers or must have very low prices, in order to compete.

The most important benefit of an omni-channel strategy is a lasting impression and strong brand recognition, which creates brand loyalty among their customers. (Abramowicz, Daily and Kieff, 2014) If customers are satisfied and happy, they are likely to remain loyal to the first-mover in the market. This means that it will be difficult for later entrants to break down the loyalty and successfully penetrate the market.

To summarize, a successful omni-channel environment could create a lasting impression on consumers, giving a company a first-mover advantage. Some companies have already implemented an omni-channel strategy; however, there is still a potential of being the first-mover to “non-conquered” markets.

4.0 Industry practice

This chapter will present two different industry practices of a successful omni-channel presence. Even though they have chosen different paths to achieve the same goal, both have highly relevant elements for the creation of an omni-channel model. The companies the authors have decided to look at is the American department store, Macy's and the Danish sportswear company, Hummel.

4.1 Macy's

Macy´s started their rotation towards an omni-channel landscape in 2009 when they started implementing RFID at a store level. In 2009 they tagged virtually everything in their Bloomingdale SoHo store, where a small tag was embedded in the pricing label. This enabled Macy´s to increase their accuracy of stock as well as getting a more stable and reliable replenishment policy. Earlier they counted their merchandise twice a year, and it would cost both money and time. Also, there was room for human error. Thanks to RFID-technologies they can now do an inventory count up to 24 times a year. Additionally, they were able to remove human error, which leads to a 90 % error margin. The implementation in the Bloomingdale store was such a success that they started implementing RFID in all of their 850 stores. In early 2014, Macy´s took RFID one-step further when they expanded the number of vendors that they asked to pre-tag the items with RFID. They decided to expand, and by the end of 2015, half of the vendors were supposed to send RFID tagged items (Fernie and Grant, 2015). This implementation made it possible for Macy's to start implementing omni-channel retailing. Using RFID-technologies, they increased their visibility, by being able to install 40 000 Internet compatible in-store terminals that made it possible to search for a size or color in any of their 840 stores. This is mostly thanks to RFID-technologies, which was now included down to SKU level. They also started reorganizing the whole organization, all the way from the way Macy's was built, to the way the employees were trained. They have begun to build distribution centers and fulfillment centers, to be able to meet all requirements from "click and collect solutions" and "pick up in store" solutions. Their employees are also learning to "sell as an omni-channel company", meaning that they are quick to search for the product in the entire Macy´s system to fulfill customer needs. They have also been able to build, what can be

called, the best delivery system in the world, where same-day or even same-hour delivery from physical stores are becoming a reality.

Macy´s have also taken advantage of the new technology in their marketing, where they now have a 360-degree view of the customers shopping habits and is using this to coordinate strategies across all channels (Das, 2015). The implementation has been a huge success, and in 2014 Macy´s delivered stock returns that beat those of Wal-Mart, Best Buy, and Amazon. Macy's have moved much faster than any other company when it comes to leveraging digital technologies. Their omni-channel platform includes real-time inventory, pick-up at store, click-and-collect and online sales. They have also created a mobile app that integrates payment solutions, local store inventory, excellent delivery options and loyalty programs (Libert, Beck and Wind, 2016). Their technology development may have taken time and a few tries, but once they fully embraced the omni-channel ways, they quickly grew and saw results. They increased their online sales by 48% in 2012 and in 2014 Mobile Marketer named them mobile retailer of the year. The same year 70% of their black Friday traffic was through the mobile channel. Their profit margin grew by 257.7 % in 2014; this was much higher than their competitors. The second best competitor was Wal-Mart with a growth of 2.61 % (Aiello, 2016). They also saw other benefits such as an increased brand value, which grew by 383 % from 2013 to 2014. Their omni-channel strategy also impacted their stock value positively with a growth of 40% in 2013 (Aiello, 2016).

To get these results, Macy´s had to restructure their merchandise and silo approach, to fit it to a more singular omni-channel approach. They also restructured their delivery, which allowed them to test a lot of ideas to differentiate themselves in a highly competitive marketplace (Aiello, 2016).

4.2 Hummel

Hummel started their journey toward omni-channel retailing in 2010. To "kick" of this transformation, they decided on four key thrusts:

1. *Aligning online branding globally*
2. *Enhancing E-commerce Support for B2B partners*
3. *Building the omni-channel customer community*
4. *Completing the physical store experience*

(Baker and Saren, 2016).

They started the first thrust in 2010 when they launched their "one brand, one voice" mission, where they consolidated 22 local websites to one global platform with local sites. They also did this with their Facebook pages. In addition, Hummel created a Digital Communication Matrix, to ensure a digital presence on all social media. This was partly done to ensure the brand's safety, but also to engage the customer on several platforms. They, therefore, made a matrix to keep track of what attributes each platform should have (Baker and Saren, 2016). This is illustrated in the matrix below:

	Website	Facebook	YouTube	Instagram	Newsletter	Google+	Twitter	LinkedIN	Blogs
Brand & Product Communication	x	x	x	x	x	x	x	x	x
Traffic Generation to Website		x	x	x	x	x	x	x	x
Service/Interaction	x	x	x			x	x	x	
Fan/Customer Acquisition	x	x	x	x	x	x	x	x	x
Loyalty/Retention	x	x	x	x	x	x	x	x	
Direct B2C Sales	x	x							
Crowd Sourcing		x				x		x	x
Feed to hummel. net		x	x	x			x		

Table 4: Digital Communication Matrix (Baker and Saren, 2016)

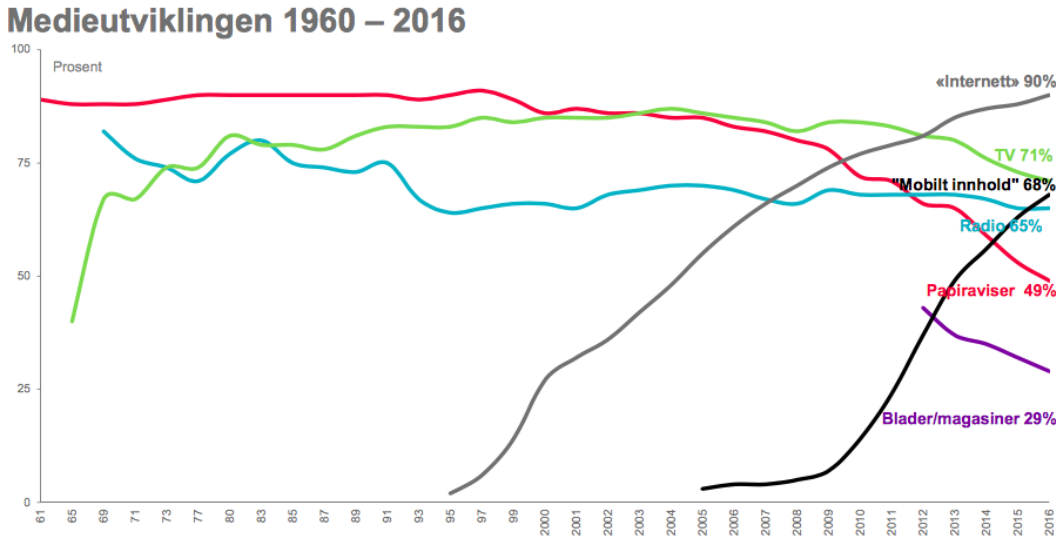
In this matrix, Hummel sorted out how each platform should interact with the customer. For example, Instagram is only used for communication of the brand and products, but also to create customer loyalty. This became an important pillar for step 3, where they focused on a more coordinated marketing towards the consumers. This meant that they would advertise on Google, Facebook, Instagram, Twitter and printed magazine, and by doing so, the customer would get a constant stream of campaigning in all channels. Furthermore, they improved their B2B relations and e-commerce platform.
The last thrust they did was their digital solution called Shop-in-Shop, where all B2B partners could offer all Hummel products, without carrying the actual stock. By the use of an e-commerce app, they were able to provide additional styles, colors, and sizes since some store were limited by their sizes, and were, therefore, not able to carry this inventory themselves. The ordered items would be delivered directly to the customer's home or could be picked up at the store.

Hummel have reported great results after they started their rotation towards an omni-channel landscape. From 2010 to 2013, they increased their total sale from $170 million to

$240 million, and the sales from online channels grew from 5% in 2010 to 21 % in 2013. By having an omni-channel approach, the Hummel brand was strengthened, and the Hummel community grew from 13 000 people in 2010 to 1.5 million people in 2014. In addition, they increased their website visitors from 216,000 to 1.25 million in four years. By aligning their digital channels and marketing, they were also able to increase their total number of people reached per week to amazingly 15 million. This would not have been possible without integrating the IT-department into every division of the company. This means that the IT-employees function as coordinators across several departments (Baker and Saren, 2016).

4.3 Lessons from the industry

Both Macy`s and Hummel have successfully started their rotation towards an omni-channel landscape. From the industry examples, we see that this was achieved in two different ways, where Macy´s used RFID technology as their basis and Hummel started with the alignment of their brand. This means that there are several ways to start this journey. However, both companies have had a strong focus on mobile channels, used both in stores and as marketing and tracking tools. The mobile channel is continuously growing, which is illustrated in graph 1.



Graph 1: Media development 1960-2016 (Futsæter, 2017)

From the graph, we see that the mobile channel has had a rapid growth from 2009/2010, and it has predicted that it will pass 90% and therefore, become the biggest channel (Futsæter, 2017). By using the mobile channel, the goal is to have a seamless interaction

with the online store and the traditional brick-and-mortar stores. Mobile devices in-store make it possible to further elevate the company, by connecting the digital store and the bricks-and-mortar store and making them stronger together. This is proven with solutions like click-and-collect, but also with the fact that the staff is now trained to search and find an alternative online or in a store nearby. These solutions would not have been possible without mobile channels, and it has created a seamless interaction between two parts of the company, which previously were separated. The model below, it is illustrated the benefits of combining the two (Omni channel retailing, 2012).

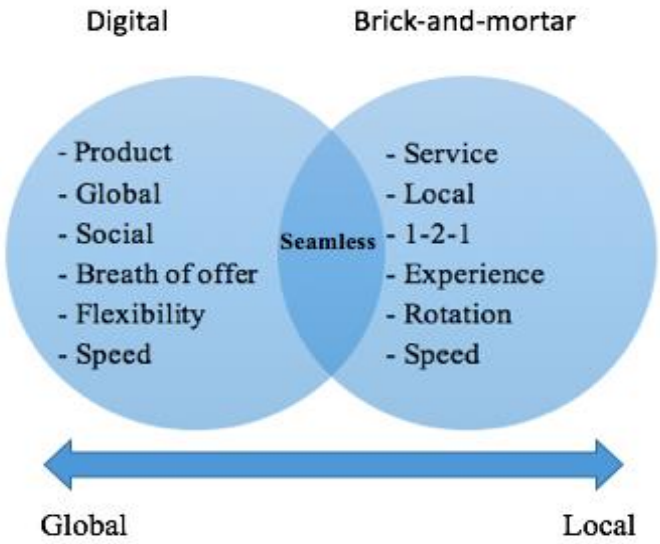


Figure 6: Integrating digital and brick-and-mortar (Omni channel retailing, 2012).

It also becomes clear that to deliver on customer promises; one must have control over inventory. This can be done in several ways, however, from this chapter, it is RFID-technologies that yet again plays an important role. Macy's have been and is one of the pioneers within omni-channel retailing using RFID-technologies.

5.0 Research Methodology

This chapter focuses on the research methodology of this study and will present the procedures that have been conducted throughout this research to collect data in the best possible way.

5.1 Aim and Research Questions

The problem statement and research questions are outlined in chapter 1 of the thesis.

