



Norwegian University of
Science and Technology

How May Fashion Retailers Incorporate Lean Management in their Supply Chains?

A Case Study of the Current Supply Chain of a
Small and Medium-sized Fashion Retailer
and Suggestion of a Framework for Future
Lean Implementation in Supply Chain
Management

Jeffrey Zhang

Industrial Economics and Technology Management

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Supervisor: Ann-Charlott Pedersen, IØT

Co-supervisor: Elsebeth Holmen, IØT

Norwegian University of Science and Technology

Department of Industrial Economics and Technology Management

Problem description

The competition in fashion industry is fierce and the competition is even more intensive for fashion retailers (Newman and Cullen, 2002). Supply chains in fashion industry have become more and more complex and dynamic (Brun and Castelli, 2008, Bruce et al., 2004). How could lean management methods be incorporated in the supply chain management of small- and medium-sized high-end fashion retailer in order to reduce total cost as well as to improve the service quality?

What are different lean management methods and lean supply chain as addressed in existing literature? What are the main characteristics of fashion products, luxury fashion consumption and fashion supply chain as addressed in existing literature? How does an actual supply chain of a high-end fashion retailer look like today? How could a lean supply chain of a high-end fashion retailer look like in the future by adapting suitable lean management methods? How will a general framework that guides the managers of high-end fashion retailers to implement lean supply chain look like?

Preface

This master's thesis is the concluding part of the author's Master of Science degree at Norwegian University of Science and Technology, Department of Industrial Economics and Technology Management. This thesis was written within the field of Strategy and Business Development during the spring semester of 2016. It is a further development of my project work during the autumn semester of 2015.

I would like to thank my supervisors, Professor Ann-Charlott Pederson and Professor Elsebeth Holmen, for their valuable guidance and useful feedbacks throughout the two semesters. This thesis would not achieve the same quality without the helpful discussion meetings with you. It was my honor to have you as my supervisors. I also would like to thank the general manager of my case company, Cecilie Klein Reinertsen, for her sincere enthusiasm, commitment and effort to the research. I am really appreciated for this cooperation.

The whole research process has been really interesting and enjoyable overall and I have learned a lot. I hope this thesis would provide some inspirations and I hope you who are going to read this thesis would enjoy it as much as I did.

Trondheim, June 26th, 2016

Jeffrey Zhang

Abstract

This thesis attempts to provide a framework for how lean management methods could be incorporated in the supply chains of fashion retailers by reviewing relevant literature, development of a theoretical framework and conducting a case study of one of the biggest multi-brand fashion stores in Trondheim, Norway. Very limited research of lean supply chain within fashion industry context has been conducted. It will be useful to look at lean supply chain from the perspective of fashion retailers, as this type of research provides a fundamental framework for fashion retailers in order to adapt lean methods to more efficiently manage their supply chains. As a multi-brand fashion retailer, the case company do not do production of products by themselves and do not own any fashion brands either. The company is only focusing on their retailing operation.

Knowledge of both fashion retailing and lean supply chain is required to provide a valuable framework for future lean implementation. The first part of the thesis is a literature study that focus on theory of different aspects regarding lean supply chain and fashion retailing industry, in order to get an insight in both knowledge areas. A theoretical foundation has been presented and a theoretical framework was then suggested for analysis of the current state of fashion retailers' supply chains.

The supply chain of the case company is described in detail in order to show how the supply chains of fashion retailers work today and provide data for mapping value stream map of current state (AS-IS). Analysis and evaluation of different lean management methods in the light of the characteristics of fashion retailing industry was done based on the AS-IS value stream map. In the end of the thesis, a modified framework of how fashion retailers which currently are not lean could incorporate lean management methods is suggested.