5.2 Research design

Research design can be seen as an outline of a research study, where one tries to get from one point to another in a logical way (Yin, 2009). It can also be seen as a "blueprint" which mainly deals with four questions:

1) *What questions to study?*
2) *What data are relevant?*
3) *What data to collect?*
4) *How to analyze the results?*

(Yin, 2009)

5.3 Research Approach

In order to collect and analyze data in the best possible way, a qualitative methodology was chosen. The focus of a qualitative approach lies in discovery and aims to describe, explain and understand collected data (Williams, 2007). Furthermore, qualitative methodology uses inductive reasoning. This means that the researcher will use a specific occurrence to establish a conclusion. Furthermore, *"there are five areas of qualitative research: case study, ethnography study, phenomenological study, grounded theory study, and content analysis"* (Williams, 2007).

5.4 Research Strategy

For the purpose of this thesis, a case study approach will be applied to analyze and collect data. The reason for this is that a case study provides an in-depth exploration of a specific project and is often analyzed from several perspectives. The aim is to give the researcher a good understanding of a specific topic to be able to provide information or knowledge to a professional practice (Simons, 2009). Case studies are also suitable when researching a process or activity, which is the case with Moods of Norway: They are researching a process of utilizing RFID to the fullest and create a successful omni-channel presence. (Williams, 2007). Furthermore, Yin (2009) states that "*the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events- such as individual life-cycles, organizational and managerial processes, neighborhood change, international relations, and the maturation of industries."* This yet again confirms that a case study is the right choice for our research.

5.5 Category of case study

Thomas (2011) introduces five different purposes of a case study and distinguishes between purposes used for early research and those used later in the process. For the initial process, an intrinsic and instrumental purpose is presented. (Thomas, 2011).
An intrinsic case study researches a subject out of interests and is not studied in order to identify a problem or to show a trend. An instrumental study, on the other hand, aims at getting insight into some problem and get a general understanding of it. Furthermore, the instrumental study is not used when one purely wants to become more knowledgeable, but when the study is used as a tool to achieve a specific purpose (Thomas, 2011). The point of an instrumental study is therefore to get a better understanding and knowledge of either a theme or process (Thomas, 2015), which is suiting for our research motivation.
Furthermore, Thomas distinguishes between an exploratory, explanatory and evaluative approach.

5.5.1 Exploratory approach

"Exploratory case studies are designed to study a program, phenomenon, or event for which researchers have no theory or hypothesis to guide the development of research

questions before data are collected" (Voorhees, 2008). An exploratory approach is often suitable when one has little information and knowledge about a subject, or when the research problem is poorly understood. This often results in a wide-use of the exploratory approach, since many feel that this is best suited at the beginning of a process. Since the concept of omni-channel retailing is fairly new, we believe that an exploratory approach is suitable.

To conclude, this thesis will have *an instrumental, exploratory case study approach.*

5.6 Form of case study

Regarding the form of a case study, a researcher can decide between a single- or multiple case study. For the purpose of this research, a single case study will be applied.

5.6.1 Single case study

A single case study assesses one unit of a social phenomenon, in contrast to the multiple case study, which compares two or more cases. Due to the fact that this thesis researches a rather new concept, there are few case studies available on the topic. Furthermore, it is difficult to come in contact with fashion retailers that are working towards an omni-channel strategy. However, Moods of Norway is somewhat the leader of the "Nordic omni-channel race" and were happy to collaborate with us. As a result of this, the authors will apply the classic form of the case study to address the research questions in this thesis, namely the single case study. (Thomas, 2015)

5.7 Data collection

To provide a solution to the problem statement and answer the research questions of this thesis, the authors decided to use both primary and secondary data.

5.8 Primary data

Primary data is defined by Hox and Boeije (2005) as "original data collected for a specific research goal." Primary data can both be qualitative and quantitative, however, for this

thesis, a qualitative approach was chosen. Qualitative data can come in the form of audiovisual material, interviews, and notes from experiences in the field (Hox and Boeije, 2005).
We decided that interviews were the most suitable form.

5.8.1 In-depth interviews

One of the main methods of qualitative research is an in-depth interview, which offers a very fascinating way to collect data (Legard, Keegan and Ward, n.d.). There are different types of interviews to consider, namely structured, unstructured and semi-structured interviews. For the purpose of this research, semi-structured interviews were conducted. *"Semi-structured interviews are simply conversations in which you know what you want to find out about- and so have a set of questions to ask and a good idea of what topics will be covered- but the conversation is free to vary, and is likely to change substantially between participants"* (Miles and Gilbert, 2005). Based on this definition, there are primarily two reasons why semi-structured interviews were used: First of all, semi-structured interviews are perfect when one needs to research the opinions and observations of a respondent regarding complex and sometimes delicate matters. Secondly, the different research areas and job descriptions of the respondent's makes standard questions non-suitable since they might have different experiences and knowledge of the topic (Barriball and While, 2013). Furthermore, semi-structured interviews were suitable as they let the respondent talk in a natural manner, which perhaps gives answers beyond what's expected. As a result, the authors were guaranteed answers to what they needed but were also able to get an understanding of other critical elements.

Our interview respondents were Hans-Petter Hübert, retail director of Moods of Norway and Steffen Larvoll, marketing manager of Warehouse and Industrial Systems AS. Mr. Hübert is the main source of primary data, as he has a direct insight into Moods of Norway's operations. He is also the person within Moods of Norway which is responsible for RFID deployment and omni-channel implementation. We had several correspondences via both Skype and E-mail. Furthermore, we had a company visit. Regarding Mr. Larvoll, we had interviews via E-mail. We came in contact with Mr. Larvoll because of our supervisor who recommended us to talk to him. Mr. Larvoll is very knowledgeable when it comes to the logistical operations surrounding an omni-channel environment and therefore

provided us invaluable knowledge. In the table below, we have shown the interview style with the different candidates, as well as the date for it.

Hans Petter Hübert	Date of interview
Mail correspondence	October 2016-April 2017
Company visit & face-to-face interaction	January 9th, 2017
Skype-sessions	January 25th, 2017
Steffen Larvoll	
Mail correspondence	March 13th, 2017

Table 5: Interview overview

5.9 Secondary data

Secondary data is data that already exist and was gathered by someone other than the researcher (Nykiel, 2007). In other words, it was gathered because of another research project and only re-used by us due to its fitting content (Hox and Boeije, 2005). The benefit of using secondary data is that it normally is obtained and often doesn't cost anything. Furthermore, secondary data can be divided into two categories: *internal and external*. Internal secondary data is gathered from the research objective, such as Moods of Norway. This can, for example, be the total number of hours that Moods of Norway reduced their inventory counting through the use of RFID, is also considered to be internal secondary data. External secondary data, on the other hand, can come from several different sources outside the organization, such as statistical bureaus, research articles, or research firms (Nykiel, 2007). For the purpose of this thesis, external secondary data was mainly collected from books, research articles and company websites. Furthermore, the authors have found two secondary case studies (Macy's and Hummel) which are used for the purpose of strengthening the analysis of Moods' strategy and future recommendations.

5.10 Validity and reliability

In qualitative research, there's a tendency that the researcher's subjectivity can heavily affect the interpretation of data, which often leads to uncertainty around the data collected (Brink, 1993). As a result, researchers must be concerned about validity and reliability.

Validity refers to whether or not the answer is correct, and can be explained as the consistency between the variable we want to measure and the variable we actually measure. ***Reliability***, on the other hand, is defined as *(… "the extent to which a measurement procedure yields the same answer however and whenever it is carried out."* (Kirk and Miller, 1986) A high level of reliability would, therefore, occur if the same answers and recommendations could be used across several similar companies.
Validity and reliability are rather difficult to distinguish, so many researchers examine the trustworthiness of the data instead, and there are four criteria to consider: Credibility, transferability, dependability and confirmability.

Credibility concerns the internal validity and can be researched through prolonged engagement, persistent observations, triangulation, referential adequacy, peer debriefing and member checks (DeVault, 2016). The most frequently used attributes are triangulation and member checks, which is what we've done for the purpose of this research. By triangulation, the authors refer to how the same questions have been answered through two or more methods, such as interviews and articles. Member checks were also done, as interview objects and our supervisor was offered to review and confirm that we did not misinterpret any statements. Furthermore, they were given the opportunity to fill in any potential gaps. (DeVault, 2016)

Transferability concerns the external validity and refers to the generalization of the findings and how it can be transferred across similar situations (Shenton, 2004). As this thesis is written for Moods of Norway, an international fashion retailer, we believe that the findings are transferable to similar situations. Moods of Norway does not have a customized logistical situation since they do not produce their products. Therefore, it should be very plausible to "copy" this strategy and get the same flow of goods and high level of information sharing.

Dependability addresses the issue of reliability and aims to determine that the same results would occur, under the same circumstances if done again (Shenton, 2004). Dependability is rather difficult to establish since social factors influence the success of Moods of Norway's omni-channel. However, with the same strategy, under the same circumstances, there is no reason why RFID should not improve visibility and create an omni-channel environment. Hence, the dependability is considered good.

Last, but not least, one must consider the ***confirmability*** of the research. Confirmability refers to the objectivity of the researcher, and the researcher should, therefore, get an outside party to determine whether the analysis, interpretations and conclusions are

supported by the data collected (Shenton, 2004). The authors of this thesis have used their supervisor, Bjørn Jæger, to assess and evaluate their thesis and he believes that this is an objective thesis. It can, therefore, be concluded that there is a high level of confirmability.

6.0 Empirical evidence

Chapter 6 presents the empirical evidence of this research, which was conducted through in-depth interviews. The data presented is considered to be the essence of the interviews conducted, which hopefully will be useful elements for the ROCK-framework.

6.1 Empirical evidence

Empirical evidence is expressed as *"scientifically based research from fields such as psychology, sociology, economics, and neuroscience, and especially from research in educational settings*" (Belzer, 2013),
Furthermore, empirical data is explained as *"facts derived from experience",* which in our case comes in the form of interviews (White and McBurney, 2009). The empirical evidence gathered is used to back-up the theoretical parts of this thesis, and aims to show that theory and reality matches.

6.2 Interview highlights

The interviews conducted for the purpose of this research was both valuable and interesting. Our two interview respondents had different experiences with the concept of omni-channel retailing; nonetheless, they both provided us with great input. Retail director of Moods of Norway, Hans Petter Hübert, focused more on the early phase of an omni-channel journey, while Steffen Larvoll, the marketing manager of Warehouse and Industrial Systems AS, focused more on the latter face, with return policies and customer service.
In the early chapters of this thesis, RFID-technology and visibility were presented as critical elements of an omni-channel rotation, and Hübert (2017) could not agree more. *"Visibility is a fundamental necessity of an omni-channel experience and everything that concerns the future shopping experience. Furthermore, RFID is the technology that best*

offers visibility throughout the entire supply chain, and the reason for this is that RFID provides real-time information on an item-level basis, which allows the retailer to know the exact location of a product at any time. RFID also permits for proper supplementation and thus better product availability, and lastly, surveillance of products is achieved, which helps reduce waste and allows staff to provide better customer service since they now sit on accurate information" (Hübert, 2017). From this statement, it becomes clear that RFID is key to achieving visibility, and that visibility is key to an omni-channel experience. He also highlights the following: *"There are two rules of an omni-channel experience. Number 1 is to provide the right product, at the right time, at the right place and in many cases, at the right price. Number 2 is to offer exceptional customer service by enabling employees with tools to better help the customer. If one can combine these two, you have a winning formula!" (Hübert, 2017)* This statement yet again focuses on visibility, since visibility refers to the knowledge of a products' status. However, the focus is also on customer service. As explained in Chapter 3, an omni-channel experience is customer-oriented and aims at delivering a convenient and available solution. From Mr. Hübert's statement, we can interpret that he feels the same. He further explains how Moods are adapting to the new technological era, and that they are trying to use RFID to get control of internal operations.

The authors of this thesis have wondered why retailers all over the world have decided to go all-in on creating an omni-channel. On that note, we received this answer:
"The main reason is that it is expected by the customers. It is no longer interesting which channel the goods are sold in, it is now only interesting to be as accessible as possible and be able to deliver on our customer expectations. It becomes meaningless to talk about and distinguish between online and physical, it is commerce we are dealing with. The omni-concept and buzzword will eventually disappear, since it over time will become the new normal" (Hübert, 2017). Based on this statement, we can perhaps begin to imagine seamless shopping experiences from all sorts of consumer goods, not just fashion retail. Furthermore, we can start to imagine a future where one doesn't feel a difference when moving between brands. In other words, the omni-channel concept could perhaps lead to a universal platform (like briefly explained in chapter one). Steffen Larvoll (2017) says that *"one must stop to think of consumers as loyal, and focus on the fact that consumers at all times will choose the best alternative."* A universal platform could, therefore, be a good solution.