Sammendrag

Denne oppgaven forsøker å gi et rammeverk for hvordan “lean management” metoder kan bli innlemmet i forsyningskjede av motebutikker ved gjennomgang av relevant litteratur, utvikling av et teoretisk rammeverk og gjennomføring av en casestudie av en av de største multi-brand motebutikker i Trondheim, Norge. Svært begrenset forskning av lean forsyningskjeden innen moteindustrien kontekst har vært gjennomført. Det vil være nyttig å se på lean forsyningskjeden fra perspektivet til motebutikker, som denne typen forskning gir en grunnleggende rammeverk for motebutikker for å tilpasse lean metoder for å administrere deres forsyningskjeder i en mer effektiv måte. Som en multi-brand motebutikk, produserer ikke caseselskapet produkter selv, og de eier ikke noen motemerker heller. Selskapet kun fokuserer på sin detaljhandel.

Kunnskap om både mote detaljhandel og lean forsyningskjeden er nødvendig for å gi et verdifullt rammeverk for fremtidig lean gjennomføring. Den første delen av oppgaven er en litteraturstudie som fokuserer på teorien om ulike aspekter vedrørende lean forsyningskjede og mote detaljhandel industrien, for å få et innblikk i både kunnskapsområder. En teoretisk fundament har blitt presentert og et teoretisk rammeverk ble deretter foreslått for analyse av den nåværende tilstand av caseselskapet sin forsyningskjeden.

Forsyningskjeden av caseselskapet er beskrevet i detalj for å vise hvordan verdikjeder til motebutikker fungerer idag og skape en base for “value stream mapping” av nåværende tilstand (AS-IS). Analyse og evaluering av ulike “lean management” metoder i lys av karakteristikene av mote detaljhandel industrien ble gjort basert på AS-IS value stream map. I slutten av oppgaven, vil et modifisert rammeverk på hvordan motebutikker som i dag ikke er “lean” kunne innlemme “lean management” metoder bli foreslått.

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Abbreviations

5S	Sort, Set in order, Shine, Standardize, Sustain
B2B	Business to Business
B2C	Business to Consumer
CAD	Computer-aided design
CAM	Computer-aided manufacturing
CI	Continuous improvement
CODP	Customer Order Decoupling Point
CSM	Current State Map
EDI	Electronic data interchange
ERP	Enterprise Resource Planning
FSM	Future State Map
IP	Intellectual property
JIT	Just-In-Time
KPO	Kaizen promotion office
MRP	Material requirement planning
NOK	Norwegian krone
OTB	Open-To-Buy
PLM	Product lifecycle management
POS	Point of sale
SME	Small- and Medium-sized Enterprise
SMED	Single-Minute Exchange of Dies
SOP	Standard operating procedure

1 Introduction

.....

Have you even thought about why the price of branded fashion items could be so high? For instance a basic luxury bag charges consumers more than 15 000 NOK. Does it really worth the amount of money that you pay? Do the fashion retailers "have to" set the prices so high in order to cover total cost? According to Weber et al. (1991), the most important selection criteria for customers when they purchase products and services are quality, delivery, reputation, warranties and price. In this paper I assume that criteria such as delivery performance and warranties are parts of the concept of quality. In recent years we care more and more about sustainability(D'Souza et al., 2006, Drumwright, 1994). Our logics tell us that lower prices are often correlated to poor quality. Image how wonderful it is for fashion consumers when the prices of fashion products could be lower without that the quality declines?

Different costs exist in the entire supply chain of fashion products, for instance raw material cost, manufacturing costs, promotion cost, transportation cost and operation cost of the store. Fashion retailers are facing fierce competitions in the market (Newman and Cullen, 2002). Bertolini et al. (2013) proposed companies should have the capability to overcome the tradeoff between quality and costs in order to sustain their competitive advantages today. A strategy which could reduce total cost of supply chain without declined product and service quality will be very valuable for fashion retailers. The concept of lean supply chain might be such a strategy to consider.

1.1 The concept of lean supply chain

Lean supply chain has been further developed from lean production. In this chapter I am going to give a brief description of the history of lean and introduce different concepts within lean.

1.1.1 A brief history of lean production

Lean production has its root in the automotive industry. In the days of craft production, the total cost of a single product was very high and products were way too expensive for most of the consumers. Henry Ford introduced the mass production system, where the concept of a continuous flow assembly line is in focus (LeanEnterpriseInstitute, 2016). Taiichi Ohno from motor company "Toyota" visited Fords manufacturing plants in Detroit after World War II,

and realized that the system was full of Muda (waste). There were activities which were not adding any value to the product at all. During his stay in US, he was impressed and inspired by the supermarkets there. He said:

‘‘From the supermarket we got the idea of viewing the earlier process in a production line as a kind of store. The later process (customer) goes to the earlier process (supermarket) to acquire the needed parts (commodities) at the time and in the quantity needed. The earlier process immediately produces the quantity just taken (re-stocking the shelves). ‘’(Ohno, 1988, p26 in Hopp and Spearman, 2004).

They went back to Japan and after many experiments in their own company, Eiji Toyoda and Taiichi Ohno further developed Ford's concept and invented Toyota Production System in the early 1960s. The basic idea was to produce faster and without defects while using less resources, which means low cost and improved quality (Womack et al., 1990).

In the 1970s to 1980s, the Japanese economy was one of the strongest economy in the world while Japan is a small country that only has very limited nature resources. Toyota at that time became the most successful company in the automotive industry and is remained as one of the strongest player in the automotive market today. This phenomenon soon received attentions from American managers. They were enamored with everything Japanese. American researchers went overseas to Japan to study first-hand what was going on in this country. The Japanese production philosophy, especially automotive production, has been done lots of researches on since then. Many books and articles has been published. In 1981, the first Just-In-Time book was published, ‘‘Driving the Productivity Machine: Production and Control in Japan’’ by Robert W. Hall (Hopp and Spearman, 2004).

Later on more and more research articles and books have been written by scholars worldwide, including the very famous ‘‘Machine that Changed the World’’ (Womack et al., 1990) and ‘‘Lean Thinking’’ (Womack and Jones, 1996). Womack et al. (1990) developed the concept of lean production based on Toyota Production System in their book ‘‘Machine that changed the world’’ which described the difference between lean production in Toyota and mass production in the West.

1.1.2 Move from lean production to lean supply chain

Lean production has been proved to reduce the total cost of production and improve the quality (Macduffie (MacDuffie and Helper, 1997, Scherrer-Rathje et al., 2009, Myerson, 2012). Most of the researchers did their research by focusing on how to produce in a lean way in the production department, or one or few areas within lean production or compare lean production with other production strategies (Zhang, 2015). For instance, Just-In-Time production, how to combine lean production and agile production, impacts of lean production etc. Lamming (1993) stated in today's market the competition is no longer between companies, but rather between the supply chains that a company is one part of. Recently there has been increased interests in the industrial field for carrying out lean management beyond production department throughout the whole enterprise and spread it even to the entire supply chain (Myerson, 2012). The advancement and efficiency of the production and supply chain is deciding how much the total costs will be. A lean supply chain will help the company with reducing the total cost, just like lean production, hence increase the financial returns of the company (Myerson, 2012).

Even though we could think of all the advantages that lean supply chain could provide, it is not easy for any companies to become lean. Every enterprise has unique organizational structure, value and cultures, different products, business strategies etc. The way lean production is applied in different enterprise is very different (Byrne, 2013). To implement lean principles in other functions is different than implementing lean principles in production function. Along the supply chain there are usually several independent companies and they all have their own interests. In order to achieve a truly lean supply chain, companies must be aligned, coordinated, commit to become lean and work in consistency (Zhang, 2015). Lean implementation is never a quick fix, but rather a long journey for any companies (Scherrer-Rathje et al., 2009).

1.2 Fashion industry and supply chain management

Fashion industry is devoted to the manufacturing and selling of fashion merchandise, such as clothes, bags, shoes, watches etc. While the apparel sector (including menswear, womenswear, kids clothing, animal wear, sportswear, industrial clothing etc.) is the most important part of the fashion industry (Priest, 2005). Fashion industry is one of the most important economy in the world, both in the industrialized and the developing nations (Bruce

et al., 2004). Only in Europe there are more than 2 million people work within fashion industry (Stengg, 2001). Fashion retailing is one downstream joint in the supply chain in fashion industry and fashion retailers has the direct contact with the ultimate consumers of fashion products.