Steffen Larvoll goes on and supports Mr. Hübert's view on being available to the customers and providing convenient solutions: *"I think that retailers must focus on reducing friction in all aspects of customer contact. Here you must see the shopping experience from the customer's perspective and remove all the obstacles that appear along the way. Logistics is the most important factor in managing to deliver on the customer satisfaction the companies provide, and it is also here that you see the biggest frustration at the customer" (Larvoll, 2017).* Here, we can see that he considers logistics to be the crucial task in an omni-channel journey and that this must be in place, in order to satisfy customers. Furthermore, he goes on to speak about consumer behavior, and how both consumer behavior and technological advancements shape the omni-channel environment. *"Changes in consumer behavior and new technology all help create such a complex future that it's hard to stay ahead. An omni-channel is, therefore, a bit like finding the Holy Grail- it's a job that never ends. When you have solved all the problems one had at the start of an omni-channel project, the market has changed so much so that new problems have occurred" (Larvoll, 2017).* It becomes apparent that in order to be a successful omni-channel retailer, one must be attentive to new changes in consumer behavior so that one always satisfies the customer. The omni-channel journey never end and retailers must be aware of new trends and improvements at all times. The omni-channel experience is customer-oriented, and like mentioned in chapter 3, the customer is the "new boss." Mr. Larvoll clearly has the same point of view, as he highlights the ever-changing market trends and consumers.

The final element that stood out in our interviews was Mr. Larvoll's comment about the importance of return logistics. *"Return logistics is a great source of frustration. Most companies today, for example, send products without a printed return receipt, which means that the customer must print it out. This implies that companies expect all customers to have a printer available, which is not the actual case. However, when ONE online store offers printed receipts, it quickly becomes an expectation from the customer's side - and ultimately a standard" (Larvoll, 2017).*

Return logistics should and must, according to Mr. Larvoll, receive more attention if one wants to create a successful omni-channel. Purchasing online have had increased popularity and so has the need for returning products. Hence, this process should be made as easy as possible. If one retailer makes returns easier than others, they will eventually "win" and be chosen as the go-to retailer.

7.0 Findings

This chapter presents the most significant findings of the previous chapters and aims to recap the most crucial elements needed for a successful omni-channel strategy. Moreover, this chapter lays the foundation for what the ROCK-framework should contain.

7.1 Foundation of an omni-channel

Three overall elements lay the foundation of an omni-channel. These are RFID-technologies, visibility and customer touchpoints. According to Ustundag (2013), RFID-technologies is a strategic tool, which improves operational performance. Furthermore, he focuses on how RFID-technologies gives companies control of inventory throughout the supply chain. This is done by enabling companies to communicate information in real-time, which allows companies to move away from operating in silos. As a result, companies improve their forecasting and inventory optimization. This allows companies to save money, but also inevitably satisfies customers, which is the ultimate goal. Ustundag (2013) further states that RFID-technologies improves efficiency, accuracy, visibility and security. These factors are considered as core competencies of omni-channel retailing, however, the term visibility has received more attention (see chapter 3.8). Visibility is therefore seen as the second foundation element of an omni-channel.
Visibility is achieved through the utilization of RFID-technology according to Hübert (2017). He further focused on the fact that "*(...) visibility is a fundamental necessity of an omni-channel experience and everything that concerns the future shopping experience."* Sub-chapter 3.7.1 further elaborates on the topic of visibility, and Tohamy (n.d) described it as the ability to capture and analyze supply chain data in order to ease decision making. This leads to lower risks and improved processes. Francis (2008), on the other hand, highlighted that visibility is seen as *"the identity, location and status of entities transiting the supply chain, captured in timely messages about events, along with the planned an actual dates/times for events."* Based on these three sources' contributions on visibility, there is no doubt that visibility is key to an omni-channel strategy. This is because omni-channel logistics need full information of inventories, as well as effective coordination. This was supported by Vecchi and Buckley (2016), which explained that omni-channel retailing demands the highest level of integrations so that customers can make an uninterrupted journey through all different customer touchpoints.

Customer touchpoints are the third factor that stood out throughout our research. According to Davis and Longoria (2003), customer touchpoints are the different channels and places that a customer can interact with a brand. With all the different media platforms and devices, the number of customer touchpoints is larger than ever. As a result, customers expect companies to be available on all platforms so that the shopping-experience becomes as easy and convenient as possible. However, it is important that the different touchpoints "melt together" and that no touchpoint is better than another. According to Carroll and Guzmán (2015), the various touchpoints should offer the same opportunities and clearly represent a single face to the customers. They highlighted that the different touchpoints should not compete against each other like multi-channels does (Berman and Thelen, 2004). This was supported in chapter 3.7.2, where the omni-channel life-cycle was presented (Nichols, 2015). This life-cycle show that the omni-channel customer does not look at touchpoints as competing outlets. From that model, it further becomes clear that an omni-customer is irrelevant to what touchpoint he or she uses as long as it provides the same service level and same inventory information and availability.
We conclude that RFID- technologies, visibility and customer touchpoints are the foundation of any omni-channel experience.

7.3 Specific requirements

Omni-channel retailing has proven to have major inflictions on supply chains seeing that they are increasingly customer-oriented. Because of this, retailers must perfect their operations and deliver suitable solutions. From chapter 3, there are mainly three particular requirements that stand out. These are replenishment strategies, fulfillment options and returns. Replenishment strategies were introduced by kurtsalmon.com (2016) and were divided into two categories: allocations and inventory policies. Allocations policies and inventory policies intervene with each other, where the focus is to place the different products and at what quantity. This enables retailers to provide the right product at the right time.
The next requirement is fulfillment options. Peragine (2009) explains fulfillment options as the different ways that a retailer can complete an order. In an omni-channel world, the number of fulfillment options is crucial. As more companies offer click-and-collect, ship-from-store, etc. it becomes clear that it eventually becomes an expectation from the customer. One must, therefore, have all the "standard" fulfillment options and perhaps

some more. Grackin (2015) mentioned how the number of fulfillment options affects logistical operations and that new procedures are demanded. This means that distribution centers and stores might have to send smaller quantities at a more rapid frequency than before. The third requirement is returns, which had little relevant theory in regards to omni-channel retailing. However, our primary source Larvoll (2017), elaborated on the topic. He firmly believes that returns are an important part of any omni-channel, and that convenience and simplicity must be offered to the customer. He focuses on the customer desires of returns, and highlights that some retailers are "lazy", while others are not. The fact that some retailers provide printed return labels, will eventually make it a standard. From a retailer's perspective, in-store returns are annoying because returned products must be re-distributed in the store. However, they are often just put in storage, without anyone knowing it. With the use of RFID all products are scanned and put into a system, which shows what products are available. Therefore, all departments will be able to see the actual inventory number, including returns, which enables them to re-sell returned goods.
Last, but not least, an omni-channel is all about customer service. Even though customer service is not an explicit chapter previously in this thesis, an omni-channel experience is all about putting the customer first and pleasing his or her desires. The customer is king (or queen) with all his technological devices and touchpoints.

7.4 Potential benefit

According to Johnson, Scholes and Whittington (2008), a first mover advantage can be achieved when a retailer becomes more successful than its competitors as a direct result of being first to market with a new product, process or service. In the case of omni-channel retailing, we can say that retailers are competing on becoming the first to offer a new service. According to Abramowicz et al. (2014), a first mover advantage can create brand loyalty, which can increase and thus, result in a larger customer base. So, for those deciding to invest in an omni-channel rotation, it might be very beneficial to be "first to market."

7.5 Summary

From the three previous sub-chapters, we find eight highlights. These are RFID-technologies, visibility, customer touch-points, replenishment strategies, fulfillment options, returns, customer service and first mover strategy. However, RFID-technology, visibility and customer touchpoints must all be in order before one can begin to look at the five latter highlights. These three elements lay the foundation of any omni-channel experience. We cannot begin to talk about optimized replenishment strategies, fulfillment options, returns or excellent customer service before this is in place.

8.0 The ROCK-framework

As a result of the research conducted throughout this thesis, the authors have developed a framework which focuses on the necessary requirements for omni-channel logistics. This is presented as the Retailer Omni-Channel Knowledge framework (ROCK-framework). This framework focuses on the fundamental logistical steps of an omni-channel experience and is founded on the combination of both primary and secondary data.

8.1 Definition of a framework

A conceptual framework aims at *"(...) linking all of the elements of the research process"* (Ravitch and Riggan, 2016). This includes the researcher's interests and goals, context and setting, primary and secondary data, theory and methods.

8.2 Background of the ROCK-framework

We developed the Retailer Omni-Channel Knowledge framework (ROCK) to answer our problem statement and research questions. The background for this is motivated by two reasons. The first reason is that the authors believe that there are lacking theory on the concept of omni-channel retailing and the logistical capabilities needed. The few theories and frameworks that do exist only focus on basic requirements of an omni-channel strategy, and hence, only technology and readiness of the organization. We believe that an omni-channel framework should highlight several, logistical specifications for retailers starting their omni-channel journey.

Secondly, we decided to make this framework to help Moods of Norway in their future omni-channel journey. They are looking for new ways to utilize RFID-technologies and we, therefore, wanted to provide a straightforward framework that easily suggests future focus and improvement areas. We decided to exclude the earliest phases of an omni-channel process, which means that the development of a business strategy and RFID-implementation is omitted. However, if one shall utilize this framework, one must keep in mind that RFID is the base. In the sub-chapter below, the ROCK-framework is illustrated.

8.3 The ROCK-framework

Inventory strategy	Fulfillment options	Returns	Customer service
How to take advantage of increased visibility to optimize inventory planning?	*How can logistics support the statement "order anywhere, fulfill anywhere?*	*How to successfully handle the logistics of returns?*	*How to use logistics to improve customer service?*
1) Use RFID to support core competencies 2) Use RFID both upstream and downstream in the supply chain 3) Optimize replenishment policies through supply chain segmentation	1) Use RFID to reduce out-of-stock situations 2) Use RFID to turn stores into fulfillment centers 3) Use RFID to offer more fulfillment options	1) Use RFID to simplify returns 2) Use RFID to identify counterfeit goods 3) Use RFID to track returns to increase turnover	1) Use logistics to improve customer touchpoints 2) Use RFID to identify previous customer purchases 3) Use RFID to enhance in-store shopping experience

Table 6: The ROCK-framework

8.3.1 The ROCK-framework explained

The ROCK-framework consists of four steps: Inventory strategy, fulfillment options, returns and customer service. Each of these steps has an overall question followed by three answers. The different steps are thoroughly described below.

Step 1: Inventory strategy

Step 1 of the ROCK-framework focus on inventory strategy and raises the question *"How to take advantage of increased visibility to optimize inventory planning?"* This question is best accomplished through the three following tasks:

1) *Use RFID to support core competencies*
2) *Use RFID both upstream and downstream in the supply chain*
3) *Optimize replenishment policies through supply chain segmentation*

The first task focus on the use of RFID to support core competencies, and these are accuracy, efficiency, security and visibility (see chapter 3.7) RFID helps improve these four competencies by providing correct real-time information across all divisions of the company, which improves operational performance. By doing so, retailers are can get more efficient supply chain and hence, deliver products as promised.

The second task recommends retailers to use RFID both upstream and downstream in the supply chain since this will increase visibility and improve control. Today, not all retailers are able to "force" their suppliers to use RFID, many therefore only utilize RFID in the downstream part of the supply chain. However, if a retailer shall have an omniscient view of their supply chain and always be able to know the location and status of a product, RFID-tracking must be used upstream and downstream.