The competition in fashion retailing is very intensive (Newman and Patel, 2004, Moore and Fairhurst, 2003). Due to the constantly changing fashion trends, the low cost and low knowledge barrier of entry (Moore and Fairhurst, 2003). On proff.no I searched all the apparel retailers in Norway with annual revenue more than 1 million NOK, the result showed there are in total 1804 such fashion retail companies in Norway which only has a population of 5.2 million.



Figure 1: Calvin Klein Spring 2015 fashion show (Theimpression.com, 2016).

Retail management composes of different activities, such as management of merchandise and pricing, store formats and design, human resource management (especially sales staff), advertising and promotional efforts, customer service and reputation (Walters and Laffy , 1996 in Newman and Patel, 2004, Dunne et al. 2002). Customers in fashion retail market are fickle and their purchasing decision are made just before purchasing, so called impulse purchasing (Newman and Patel, 2004). The purchasing decision is much impacted by the emotions and feelings that the customers have at the moment of decision making. This type of consumption differs a lot from the retailing of vehicles (in automotive industry where lean

production was developed). The unit price of vehicles is very high, usually the customers who purchase vehicles have to consider several aspects before making final decision. The customers who purchase vehicle usually tolerate longer delivery time than customers who purchase fashion goods also.

Due to the intensive competition and dynamic demand and fast moving customer needs, there has been a trend for a long time that fashion companies are sourcing globally in order to cut the total costs (Bruce et al. 2004). Even the manufacturing process of fashion good is not as complex as manufacturing of vehicles, the supply chain in fashion industry is not simpler than in automotive industry. Global sourcing was one important reason and another one important reason is the numerous different designs of fashion goods. The supply chain in fashion industry has become very dynamic and complex (Lowson et al., 1999).

Outsourcing the manufacturing to low cost countries has been a common strategy among practitioners in fashion industry (Bruce et al. 2004). But what about other possibilities for reducing the total cost of merchandise in fashion industry than? Could we loan some approaches from other industries? One approach that has been very popular among automotive manufacturers in order to reduce total cost and improve quality, which has been presented in previous subchapter, is lean production, and its further extended concept: lean supply chain. In automotive industry, lean production made Toyota became one of the most outstanding company in the world. Recently lean has successfully been adapted by companies in service and process industry (Melton, 2005, Nugroho et al., 2012). So how about incorporating lean management methods in the supply chains of fashion retailers? This is the topic we are going to take a closer look at in this thesis.

2 Problem definition and research question

2.1 Background and problem definition

The competitions in the overall fashion industry is fierce and the competition is even more intensive for the retailers (Newman and Cullen, 2002). Retailing is not knowledge intensive and does not require lots of capital investment, makes it an easy industry to entry. The supply chain of the fashion industry has become more and more complex and dynamic (Brun and Castelli, 2008, Bruce, 2004). Lots of companies in the fashion industry are sourcing globally. The end customers are influence by ‘complete shopping experience’ and becoming more brand aware (Birtwistle et al., 1999, Giovannini et al., 2015). The managers of fashion retail stores are facing all these challenges at same time.