The third and final task focuses on the optimization of replenishment policies through the use of supply chain segmentation. Replenishment policies were introduced earlier in this thesis and refer to how much inventory a retailer should keep- and where. As a solution, the framework suggests supply chain segmentation. RFID-technologies maintains control over "where, when and at what time a product is sold", which makes it possible to segment what type of customer group the different stores of a brand have. Through this, replenishment policies become more accurate and hence, more beneficial. So, retailers should utilize RFID to see how much of each and every product category that is sold in different stores. Example vise, if men's suits always are sold out in a store in Oslo and never sold in the store in Kristiansand, more suits can be kept at the store in Oslo. That way, both the customer and the retailer gets satisfied. The customer is pleased since there's a broader product availability in the store nearby, while the retailer most likely can sell more products.

Step 2: Fulfillment options

Step 2 of the ROCK-framework is fulfillment options, which is related to the notion of "buy anywhere, fulfill anywhere." As a result, the overall question for step 2 is *"How can*

logistics support the statement "order anywhere, fulfill anywhere"? The answer to this is to meet the following requests:

1) *Use RFID to reduce out-of-stock situations*
2) *Use RFID to turn stores into fulfillment centers*
3) *Use RFID to offer more fulfillment options*

The first task is to reduce out-of-stock situations through the use of RFID-technologies. RFID enables this by allowing all members of the supply chain to see how much inventory is kept at different stores, distribution centers, and warehouses. Through quick and easy inventory counting, as well as products being registered when they leave the store with a paying customer, retailers will always have the correct amount available. So, if they see that a product is selling well and that there are few left, they can order more, before they're sold-out. Hence, reducing out-of-stock situations. This is an important stage, where out-of-stock situations, can lead to customer dissatisfaction and distrust in the brand.
The second task suggests that an omni-channel environment demands that stores are converted into fulfillment centers. This happens because omni-channel customers expect quick, easy and convenient solutions, and retailers must, therefore, be able to suggest the best possible pick-up or shipment solution. This means that if a customer orders an item online and the main warehouse is out-of-stock, but the brick-and-mortar store carries the item, the brick-and-mortar store will ship or reserve the item until it's picked up. Furthermore, if a customer is in one store and it does not carry the right size, RFID allows retailers to guide the customer to the nearest store. The third task emphasizes multiple fulfillment options, and this is perhaps the most crucial task of step 2. Fulfillment truly focuses on how logistics support the statement "order anywhere, fulfill anywhere", and retailers must, therefore, be able to offer multiple fulfillment options. Typical omni-channel fulfillment options are "click-and-collect" and "ship-from-store." With consumers being used to several solutions from multiple retailers, it eventually becomes and expectation from the customer and therefore, a standard. RFID-technologies allows for multiple fulfillment options as it gives retailers full overview of all inventory so that they can deliver the ordered product as-soon-as-possible. Additionally, by having RFID customers won't end up ordering a product online and waiting for it, and then all of a sudden get a message that it was sold-out. RFID provides correct information both to retailers and customers.

Step 3: Returns

Step 3 focus on a somewhat neglected omni-channel element, namely returns. Step 3, therefore, raises the question "*How to handle the logistics of returns successfully?"* This was a rather difficult question to answer as the authors struggled to find theory on return logistics related to omni-channel retailing. Furthermore, only one of our primary sources mentioned returns as a crucial step in an omni-channel strategy. Returns must receive more attention from retailers trying to deliver an omni-channel experience, and to do so, the three following tasks should be completed:

- *Use RFID –technologies to simplify returns*
- *Use RFID –technologies to identify counterfeit products*
- *Use RFID –technologies to track returns to increase turnover*

The first task is all about adaptation and how retailers are perceived as "engineering" solutions to fit each and every single customer. This obviously doesn't mean that retailers have to offer 200 types of returns solutions if they have 200 customers. However, they need a broad variety to meet diversity in their customer base. As mentioned in chapter 3.8.2, many consumers have now converted to online shopping and made their homes their new fitting room. However, for it to stay that way, returns must be easily handled. With online brands offering easy and convenient solutions, such as Zalando, other retailers must follow and allow for the same procedures. Additionally, it is important to offer multiple solutions for returns, so that all different consumers feel satisfied. It is, therefore, important not to "drop the ball" on this stage because it highly affects customer satisfaction.

The next task focus on counterfeit goods, which is something theory has neglected to mention. However, own experiences have made this an important part of the framework. Counterfeit goods are not custom in Norway. However, they are easy to purchase abroad. The sad truth is that some will try to return fake items, where they either want a new "real" product or try to use the "money-back" guarantee. These fake goods are so well-made that an untrained eye might not see the difference and they might not event think that it can be counterfeit. This problem can be solved by RFID, where the store can easily identify if the product is real or not. They can also store information on the RFID-tag, so that the store can get additional information about the item. This is information such as when, where and at what cost. This information is helpful when handling returns, as it can make the situation easier to handle. Hence, RFID-technologies protect against fraud.

The last concrete task is about the importance of using RFID-technologies to track returns so that you can know where and when it will arrive. This helps companies put the item up for sale again, at a quicker rate than normal. This is important, so that returned products

aren't just forgotten about, but are re-assigned both in the physical and online store, to be re-sold.

The return stage is not solely dependent on RFID-technologies as they are dependent on partners such as transportation companies. However, RFID-technologies has several usages in the return stage. By using RFID-technologies, retailers can track merchandise from the customer and back. This allows retailers to offer it to another customer, even before it is returned. This means that the store can have a wait-list for popular items. This gives a higher rate of customer satisfaction as well as increased sales. This is a feature that is crucial in world of fast fashion.

Step 4: Customer service

The fourth and final step is customer service with the overall question: *"How to use logistics to improve customer service?"* To answer this, we developed the following tasks:

- *Use logistics to improve customer touchpoints*
- *Use RFID to identify previous customer purchases*
- *Use RFID to Enhance in-store shopping experience*

In chapter 3.3, we established that customer touchpoints appear in three phases: pre-purchase, purchase and post-purchase. In all these phases, it is important to use RFID to increase system flexibility and remove constraints. In the omni-channel world, the customer should be able to go to any device or store and find out information about an item. This includes the location of an item, when it will arrive, or where it can be picked up. The customer should dictate everything from what, how, when, where. There are also some cases where the customer can dictate the price (Optimal Omni-Channel Strategy and Execution, n.d.). This means that the customer should move through all touchpoints without noticing the switch, in other words, move seamlessly. The next task focuses on identifying customers, which mainly refers to recognition of previous purchases. However, in the future, we hope it will be the identification and "tracking" of persons. Unfortunately, this is difficult because of issues surrounding privacy policies. If this was possible, the customer would receive excellent and quick service, as well as adapted solutions and products. However, if we just stick to tracking their previous purchases, the store can analyze what the customer likes and therefore customize offers, advertisements, and services. This will again benefit the customer, who can potentially save time and money, as well as the retailer who gain another loyal and happy customer.

In the last task, it is important to see what aspects that can give excellent service. This can involve the usage of RFID-technologies in the physical store, by for example creating

“high-tech” fitting rooms. RFID can also be used in aftersales, however, few retailers does that today. The reason for this is that most retailers take of the RFID tag when the customer leaves the store with a product. However, if it was left on, it would enable retailers to track the product and the customer’s behavior. This means that information can easily be communicated if an item is returned or the customers have complaints.

8.3.2 Quality of the ROCK-framework

From the explanation above, it should be quite straightforward how the ROCK-framework functions. It distinctly illustrates that the best way for any retailer to move towards an omni-channel is by following the different steps in chronological order. One should preferably not move from one step to another before all three tasks of each step is completed. The reason for this is that future steps are easier accomplished when one has laid all the groundwork. For instance, it is difficult to reduce out-of-stock situations (step 2) before one has managed to get full control over core competencies (step 1). However, if done in the correct order, step 2 somewhat happens by itself. Based on this, we believe that the ROCK-framework is of high quality and delivers much value since it can help a retailer’s better plan their omni-channel journey. Furthermore, it is worth mentioning that even though it is a rather specific framework, it is convertible to various organizations due to its high level of transferability (see chapter 5.8).

9.0 Case company: Moods of Norway

The ninth chapter presents the case company of this thesis, Moods of Norway. The authors will give a brief overview of the history of Moods of Norway before introducing their current usage of RFID-technologies. We will look at the different procedures they have completed through the use of RFID, which includes both click-and-collect and smart fitting rooms.

9.1 Company presentation

Moods of Norway (Moods) is a Norwegian fashion brand, which was established in Stryn in 2003. Simen Staalnacke, Peder Børresen, and Stefan Dahlkvist founded the company, and together they own 85% of the brand, while the employees own the remaining 15 % (Growth, creativity and innovation in the Nordic Countries, 2012).
In July 2016, Moods decided to expand and announced their first acquisition in Norway by purchasing Brandstad, who is one of Norway's top retailers within men's fashion. Because of this Moods could add 24 more stores to their portfolio, and simultaneously strengthen their presence in the Norwegian market (Moodsofnorway.com, 2017). For many years, Moods was thriving within their industry, and the secret behind their success was their strategy and creative branding. The founders of Moods, knew that in order to succeed they had to differentiate themselves from other fashion brands. Any successful fashion brand today has a unique story or identity, which is the cornerstone of the company. The cornerstone of Moods became their Norwegian heritage and history. Their vision, therefore, became "Happy Clothes for Happy People", where they combined the Norwegian traditions with an international lifestyle (Moods of Norway, n.d). They also played around with Norwegian stereotypes, where they, for example, used labels such as "made in Europe by really, really pretty blonde girls" inside their clothes. Furthermore, they wrote stories inside their clothes, which involved their hometown Stryn and their grandparents (Growth, creativity and innovation in the Nordic Countries, 2012). These playful, little details managed to put Moods on the map both in Norway and globally. Both consumers and competitors were impressed, which led to a lot of media coverage due to their new and innovative way of storytelling through their clothes. Thanks to this strategy, Moods has managed to become a multi-million, international fashion brand. They have stores located in the US, Sweden and Norway. However, the majority of the stores is

located in Norway (Moods of Norway, n.d.). Additionally, Moods sell their clothes through various touchpoints, like Brandstad, independent brand stores and their website.

9.1.1 Current situation

Moods' success truly started in 2011, but after only three years of rising sales and income, problems occurred. In 2014 the positive trend changed, and the company saw negative profits. This was also the case in 2015 and 2016. This has led to cutbacks, both concerning employees and stores. There has not yet been any closing of stores in Norway, however, in the US two out of three stores are gone. Even though things may not seem so bright in terms of profit, Moods are continuing to make a name for themselves. To improve their business performance and create a better customer experience, Moods have invested in RFID-technology. Moods are now using RFID in several ways to try to build a successful omni-channel, which many believe is the future of retailing. They are not only using RFID for inventory control, even though that is a necessary factor for an omni-channel strategy, but they are looking at the different ways of utilizing it in store and in interacting with customers (Hübert, 2016). Moods are currently seen as one of the "leaders" of omni-channel retailing in the Nordic area, and their main goal now is to become the first retailer to offer a successful omni-channel experience.

9.2 The beginning of Moods of Norway's omni-channel journey

Moods' omni-channel journey started back in 2013 when they began to plan their utilization of RFID-technologies. Their initial RFID-plan is illustrated in the figure below.

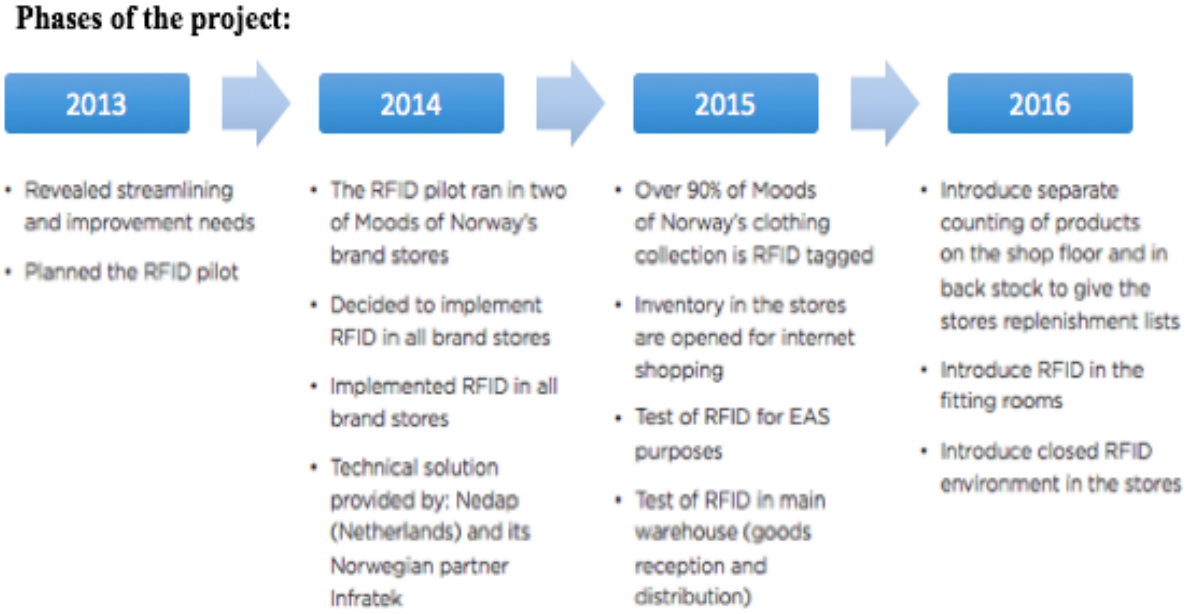


Figure 7: RFID implementation (GS1 Norway, 2017)

From the figure, we see that Moods of Norway started the first pilot project in January 2014 (GS1 Norway, 2017). In this project, they started with two pilot stores that would both have RFID-tagged items. The chosen stores where the main store in Oslo and a store in Stryn. They decided to tag two different product categories: men´s suits and shirts. The aim of the project was to reveal eventual differences in the sale of RFID- tagged items as well as the revenue per category. In this project, Moods of Norway measured how the RFID-tagged categories performed vs. the non-tagged categories in the pilot stores. In addition, they were able to measure how the RFID categories performed against similar categories in other stores. Here they saw that *"In the seasonal goods, there was a significant difference, as Moods saw a double-digit growth compared against corresponding categories in other stores. Furthermore, "never-out-of-stock" products performed poorly for unexplained reasons, but overall, the two categories had better growth than assumed beforehand in the business case (which was 3%)"* (Hübert, 2017). An unexpected result was that the two pilot stores had greater sales in the two RFID-tagged product categories than non-RFID tagged items, which has also been reported by other fashion retailers when implementing RFID (GS1 Norway, 2017). In addition, they saw several benefits and opportunities of a fully integrated RFID system. The benefits

were improved stock security, reduced level of inventory, better and more accurate information, and that they now were able to detect faults and inconsistencies more easily. In other words, they achieved complete visibility, as RFID-technologies provides 99% accuracy of inventory. This made it possible to remove critical inaccuracies (the system believe that an item exists, while it physically does not). Based on these results, Moods decided to continue their work with RFID, and upon completion of their pilot project, Moods of Norway had finalized the largest RFID project in the Nordic clothing industry. After this positive experience with RFID, Moods of Norway saw new opportunities and decided to utilize RFID further. They, therefore, decided to integrate physical and digital shopping. Hence, they created a "click-and-collect" system and "smart fitting rooms" (Hübert, 2016).

9.3 Ship-from-store

In 2015, Moods began to ship clothes from their stores to customer's home. In past situations, customers would come to a store and ask for a certain product in a specific size. Moods were then often out of stock in that specific store, however, available at another without knowing it. After their products were RFID-tagged, Moods were able to see which other stores had it in-stock. They could, therefore, get it shipped from the specific store and home to the customer. RFID allowed Moods to connect the store's inventory up to the online store, which made ship-from-store possible. This was a huge success, and it resulted in the online store becoming their best department in 2015, which had never happened before (Hübert, 2016).

This implementation was a huge win for the online customers. Furthermore, it was a win for Moods, since their previous solution created several disadvantages. The main problem was that as the season developed, items might be out of stock in the online store, while still available in one of the brand stores. Without RFID, they were not able to get complete inventory control, which in some situations led to losses. Thanks to RFID this is no longer a problem, and also, they were now able to take it one step further.

9.4 Click-and-Collect

Another omni-channel initiative Moods decided to implement, was the click-and-collect concept. This idea was fully implemented in February 2017, but the work started back in 2015 (Hübert, 2016). This solution allows the customers to order a product online and collect it themselves in the nearest store. Click-and-collect started in 2015 and was a huge success, whereby the end of the year 25% of orders were dispatched from Moods' brand stores. This implies that a click-and-collect system probably will function very well, and most importantly, provide an even more convenient and flexible solution for the customer. According to retail director Hans Petter Hübert (2017), the click-and-collect solution will improve their performance online. Furthermore, he says that other stores, who have done the same, have experienced a growth of over 20 % in sales and that 30-40 % of sales is through the click and collect solution. Additionally, the click-and-collect concept attracts more customers to the physical stores (Hübert, 2016).

9.5 Smart fitting rooms and green screens

In an omni-channel world, the offline and online channels are equally important. However, when it comes to the offline channel, many researchers firmly believe that the choices of the consumer are influenced by the surrounding environment (Rinaldi and Bandinelli, 2017). Many variables, such as the smell, sound or lighting, can affect a customer's mood and impact the shopping experience. The traditional fitting room is no longer good enough, and through the use of RFID Moods are now able to talk about "the future store." The idea behind the new concept of fitting rooms focus on "*(…) exploiting automatic single item identification using RFID to adapt the fitting room of a retail store to the products that enter it, using video projection mapping, magic mirrors and screens, lighting and sound. In addition to opening up new possibilities for integrating product information, recommendations, clienteling and social media in the fitting room, we believe that it will possibly attract customers to physical stores and augment the stores' online presence. This is important in a time where physical stores need to play to their strengths and engage customers in novel ways in order to remain attractive and economically viable"* (Rinaldi and Bandinelli, 2017). Moods have seen the importance of utilizing RFID in fitting rooms and decided that their new flagship store will be located in Trondheim, which is considered to be the "tech-town" of Norway. Here, they partnered up with several tech- and IT-

companies, such as Capgemini and Sintef, in order to create their new store. Moods have laid down 1,2 kilometres of cable to pave the way for new technology. In October 2016, they introduced a "smarter store", which involves smart fitting rooms and a green screen. The smart fitting room scans the RFID-tag implemented in the clothes and brings up information about the product on a screen inside the room, and the workers get a notification on their smart watch. Furthermore, it can provide advice on what other products that might match the chosen product. These smart fitting rooms can also track which items have been brought into the fitting rooms, but not purchased. This means that Moods now have the unique ability to know what patterns and styles that meet the customers' eye and can therefore easily make alterations to the different products. (Kuldvere, 2016) In Appendix 1, one of the founders of Moods, have brought a shirt into the dressing room and is receiving product information, as well as suggestions.
Another element in the new, flagship store is the green screen available. The green screen has various backgrounds to choose from so that the customer can see how the outfit would fit in different settings. Maybe a customer wants to see themselves in a nightclub or perhaps on the top of a mountain? In Appendix 2, we see that the founder, Simen Staalnacke, have chosen to stand in front of a historic landmark, the famous church Nidarosdommen.
Moods hope that their new technology will help customers choose the right product for the right occasion, but also create a fun and positive shopping experience. Moods have chosen to create a store like this in order to combine the best of the digital world with the physical world, hopefully, help improve customer service as well as generating more sales (Heggdal, 2017).

9.6 Omni-channel status

Moods are currently one of the leading omni-channel retailers in the Nordic area and wishes to keep this position moving forward (Hübert, 2016). As a result of this, Moods requested that we look into how they can further develop their omni-channel status and become the winning retailer in the Nordic area.

10.0 Analysis

This chapter analyses Moods in regards to the ROCK-framework and aims at discovering their current strengths and weaknesses. Moreover, the initial problem statement and research questions of this thesis will be answered. We will also provide a discussion and conclude with best practice solutions in regards to their omni-channel rotation.

10.1 Analysis of Moods in regards to the ROCK-framework

Step 1: Inventory strategy

In regards to step one of the ROCK-framework, Moods have only managed to complete the first task: "Use RFID to support core competencies." When Moods made the strategic decision to invest in RFID-technologies, they did this with the aim to support the four core competencies: Accuracy, efficiency, security and visibility. Through the improvement of these four elements, they managed to get inventory control, which was critically needed. By supporting the core competencies with RFID, Moods were able to receive information about stock levels in all their different stores and main warehouse giving them excellent overview of merchandise variance. Through this, they were able to improve their online store and presence by offering products to customer no matter where the product is stored. With this ability, they were able to move forward and fulfill other tasks in the ROCK-framework, however, they "skipped" the two other tasks of step one. Task two of step one focus on the use of RFID-technologies upstream and downstream in the supply chain. However, Moods only utilize RFID downstream. Moods' products are labeled by the manufacturer pretty early in the production process. However, they are not activated/utilized before they arrive in stores or at the main warehouse. This is something the framework does not approve of since customers and retailers should be able to know the location and status of a product from production to consumption. The third task, "optimize replenishment policies through supply chain segmentation", is also not a focus area for Moods, even though they could benefit greatly from supply chain segmentation both in terms of customer satisfaction and reduced inventory levels.

Step 2: Fulfillment options

By improving their core competencies, Moods managed to reduce out-of-stock situations, which is task one of step two. This was made possible since full visibility informs the different employees of the stock levels regardless store location. Employees also got the

ability to know the exact inventory number for one specific store, as well as for the whole organization. This way Moods would have the power to know when stock levels are reaching a re-stock level, which helps reduce out-of-stock situations. Task two, on the other hand, focus on the use of RFID to turn stores into fulfillment centers. This is a task that Moods have focused and somewhat completed, with fulfillment options like "click-and-collect" and "ship-from-store." Moods have enabled the customer to pick-up purchased items in the nearest store or that their employees' can ship products from the nearest store or warehouse. This is yet again made possible through the use of RFID since they quickly and accurately can locate where an item is in the supply chain. The second task leads us to the third, where the focus is to offer more fulfillment options. By supporting core competencies, reducing out-of-stock situations and turning all stores into functioning fulfillment centers, Moods became capable of offering multiple, fulfillment options. From the previous chapter, we learned that Moods have successfully introduced click-and-collect, ship-from-store and home-shipment. This is all a direct result of the benefits offered by RFID-technologies. Naturally, there are other elements, but RFID is the crucial component. The opportunity to offer multiple fulfillment options is crucial in an omni-channel world and Moods early on saw the positive effects of it. By offering fulfillment options that were digitally integrated which didn't force customers to come into stores, the online customer base heavily increased. Even though this customer group has yet to go beyond the number of people shopping in stores, the potential is enormous. In 2015, Moods online store became their largest store in terms of revenue, which supports the need for multiple touchpoints of fulfillment. Some might prefer a "webrooming" experience while other prefer "showrooming", however, with an omni-channel experience, there are fulfillment options for everybody's preferences.

Step 3: Returns

The third step focus on return logistics, which has barely received attention from Moods. Currently, Moods are managing their volume of returned goods rather well. However, they does not have any clear routines regarding returns.

The first task of the ROCK-framework, says that retailers should use RFID to simplify returns. Moods has in no way utilized RFID in their returns and are only delivering "standard" opportunities for returns. Hence, they have introduced the same exchange rules applicable to the Online Purchase Act, so that goods purchased online can be exchanged in any store (and of course via normal online return) (Moodsofnorway.com, 2017). This is not good enough if Moods aims at establishing themselves as an omni-channel brand. If

they were to use RFID, they would be able to know where a returned item is at all times, which gives them the opportunity to re-sell it. If not, many returned products will be wasted. This gives the company a higher rate of inventory movement and also, higher customer satisfaction. Furthermore, RFID can protect Moods against counterfeit goods. Essentially, it is critical that Moods implement RFID also at the return stage in their rotation towards an omni-channel.