Even though fashion industry is one of the biggest industries and has often very complex supply chains, it seems like this industry has not received enough attention in terms of supply chain management (Bruce et al. 2004). After I come to this idea of how a fashion retailer could adapt lean supply chain in order to reduce costs and improve service quality, I started to search for relevant books and articles on for instance Oria, Scopus and Google Scholar. I used key words such as lean supply chain fashion industry, lean fashion retailing, lean logistics fashion, lean textiles and apparel industry, lean supply chain apparel retailing, supply chain in fashion industry, lean implementation fashion industry, lean implementation retail, lean store management etc. But unfortunately very few relevant researches were found. There is namely a lack of research attentions of lean supply chain in such an important industry. The concept of lean is not clarified in retail industry and how lean implementation should be executed by retailers is not clearly developed (Naruo and Toma, 2007). Fashion retailers are struggling with the fierce competition in the market and management of complex relationships with their fickle customers and numerous suppliers. Reduction of total cost and improving of service quality are critical for fashion retailers to develop competitive advantages and survive in the long-term. While the concept of lean is proved to be an efficient strategy to achieve both goals and seems to be a solution for the current problem that very many fashion retailer face, there is a lack of theoretical fundament of how lean knowledge could be adapted in the supply chain of fashion retailers. Implementation of lean supply chain in itself is very complex, and more aspects have to be considered in the special case of fashion retailers. It is necessary to have a framework which includes the most central lean management methods and the most

important characteristics in fashion industry. This framework would make the implementation of lean supply chain more feasible for managers of fashion retail companies.

The lean methods were all developed in automotive industry where the products typically have longer life cycle, higher unit price, longer assembly line, complex processes, high technology and big batch size than fashion industry. The different natures of the two industry make the adaption of lean supply chain in fashion industry a demanding and challenging process. Byrne (2013) propose implementation of lean is unique for every company and requires that the basic lean methods to be modified after the specific business environment. Moreover the difference between companies in different industries is even bigger than differences between companies in the same industry. It requires different approaches to implement lean into other industries than automotive industry as well. Womack and Jones (1996) proposed that lean concept could be adapted by service industry. However, not many lean implementation have been identified to be successful in the retail industry (the general retail industry)(Noda, 2015). In this thesis, I am focusing on implementation of lean in the supply chain of fashion retailers.

Even though lean practices have been often associated with production, lean management methods could be incorporated and help other functions to improve the efficiency (Jaca et al., 2012). How much the existed lean knowledge could be adapted in the supply chain of a fashion retailer needs to be evaluated in the light of the characteristics of fashion industry and the way fashion retailers are conducting their business currently.

2.2 Purpose of the research and Research question

Knowledge on "Lean supply chain" and " fashion retailing" seems to have been developed independently from each other. As it has been discussed in previous chapter, fashion retailers are seeking strategies to maintain and/or strengthen their competitive advantages and ‘lean supply chain’ may be a useful strategy. The purpose of this thesis is first and foremost to provide a framework that will help practitioners in the retailing sector to successfully adapt suitable lean management methods in fashion industry with its specific characteristics. Hence one important goal is to discuss how lean management methods may help fashion retailers with cutting total cost and improving the service quality and hence strengthen their competitive advantages. At the same time the framework may also function as one example of how companies in other sectors in the fashion industry as well as companies from other

industries may incorporate lean management in their supply chain fitted to their own characteristics and their industries' characteristics.

Based on the definition of the problem, we could clearly see that there is a need for making the supply chain management of fashion retailers more efficient. Consequently, I attempt to develop a framework to understand how fashion retailer may incorporate lean management method in their supply chains. My research question in this thesis is therefore:

How could lean management methods be incorporated in the supply chain management of a small and medium-sized fashion retailer in order to reduce total cost as well as to improve the service quality?

The question in itself is very big, in order to understand the actual scope of the research question and answer this research question properly I further divide the research question into 5 sub-questions:

Sub-question 1:

What are different lean management methods and lean supply chain management as they have been addressed in existing literature?

Sub-question 2:

What are the main characteristics of fashion products and luxury fashion consumption as they have been addressed in existing literature?

Sub-question 3:

How does an actual supply chain of a high-end fashion retailer look like today?

Sub-question 4:

How could a lean supply chain of high-end fashion retailer look like in the future by adapting suitable lean methods?

Sub-question 5:

How will a framework that guides the managers of high-end fashion retailers to implement lean supply chain looks like?