Step 4: Customer Service

The fourth and final step in the ROCK-framework is customer service. Customer service is in many ways the ultimate goal in an omni-channel, where the customers' wants and needs are the main focus. Everything the company has done so far, to become an omni-channel, is to please the customer on a higher level. RFID- technologies are crucial in this part, where its benefits give the company a superior customer service. This is also the case for Moods. They have used RFID-technologies to reduce their inventory errors so that they are able to offer the customer a broader choice of both products and service. They have done so by connecting their inventory up against both the physical and online store. As a result of this, we can say that moods have started to fulfill the first factor, where they have used RFID and logistics to optimize their touchpoints. The second factor is about identifying the customers' previous purchases through the use of RFID. According to Mr. Hübert (2017), this is something they plan on doing. However, privacy policies are restricting this development. Nonetheless, the goal is to eventually be able to identify a customer's previous purchases when he or she enters the store. This will at first function by leaving the RFID-tags on the clothes at check-out, which means the tag can be read when the customer re-enters the store. This enables Moods employees and smart fitting rooms to provide specialized and individual services based on the knowledge of previous purchases. Eventually, this will hopefully be further explored, where a customer will immediately be identified by having RFID in all products, such as credit cards, clothes and wallets.
As this is not the case of todays' situation, Moods risks that their employees and smart fitting rooms recommend products that the customer has already bought. This does not give the customer an enhanced shopping experience, which he or she expects. The last factor of the customer service step focus on enhance the in-store shopping experience by using RFID-technology. This is something Moods have already done by introducing smart fitting rooms and a green screen. This gives the customer an interactive and convenient shopping experience, where the customer is always "served", either by employees or digital screens. We can therefore say that Moods has been quite innovative at this stage, as

there are few that have combine physical and digital touchpoints in their in-store experience.

10.2 Analysis recapped

By analyzing Moods in the ROCK-framework, it became clear that they have yet to succeed as an omni-channel. In the modified framework below, we have illustrated what tasks Moods have either begun to work with or somewhat completed with a green check sign. The non-started tasks are marked by an X.

Inventory strategy ⇨	Fulfillment options ⇨	Returns ⇨	Customer service
How to take advantage of increased visibility to optimize inventory planning?	*How can logistics support the statement "order anywhere, fulfill anywhere?*	*How to successfully handle the logistics of returns?*	*How to use logistics to improve customer service?*
✓ Use RFID to support core competencies ✗ Use RFID both upstream and downstream in the supply chain ✗ Optimize replenishment policies through supply chain segmentation	✓ Use RFID to reduce out-of-stock situations ✓ Use RFID to turn stores into fulfillment centers ✓ Use RFID to offer more fulfillment options	✗ Use RFID to simplify returns ✗ Use RFID to identify counterfeit goods ✗ Use RFID to track returns to increase turnover	✓ Use logistics to improve customer touchpoints ✗ Use RFID to identify previous customer purchases ✓ Use RFID to enhance in-store shopping experience

Table 7: The ROCK-framework modified

From the table, step 3 clearly stands out. Here, we see that Moods have not managed even to begin to focus on returns in their omni-channel journey, even though this is exceptionally important. Furthermore, we see that Moods have a rather weak performance in regards to step 1, where only one of the task is completed. Step 4, however, is one of Moods' more successful areas. Here, they have managed to complete two out of three steps. Regarding step 2, Moods have managed to complete all tasks. Based on this, we can say that Moods have an average position in the ROCK-framework and that they still have a long journey ahead.

11.0 Discussion

This chapter discusses the findings and analysis of this research.

11.1 Discussion

In this discussion, we would like to review our problem statement and research questions. Our problem statement is formulated in the following way: *How can RFID-technologies improve supply chain performance and create an omni-channel strategy for Moods of Norway?*

Based on this, we developed the following research questions:

- *Why is RFID-technologies an essential key to successfully creating an Omni-channel?*
- *How can real-time visibility support the logistical operations of an omni-channel environment?*

To answer these questions, we looked at theory, industry practices and the results from our interviews. From this, we learned that both primary and secondary data supported each other.

The starting point of this thesis was RFID-technologies, as Moods of Norway and the fashion industry in general, believes that this is crucial for delivering an omni-channel experience. This was supported by theory in Chapter 3, where the core competencies of an omni-channel were introduced. Here, we found that accuracy, efficiency, security and visibility was needed if a brand should become omniscient. However, based on our primary sources, we concluded that the term visibility somewhat includes all of these core competencies. From both chapter 3 and our interviews, visibility was seen as a direct result of RFID-utilization. The purpose of visibility in an omni-channel environment is to enable retailers and customers to receive real-time information about a product's immediate status. As customers operate through different touchpoints, such as smartphones, tablets or stores, retailers have to utilize visibility in all outlets of the organization. Hence, the number of various touchpoints are of the essence. Based on this, the authors decided that RFID-technologies, visibility and customer touchpoints lay the foundation of an omni-channel experience. After this had been concluded, we decided to look at the different logistics areas that these three factors could affect. These were inventory strategy, fulfillment options, returns and customer service, which the following paragraphs discuss.

From our case study of Moods, we learned that different fulfillment options were highly critical satisfying the "omni-customer." However, fulfillment solutions could only be developed if one has control of inventory. Hence, an inventory strategy would have to be in place before a retailer can focus on fulfillment options. The inventory strategy should concentrate on improving forecasting, so a retailer avoids out-of-stock situations. Further, it should provide the ability to deliver products whenever and wherever the customer sees fit. If this is accomplished, retailers can establish multiple fulfillment options, such as click-and-collect or ship-from-store. By offering such solutions, the retailer satisfies different customer preferences. Furthermore, an omni-channel brand should provide the same service level, no matter what touchpoint the customer use. Thus, websites must behave more as stores and stores must act more like websites. The "store of tomorrow" should not provide different experiences, and all touchpoints should, therefore, combine the high-touched benefits of brick-and-mortar. This was also supported by theory in chapter 3. Last, but not least, one of our sources highlighted the importance of returns. With online orders, customers are making their homes into fitting rooms. So, retailers must be capable of handling returns of products that the customer doesn't fit or doesn't like. So, to gain and maintain these customers, the return process must be convenient.

Based on the information collected, we found that RFID-technologies, visibility and customer touchpoints lay the foundation of any omni-channel experience. However, these three elements must be successfully utilized throughout several areas of a supply chain. Here, we found that the most critical areas to focus on were inventory strategy, fulfillment options, returns and customer service in regards to an omni-channel environment. We, therefore, decided to focus on particular logistical tasks that could improve these four areas and decided to develop a framework, called the Retailer Omni-Channel Knowledge (ROCK), which we presented in Chapter 8. This framework is of high quality, as the authors have established that it is credible, transferable, dependable and confirmable (see chapter 5.10). However, one must keep in mind that it is only functional for those who have deployed RFID-technologies.

As Moods, our case company, have deployed RFID-technologies, we will now discuss their strengths and weaknesses in the ROCK-framework. By analyzing Moods in this framework, we learned that Moods have managed to begin all the different steps in the ROCK-framework; however, the number of tasks started or completed varies. The first step is inventory strategy, where Moods have done rather well. They have managed to

connect their main warehouse with each and every individual store. This was done through the utilization of RFID, which supported the core competencies of omni-channel retailing. In the framework, it became clear that inventory strategy should be taken further, where we highlighted the use of RFID both upstream and downstream in the supply chain and the need for supply chain segmentation. Today, Moods' manufacturers tag their products. However, they are not activated and utilized before they reach the main warehouse or any of the stores. By doing this, they do not fully utilize their RFID-potential which could benefit their upstream supply chain significantly. By utilizing RFID upstream, they strengthen the support of the core competencies (accuracy, efficiency, security, and visibility), especially security. There are many different tiers involved in Moods supply chain (manufacturers, transportation companies, etc.), which in some extreme cases can steal products. By the use of RFID upstream, this threat is somewhat removed. Furthermore, we made it clear that supply chain segmentation through the use of RFID-technologies can highly benefit replenishment policies. By being able to see the different sales categories that are popular in each and every store, Moods can better plan their inventory stocking and hence, save money and reduce waste.

Step 2, on the other hand, Moods have executed much better. They have managed to use RFID to reduce out-of-stock situations, to turn stores into fulfillment centers and to offer more fulfillment options. They have been able to complete all three tasks which mean that their fulfillment options are omni-channel ready. However, it is important to mention that these tasks can never be fully completed as they need continuous work and attention.

Step 3 is where Moods are clearly "flunking." This is because Moods do not see the value of implementing RFID in their returns, as their currently managing their volume of returned goods rather well. However, in order to become an omni-channel brand, they must begin to focus on returns through the utilization of RFID-technologies.

The fourth and final step focus on customer service, which Moods deliver fairly well. They have managed to utilize RFID to improve in-store experiences as well as allowing it to improve customer touchpoints. However, Step 4 is far from done, as both Mr. Hübert (2017) and we believe there are several possibilities to improve customer service with the use of RFID. Example wise, by having RFID tags that allow Moods to track specific items back to one particular person, Moods is given the opportunity to get to know the customer better, which can help them offer even better service. They have yet to create a shopping experience which allows the customer to move seamlessly between touchpoints. Based on

this discussion, we can say that Moods is an average performer in regards to the ROCK-framework.

12.0 Conclusion

This chapter presents the conclusion of this thesis. This includes the answers to the problem statement and research questions and Moods of Norway's position in the ROCK-framework.

12.1 Conclusion

This thesis has explored the concept of omni-channel retailing and focused on how an omni-channel strategy affects traditional logistical operations. The objective was to explore the usage of RFID-technologies in supply chains, discovering challenges and opportunities. Based on this, we developed the following problem statement: *How can RFID-technologies improve supply chain performance and create an omni-channel strategy for Moods of Norway?*

To thoroughly answer this, we sought to respond to the research questions below:

1) ***Why is RFID-technologies an essential key to successfully creating an Omni-channel?***

RFID-technologies is key to creating an omni-channel because it improves visibility. Hence, RFID allows retailers to move away from silo-based operations towards interconnected and agile business networks. By tagging products with RFID, retailers and customers have a single view of inventory, regardless of which channels is being used. They are, therefore, able to accurately and efficiently communicate data throughout the supply chain, which prevents out-of-stock situations as well as excess inventory. This again improves customer service and satisfaction, which is tremendously important for any business and especially an omni-channel customer, which wants to receive information and makes purchases "anytime, anywhere."

2) ***How can real-time visibility support the logistical operations of an omni-channel environment?***

Real-time visibility supports the logistical operations of an omni-channel environment because it allows retailers to know what's going on at any given time in their supply chain. Visibility enables the retailer to get insight into demand, inventory, inefficiencies and

consumer behavior. As a result, retailers can stay ahead of their competitors through accurate forecasting and the ability to rapidly adapt to sudden changes, thus, making sure that they always deliver on the promises. As knowledge is power and the customer is king in an omni-channel world, retailers use visibility to optimize different parts of the customer shopping journey, such as replenishment strategies, fulfillment options, and returns. By creating transparency in supply chains, visibility enables retailers to discover inefficiencies, weaknesses, and bottlenecks. This alerts retailers early on, which allows them to correct a problem before it has serious repercussions.

To answer these two research questions thoroughly, we developed the ROCK-framework. In this framework, we analyzed Moods current performance, so that we were able to give them a status report and provide future recommendations. Based on our analysis, we found that Moods is currently delivering satisfying fulfillment options. However, they must focus on their inventory strategy and returns. Regarding their inventory strategy, they are not utilizing RFID to the fullest. Concerning returns, Moods have not adapted to omni-channel standards. The fourth and final step is customer service, where Moods have performed rather well. However, the remaining task cannot be fulfilled as the "world of retailing" is limited by privacy policies and advocates. As a result of Moods current routines and capabilities, they have yet to become an omni-channel brand. They are, therefore, categorized as a "cross-channel done well", but they are on the right path to becoming an omni-channel.

13.0 Future recommendations and limitations

This chapter presents our future recommendations for Moods. Additionally, the limitations endured throughout our research is presented.

13.1 Future recommendations

We recommend Moods to keep working targeted towards an omni-channel rotation by following different steps of the ROCK-framework. We believe that if they actively focus on the two latter phases of the framework (returns and customer service), they will successfully deliver an omni-channel experience within a short amount of time. We also recommend that they fully establish themselves as an omni-channel company on a national level before expanding across borders.

As a more concrete recommendation, we would like to offer a solution concerning both fulfillment options and returns. Inspired by Deloitte, we would suggest that Moods invest in so-called "delivery lockers", which typically are lockers that are found in convenient locations, such as train stations or local food stores. These lockers can be opened by using a code, which is given by the retailer when the customer completes a purchase online, so the customer can either pick up their product or return it. (Ternstrand, 2015) These lockers will also be dependent on RFID-technologies, as picked-up and delivered products should be communicated both internally and externally.

13.2 Future research

For future research, we would recommend developing the ROCK-framework further as technological advancements, and continuous changes in consumer behavior open up new opportunities and new desires, which we have not accounted for. Especially the part about supply chain segmentation should be further researched. Furthermore, we would also advise looking at new industry practices. The reason for this is that today's omni-channel pioneers have yet to complete their omni-channel rotation, and there will probably be many great experiences to learn from in a few years.

13.3 Limitations

Although this research has enhanced our knowledge and provided us with valuable insights, some obstacles and limitations inflicted our research. The first limitation concerns the amount of literature available. A quick google search might give the impression that there is plenty of literature on the topic of omni-channel retailing; however, the content varies in quality. Furthermore, our research wanted to focus on the logistical requirements omni-channel retailing impose. Several articles briefly introduced the requirements; however, none discussed how to implement it.

The second limitation was in regards to the number of interviews conducted. Few Norwegian retailers have begun their omni-channel journey. Hence, it was rather difficult to find suitable interview candidates. Our third and last limitation was the working relationship with Moods of Norway. They were unfortunately not able to share concrete numerical information, which would have enabled us to provide a more comprehensive analysis and possibly a better recommendation. Example wise, we could have performed supply chain segmentation. We could also have been able to comment on the cost aspect of an omni-channel environment.

14.0 References

1. ssb.no. (2016). *3 in 10 connect to the Internet via Smart TVs*. [online] Available at: http://www.ssb.no/en/teknologi-og-innovasjon/statistikker/ikthus [Accessed 28 Feb. 2017].
2. Abramowicz, M., Daily, J. and Kieff, F. (2014). *Perspectives on patentable subject matter*. 1st ed. Cambridge University Press.
3. Afuah, A. (2009). *Strategic innovation*. 1st ed. New York: Routledge, pp.150-170.
4. Aiello, M. (2016). How Macy's Implemented a Successful Omnichannel Approach. [Blog] Available at: https://www.linkedin.com/pulse/how-macys-implemented-successful-omnichannel-approach-michael-aiello [Accessed 4 Apr. 2017].
5. Baker, M. and Saren, M. (2016). *Marketing theory: A Student Text*. 3rd ed. SAGE, pp.318-340.
6. Barriball, L. and While, A. (2013). Collecting data using a semi-structured interview: a discussion paper. *Journal of Advanced Nursing*, 19(2), pp.328-335.
7. Belzer, A. (2013). *Toward Defining and Improving Quality in Adult Basic Education*. 1st ed. Hoboken: Taylor and Francis, p.71.
8. Berman, B. and Thelen, S. (2004). A guide to developing and managing a well-integrated multi-channel retail strategy. *International Journal of Retail & Distribution Management*, [online] 32(3), pp.147-156. Available at: http://search.proquest.com/docview/210902582/fulltextPDF/3EC0C8AAB93E4BEDPQ/1?accountid=40814.
9. Bhardwaj, V. and Fairhurst, A. (2009). Fast fashion: response to changes in the fashion industry. *The International Review of Retail, Distribution and Consumer Research*, 20(1), pp.165-173.
10. Bjork, C. (2014). *Zara Builds Its Business Around RFID*. [online] WSJ. Available at: http://www.wsj.com/articles/at-zara-fast-fashion-meets-smarter-inventory-1410884519 [Accessed 29 Nov. 2016].
11. Moodsofnorway.com. (2017). *Blog*. [online] Available at: https://www.moodsofnorway.com/no/blog [Accessed 4 Apr. 2017].
12. Bowen, G. and Ozuem, W. (2016). *Competitive social media marketing strategies*. 1st ed. Hershey, PA: Business Science Reference, p.36.
13. Brink, H. (1993). *Validity and reliability in qualitative research*. 1st ed. [ebook] SA Society of Nurse Researchers'Workshop, p.35. Available at: https://www.google.no/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&cad=rja&uact=8&ved=0ahUKEwjshoHwpP7SAhXLCywKHRMfAAwQFghNMAU&url=http%3A%2F%2Fwww.curationis.org.za%2Findex.php%2Fcurationis%2Farticle%2Fdownload%2F1396%2F1350&usg=AFQjCNF2ajLTq6O1mOuWFcz6Pyy55BZk8w&bvm=bv.151426398,d.bGg [Accessed 4 Apr. 2017].
14. Brown, J. (2016). *Omni-Channel? - Acxiom*. [online] Acxiom. Available at: https://www.acxiom.com/omni-channel/ [Accessed 10 May 2017].
15. Brynjolfsson, E., Hu, Y. and Rahman, M. (2017). *Competing in the Age of Omnichannel Retailing*. [online] MIT Sloan Management Review. Available at:

http://sloanreview.mit.edu/article/competing-in-the-age-of-omnichannel-retailing/ [Accessed 4 Apr. 2017].

16. Burgess, P. (2016). Integrating the Packaging and Product Experience in Food and Beverages. 1st ed. Elsevier Science, p.61.
17. Carroll, D. and Guzmán, I. (2015). *The New Omni-Channel Approach to Serving Customers*. 1st ed. [ebook] Accenture. Available at: https://www.accenture.com/id-en/~/media/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Industries_2/accenture-new-omni-channel-approach-serving-customers.pdf [Accessed 1 Mar. 2017].
18. Chan, A., Ngai, E. and Moon, K. (2016). The effects of strategic and manufacturing flexibilities and supply chain agility on firm performance in the fashion industry. *European Journal of Operational Research*, 259(2), pp.486-499.
19. Christopher, M. (2016). *Logistics & supply chain management*. 5th ed. Pearson UK.
20. Croxton, K., García-Dastugue, S., Lambert, D. and Rogers, D. (2001). The Supply Chain Management Processes. *The International Journal of Logistics Management*, [online] 12(2), pp.13-36. Available at: http://ecsocman.hse.ru/data/474/089/1217/article4.pdf [Accessed 14 May 2017].
21. Das, A. (2015). An introduction to operations management. 1st ed. Routledge.
22. Davis, S. and Longoria, T. (2003). *Harmonizing your Thouchpoints*. 1st ed. [ebook] Available at: https://www.prophet.com/downloads/articles/Harmonizing%20Your%20Touchpoints%20(SD%20TL).pdf [Accessed 4 Apr. 2017].
23. de Mel, S., Herath, D., McKenzie, D. and Pathak, Y. (2016). Radio frequency (un)identification: Results from a proof-of-concept trial of the use of RFID technology to measure microenterprise turnover in Sri Lanka. *Development Engineering*, [online] 1, pp.4-5. Available at: http://www.sciencedirect.com/science/article/pii/S2352728515300245 [Accessed 29 Nov. 2016].
24. DeVault, G. (2016). *Talking Points for Convincing Clients of Data Credibility*. [online] The Balance. Available at: https://www.thebalance.com/establishing-trustworthiness-in-qualitative-research-2297042 [Accessed 4 Apr. 2017].
25. Dziuban, C., Picciano, A., Graham, C. and Moskal, P. (2015). *Conducting research in online and blended learning environments*. 1st ed. Routledge.
26. Fernandez, P. (2009). Impact of Branding on Gen Y's Choice of Clothing. The Journal of the South East Asia Research centre for Communications and Humanities., 01(01).
27. Fernie, J. and Grant, D. (2015). *Fashion logistics*. 1st ed. London, United Kingdom: Kogan Page Limited, pp.100-142.
28. Flavián, C., Gurrea, R. and Orús, C. (2016). Choice confidence in the webrooming purchase process: The impact of online positive reviews and the motivation to touch. *Journal of Consumer Behaviour*, [online] 15(5), pp.459-476. Available at: https://www.researchgate.net/publication/303746983_Choice_confidence_in_the_webrooming_purchase_process_The_impact_of_online_positive_reviews_and_the_motivation_to_touch_Choice_confidence_in_the_webrooming_process [Accessed 1 Mar. 2017].
29. Francis, V. (2008). Supply chain visibility: lost in translation?. *Supply Chain Management: An International Journal*, [online] 13(3), pp.180-184. Available at:

http://search.proquest.com/docview/216867324/fulltextPDF/6F41982EBE7A4A12PQ/1?accountid=40814.

30. Frazer, M. and Stiehler, B. (2014). *OMNICHANNEL RETAILING: THE MERGING OF THE ONLINE AND OFF-LINE ENVIRONMENT*. 1st ed. [ebook] Global Conference on Business and Finance Proceedings, pp.655-657. Available at: https://www.researchgate.net/profile/Cristobal_Fernandez/publication/260364142_TURISMO_DE_INTERESES_ESPECIALES_INVESTIGACION_DE_MERCADO_SOBRE_LAS_MOTIVACIONES_DESDE_LA_PERSPECTIVA_DEL_CLIENTE/links/02e7e530e390390694000000/TURISMO-DE-INTERESES-ESPECIALES-INVESTIGACION-DE-MERCADO-SOBRE-LAS-MOTIVACIONES-DESDE-LA-PERSPECTIVA-DEL-CLIENTE.pdf [Accessed 4 Apr. 2017].
31. Futsæter, K. (2017). Avislesing 2016: Fra papir til digitalt.
32. Grackin, A. (2015). Your Customer is Going Omni-channel. What is the Impact of Omni-channel on the Supplier?. [Blog] *ida*. Available at: https://blog.jda.com/your-customer-is-going-omni-channel-what-is-the-impact-of-omni-channel-on-the-supplier/ [Accessed 4 Apr. 2017].
33. Growth, creativity and innovation in the Nordic Countries. (2012). 1st ed. Copenhagen: Nordic Council of Ministers, pp.30-40.
34. GS1 and ISO Partnering for Standards. (n.d.). 1st ed. [ebook] Brussels: GS1. Available at: http://www.gs1.org/docs/gs1_iso_brochure.pdf [Accessed 3 May 2017].
35. GS1 Norway (2017). *implementation of RFID has led to: Market improvement in Moods of Norway's product and information ow*. 1st ed. [ebook] GS1 Norway. Available at: http://www.gs1.org/sites/default/files/gs1_moods_of_norway_case_study_uk.pdf [Accessed 4 Apr. 2017].
36. Heggdal, K. (2017). - *Denne butikken er nå vårt flaggskip i Norden*. [online] trdby.no. Available at: http://trd.by/uteliv/2016/10/13/Denne-butikken-er-n%C3%A5-v%C3%A5rt-flaggskip-i-Norden-13637871.ece [Accessed 4 Apr. 2017].
37. Houghton Mifflin Company (2005). *The American Heritage guide to contemporary usage and style*. 1st ed. Boston [Mass.]: Houghton Mifflin.
38. Hox, J. and Boeije, H. (2005). Data collection, Primary vs. Secondary. *Encylopedia of Social Measurement*, [online] 1, pp.593-596. Available at: http://joophox.net/publist/ESM_DCOL05.pdf [Accessed 1 Mar. 2017].
39. Hübert, H. (2017). *Mood of Norway*.
40. Hübert, H. (2016). *RFID in Moods of Norway*. [email].
41. Hübner, A., Holzapfel, A. and Kuhn, H. (2016). Distribution systems in omni-channel retailing. *Business Research*, [online] 9(2), pp.255-296. Available at: http://link.springer.com/article/10.1007/s40685-016-0034-7 [Accessed 28 Feb. 2017].
42. Johnson, G., Scholes, K. and Whittington, R. (2008). *Exploring corporate strategy*. 1st ed. New York: Pearson Education, pp.330 -390.
43. Jones, O. (2016). *Radio Frequency Identification: RFID*. 1st ed. Owen Jones.
44. Kamath, N. and Saurav, S. (2016). Handbook of research on strategic supply chain management in the retail industry. 1st ed. IGI Global, p.233.