2.3 Limitations of the research

The research question is very broad and many different theories could be involved in the literature study. For instance a book of brand equity is maybe not enough to explain absolute everything about the concept of ‘‘Brand equity’’ which is one aspect to view the consumption behavior of fashion consumers. So many different concepts and theories will be included in this thesis lead the decision that I will not go very deeply into each of them. Further study is required if the readers want to get deep insight in each of the theories, concepts or methods.

Lean supply chain involves typically a company, its suppliers and its customers. The framework would be more reliable if I do as much research on both the supplier base and the customer segment as I do on the company. However due to limited resource, this thesis is based on research on a particular company and view the supply chain from the perspective of the company rather than conduct a complete research on the whole supply chain. The assumption of the research is that the focused fashion retailers have control of its supplier base. For instance a franchisee retailer has to follow the overall strategy of the franchisor. Implementation of such a franchisee store is not feasible unless the franchisor agrees.

Just as other industry, the focused market segment of companies in the same industry could be very different. Luxury fashion companies and fast fashion companies are conducting totally different strategies, while most of the characteristics of fashion industry could be seen in both two types of companies. For instance, usually the unit price of product from fast fashion brands is much cheaper than luxury fashion brands and the lead time in fast fashion product is much shorter than luxury fashion product (fast fashion Barnes). The emphasis of luxury fashion companies is usually on the high product quality, great design and brand management (Husic and Cicic, 2009). This type of strategy follows with a great total cost which make the luxury fashion goods way more expensive than fast fashion products. It will be easily understood, if we take the examples of luxury fashion companies and fast fashion companies like Gucci and H&M, Christian Dior and ZARA etc. This thesis is focusing on multi-brand retailers of high-end/luxury fashion products which the first-tier suppliers are various high-end fashion companies, for instance Burberry and HUGO BOSS, and the customers are individual fashion consumers.

2.4 The structure of the thesis

There are in total 8 chapters in this thesis. An overview of the structure is shown in figure 2 below. Chapter 1 is the introduction part where the background of lean concept and fashion retailing have been introduced, so that readers will get a big image of context. The purpose of this research and research question are defined and described in chapter 2, as this chapter will explain why the researcher is doing research on this topic, what the overall research question (followed by 5 sub-questions) is and how the results of this research would be applied in the perspective of researchers and business practitioners. Limitation of this research will also be discussed in chapter 2.

Chapter 3 is the theoretical foundation. This is the heaviest chapter and many different knowledge areas will be touched in order to design a theoretical framework. The theoretical foundation and framework will be used in the analysis part. Chapter 2 provides answers for sub-question 1 and 2. Methodology used in this research process has been described in detail in chapter 4. In the end of chapter 4, the quality of the chosen methodology will be evaluated.

Basic information of the case company and how the case company is managing their supply chain currently are presented in chapter 5. Chapter 5 will answer sub-question 3, because this chapter gives an example of how actual fashion supply chains work. The supply chain management of the case company will be analyzed in light of theoretical foundation and framework in chapter 6. Sub-question 4 will also be answered by chapter 6.

The researcher will discuss how the theoretical framework worked in the analysis process in Chapter 7. The original framework will then be modified and will be the answer for sub-question 5. Suggestions for future researches will also be included in the end of chapter 7. In chapter 8 the researcher will discuss the overall findings in the light of research question.

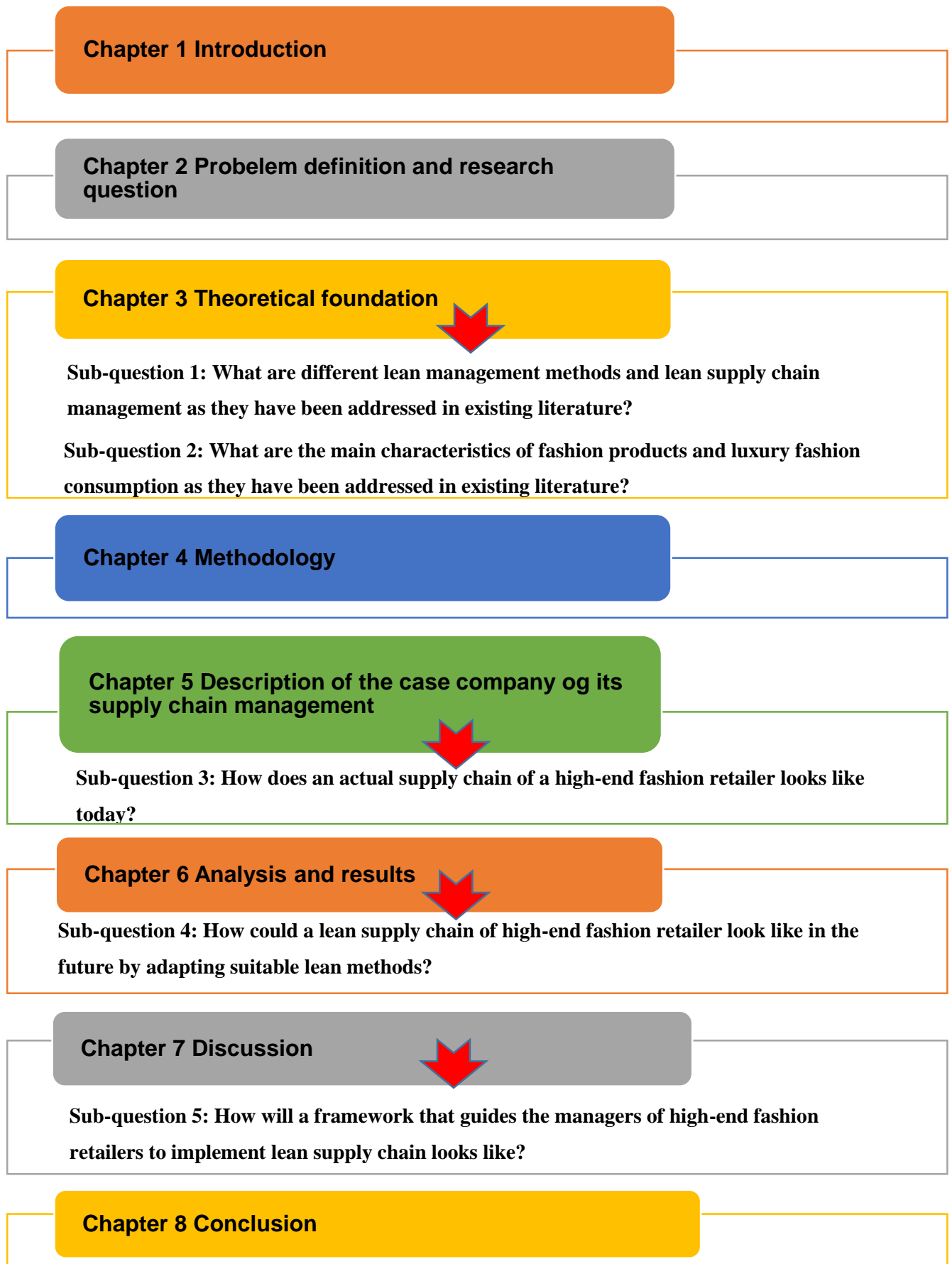


Figure 2: The overview of all chapters in this thesis.

3 Theoretical foundation

The research question is about how lean management methods could be adapted in an industry which has its own characteristics and is different than automotive industry?

Researcher has to get insight in two independent knowledge areas, lean supply chain and retailing of the high-end fashion products, otherwise it will not be possible to combine them.

A theoretical foundation should be formed before development of a theoretical framework.

This chapter is the heaviest chapter in this thesis and I will give a brief overview of what chapter 3 will cover.

First and foremost an introduction of lean concept of and different methods used in lean production forms the base for development of lean supply chain in any type of industry.

Subchapter 3.1 explains what "lean" is about and what "lean" could do for companies. 5 lean principles that guides every lean implementation is described in subchapter 3.2 and some most important lean methods are presented in subchapter 3.3. Those principles and methods show us that "lean" is an abstract concept and concrete methods could be developed to achieve the goals of lean.