45. Kersmark, M. and Staflund, L. (2015). *Omni-Channel Retailing: Blurring the lines between online and offline*. Master thesis. jönköping university.
46. Kirk, J. and Miller, M. (1986). *Reliability and validity in qualitative research*. 1st ed. Newbury Park, Calif. [u.a.]: Sage, p.19.
47. Moodsofnorway.com. (2017). *Kjøps og leveringsbetingelser*. [online] Available at: https://www.moodsofnorway.com/no/kundeservice [Accessed 9 May 2017].
48. Kuldvere, T. (2016). *Bare i Midtbyen: Nye Moods of Norway!*. [online] Midtbyen.no. Available at: http://midtbyen.no/midtbynytt/bare-i-midtbyen-nye-moods-of-norway [Accessed 9 May 2017].
49. Larvoll, S. (2017). *Omni-channel Logistics*. [email].
50. Laseter, T. and Rabinovich, E. (2012). *Internet retail operations*. 1st ed. Boca Raton, FL: CRC/Taylor & Francis, p.59.
51. Lazarevic, V. (2012). Encouraging brand loyalty in fickle generation Y consumers. *Young Consumers*, 13(1), pp.45-61.
52. Legard, R., Keegan, J. and Ward, K. (n.d.). *In-depth interviews*. 1st ed. [ebook] p.138. Available at: http://www.scope.edu/Portals/0/progs/med/precoursereadings/IEIKeyReading5.pdf [Accessed 4 Apr. 2017].
53. Leung, J., Cheung, W. and Chu, S. (2014). Aligning RFID applications with supply chain strategies. *Information & Management*, [online] 51(2), pp.260-269. Available at: http://www.sciencedirect.com/science/article/pii/S0378720614000068 [Accessed 30 Nov. 2016].
54. Libert, B., Beck, M. and Wind, Y. (2016). The Network Imperative: How to Survive and Grow in the Age of Digital Business Models. 1st ed. Harvard Business Review Press.
55. Lierow, M., Janssen, S. and Schulte, M. (2015). *OMNICHANNEL LOGISTICS: COUNTERING AMAZON*. 1st ed. [ebook] Oliver Wyman. Available at: http://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2015/nov/POV_Omnichannel%20Logistics_Web.pdf [Accessed 10 May 2017].
56. Ling, P., D'Alessandro, S. and Winzar, H. (2015). *Consumer behaviour in action*. 1st ed. Melbourne: Oxford University Press, pp.6-9.
57. Mangan, J., Butcher, T. and Lalwani, C. (2008). *Global logistics and supply chain management*. 1st ed. Chichester [u.a.]: Wiley.
58. Martin, C. and Turley, L. (2004). Malls and consumption motivation: an exploratory examination of older Generation Y consumers. *International Journal of Retail & Distribution Management*, 32(10), p.464.
59. Iso.org. (2017). *Members*. [online] Available at: https://www.iso.org/members.html [Accessed 3 May 2017].
60. Miles, J. and Gilbert, P. (2005). *A handbook of research methods in clinical and health psychology*. 1st ed. Oxford: Oxford University Press, pp.65-70.
61. Mirsch, T., Lehrer, C. and Jung, R. (2016). CHANNEL INTEG TION TOWARDS OMNICHANNEL MANAGEMENT: A LITE TURE REVIEW. In: *Paci c Asia Conference on Information Systems (PACIS)*. [online] PACIS. Available at:

http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1289&context=pacis2016 [Accessed 28 Feb. 2017].

62. Moods of Norway. (n.d.). *Moods of Norway: About Moods*. [online] Available at: https://www.moodsofnorway.com/no/om-moods [Accessed 29 Nov. 2016].
63. Moods of Norway. (n.d.). *Moods of Norway: Store locator*. [online] Available at: https://www.moodsofnorway.com/no/stores [Accessed 29 Nov. 2016].
64. ssb.no. (2016). *More young students complete at master level*. [online] Available at: https://www.ssb.no/en/utdanning/statistikker/hugjen/aar/2016-06-28 [Accessed 28 Feb. 2017].
65. Nichols, K. (2015). *Enterprise content strategy*. 1st ed. XML Press.
66. Nykiel, R. (2007). Handbook of marketing research methodologies for hospitality and tourism. 1st ed. New York: Psychology Press, pp.20-30.
67. Omni channel retailing. (2012). 1st ed. [ebook] Ispira. Available at: http://www.ispira.com/upload/c4/c4ca4238a0b923820dcc509a6f75849b/11ccd189d25d9ebea10bd2ff18e618ed.pdf [Accessed 4 Apr. 2017].
68. Lflogistics.com. (2017). *Omni-Channel Services*. [online] Available at: https://www.lflogistics.com/content/omni-channel-services [Accessed 14 May 2017].
69. Kurtsalmon.com. (2016). *Omnichannel Success Depends on Inventory Management | Kurt Salmon*. [online] Available at: http://www.kurtsalmon.com/en-us/Retail/vertical-insight/1478/Building-a-Solid-Omnichannel-Foundation-with-Effective-Inventory-Management [Accessed 4 Apr. 2017].
70. Optimal Omni-Channel Strategy and Execution. (n.d.). 1st ed. [ebook] Envista. Available at: http://web.envistacorp.com/ebook-omni-channel-retail [Accessed 4 Apr. 2017].
71. Pantano, E. (2015). Successful technological integration for competitive advantage in retail settings. 1st ed. IGI Global, pp.150-160.
72. Peragine, J. (2009). *EBay income advanced*. 1st ed. Ocala, Fla.: Atlantic Pub. Group, p.88.
73. Ravitch, S. and Riggan, M. (2016). *Reason & Rigor: How Conceptual Frameworks Guide Research*. 2nd ed. SAGE Publications, pp.1-22.
74. Rinaldi, R. and Bandinelli, R. (2017). *Business Models and ICT Technologies for the Fashion Supply Chain*. 1st ed. Cham: Springer International Publishing, pp.80-100.
75. Roberti, M. (2015). *How Much Data Can Be Stored on an RFID Tag? — Ask The Experts Forum - RFID Journal*. [online] Rfidjournal.com. Available at: http://www.rfidjournal.com/blogs/experts/entry?8134 [Accessed 3 May 2017].
76. Rodríguez-Torrico, P., San José Cabezudo, R. and San-Martín, S. (2017). Tell me what they are like and I will tell you where they buy. An analysis of omnichannel consumer behavior. *Computers in Human Behavior*, [online] 68, pp.465-471. Available at: http://www.sciencedirect.com/science/article/pii/S0747563216308135 [Accessed 27 Feb. 2017].
77. Rogers, D. (2015). *Omnichannel Retailing: Reverse Logistics and Customer Loyalty*. 1st ed. [ebook] A Harvard Business review. Available at: https://research.wpcarey.asu.edu/internet-edge/wp-content/uploads/2016/02/HBR_20150915_Omnichannel_Retailing_Rogers_v21.pdf [Accessed 4 Apr. 2017].

78. Sabri, E. (2015). *Optimization of supply chain management in contemporary organizations*. 1st ed. Hershey: Business Science Reference, pp.1-10.
79. Shenton, A. (2004). *Strategies for ensuring trustworthiness in qualitative research projects*. 1st ed. [ebook] Education for Information. Available at: https://pdfs.semanticscholar.org/452e/3393e3ecc34f913e8c49d8faf19b9f89b75d.pdf [Accessed 4 Apr. 2017].
80. Simons, H. (2009). *Case study research in practice*. 1st ed. Los Angeles: SAGE, p.21.
81. ssb.no. (2016). *Solid increase in number of students*. [online] Available at: https://www.ssb.no/en/utdanning/statistikker/utuvh [Accessed 28 Feb. 2017].
82. Ternstrand, C. (2015). *Omni-channel retail: A Deloitte Point of View*. 1st ed. [ebook] Deloitte. Available at: https://www2.deloitte.com/content/dam/Deloitte/se/Documents/technology/Omni-channel-2015.pdf [Accessed 9 May 2017].
83. Thomas, G. (2011). *How to do your case study*. 1st ed. Los Angeles, Calif.: SAGE.
84. Thomas, G. (2015). *How to do your case study*. 2nd ed. Los Angeles, Calif.: SAGE.
85. Tohamy, N. (n.d.). *Can RFID Enable Supply Chain Visibility?*. 1st ed. [ebook] ASCET. Available at: http://mthink.com/legacy/www.ascet.com/content/pdf/ASC6_wp_tohamy.pdf [Accessed 4 Apr. 2017].
86. ssb.no. (2017). *Tre av fire har handlet på nett det siste året*. [online] Available at: https://www.ssb.no/teknologi-og-innovasjon/artikler-og-publikasjoner/tre-av-fire-har-handlet-pa-nett-det-siste-aret [Accessed 28 Feb. 2017].
87. Treadgold, A. and Reynolds, J. (2016). *Navigating the new retail landscape*. 1st ed. Oxford University Press.
88. Ustundag, A. (2012). The Business Value of RFID. *The Value of RFID*, pp.3-12.
89. Vecchi, A. and Buckley, C. (2016). *Handbook of research on global fashion management and merchandising*. 1st ed. Hershey: Business Science Reference, p.399.
90. Verhoef, P., Kannan, P. and Inman, J. (2015). From Multi-Channel Retailing to Omni-Channel Retailing. *Journal of Retailing*, 91(2), pp.174-181.
91. Voorhees, R. (2008). The impact of a peer multicultural dialogue leader training program on cognitive development of college students and overall learning. 1st ed. College Park, Md.: University of Maryland, p.83.
92. Wang, J. (2014). *Management science, logistics, and operations research*. 1st ed. Hershey: Business Science Reference/IGI Global.
93. Warner, S. (n.d.). *The Omni Channel Value proposition*. 1st ed. [ebook] RIS. Available at: https://www.cognizant.com/industries-resources/retail/the-omnichannel-value-proposition.pdf [Accessed 4 Apr. 2017].
94. BusinessDictionary.com. (2017). *Which of your friends needs to learn this term?*. [online] Available at: http://www.businessdictionary.com/definition/Generation-Y.html [Accessed 27 Feb. 2017].
95. White, T. and McBurney, D. (2009). *Research methods*. 8th ed. Belmont, CA: Wadsworth, Cengage Learning.

96. Williams, C. (2007). Research Methods. *Journal of Business & Economic Research*, [online] 5(3). Available at: http://cluteinstitute.com/ojs/index.php/JBER/article/viewFile/2532/2578 [Accessed 29 Nov. 2016].
97. Wisner, J., Tan, K. and Leong, G. (2014). *Principles of Supply Chain Management: A Balanced Approach*. 4th ed. Cengage Learning, pp.219- 220.
98. Yin, R. (2009). *Case study research*. 1st ed. Los Angeles, Calif.: Sage Publications.

15.0 Appendices

Appendix 1

Appendix 2

Appendix 3

Moods of Norway: Interview guide

1. **What made you decide to invest in RFID-technologies?**
2. **What are the challenges of implementing RFID?**
3. **What is the greatest benefit of RFID?**
4. **Where do you utilize RFID in your supply chain?**
5. **What future plans do you have for RFID-implementation?**
6. **Do you have any estimates of the cost of this implementation?**
7. **Do you have numerical evidence that prove the benefits of RFID-tagging?**
8. **Where and when do you tag products?**
9. **Are they traced all the way from production to consumption?**
10. **Why did you decide to pursue an omni-channel?**
11. **When did you decide to pursue an omni-channel?**
12. **How far have you come in your omni-channel journey?**
13. **What do you consider to be the most important tools of an omni-channel?**
14. **What are important logistical elements?**
15. **Has your strategy gone as planned so far?**