Before we move to lean implementation within the whole enterprise than production function and then the entire supply chain, I am going to provide some fundamental knowledge of fashion supply chain and fashion retailing. As this structure could provide readers an insight of how a fashion retailer conducts the business and how supply chain in fashion industry works before introducing the abstract concept of general supply chain that exists in every industry. Subchapters 3.4 and 3.5 will cover the characteristics of fashion products, how a typical fashion supply chain works, luxury fashion consumption behavior of consumers, brand equity and store loyalty that explain the consumption behavior, and at last the newest trends for fashion retailer.

How lean knowledge could be implemented in the whole enterprise and involve every employee is discussed in subchapter 3.6. Because of the human nature to resist changes, how managers could deal with the resistance of employees has been briefly discussed in subchapter 3.6 as well. In this thesis I emphasize more on the procurement function than other functions within the enterprise, because procurement function has direct contact with suppliers. Lean procurement will be discussed in subchapter 3.7. How a lean supply chain could be formed by using lean methods and making strategic alliance with suppliers is

discussed in subchapter 3.8. In the end of this chapter, subchapter 3.9, a theoretical framework will be suggested based on all the previous subchapters.

3.1 What is “lean”?

We have used the word “lean” many times earlier in this thesis, but what do we mean by ‘lean’? Before we moved into what lean do to companies, we have to know what ‘lean’ is. Byrne (2013) proposed that every company is conducting lean in their own and unique way depending on the particular industry, company size, type of products, etc. The ultimate goal of lean without doubt is to minimize total cost and improve the quality (Melton, 2005, Lamming, 1993, Myerson, 2012, Byrne, 2013). However a clear definition of lean is not formed yet (Lewis, 2000).

According to Lean Enterprise Institute (2016), a lean organization should maximize the customer value while minimize the total resources required to provide the goods (through reducing wastes). The goal is to create the perfect value for customers through a perfect value creating process without any waste (LeanEnterpriseInstitute, 2016). The core approach to transform an ordinary company to a lean company is the continuous improvement where the goal is to eliminate all the identified wastes within the operation of the company (Myerson, 2011, Lewis, 2000).

Different articles that have been reviewed also emphasize on different areas of lean (Myerson, 2011, Zhang, 2015). The subjects of many books of “lean” has been written are too narrow, focus was on for example lean procurement, lean workplace, Just-In-Time delivery etc. The two most frequently mentioned characteristics of lean production are: "setup time reduction" and "continuous improvement" (Kaizen in Japanese) (Lewis, 2000). Failure prevention and production leveling are mentioned frequently as well (Mi Dahlgaard-Park and Pettersen, 2009).

Two main aspects of lean

Different articles are usually based on the different aspects of lean. There are two traditional ways to describe lean: "toolbox lean" and "lean thinking (Kaizen)" (Čiarnienė and Vienažindienė, 2012, Shah and Ward, 2007, Mi Dahlgaard-Park and Pettersen, 2009). From a perspective of ‘toolbox lean’ researchers consider lean as a collection of different management practices and tools to eliminate wastes, lower cost and improve quality. Whereas

‘Lean thinking’ tells us to integrate lean as enterprise value and lean should be a fundamental consideration when making any corporate strategies.

Figure 3, lean house proposed by Liker (2004) shows the different methods to achieve the ultimate goal of lean. Visual management, stable and standardized process and leveled production are the cornerstones of the house. Those represent the most fundamental methods in lean production. Waste reduction is the necessary way to create space for improving. People are the most valuable assets when implementing and executing lean principles, a truly lean enterprise should involve everyone in the enterprise and emphasizes on teamwork to achieve the common goal. It is impossible to succeed with only one value stream mapping and implementing of lean, the process should be repeated to seek perfection (zero waste) (Womack and Jones, 2010). Additionally, market demand, supplier base, government policies, new technology, market trends and environment are changing all the time. Enterprises should be proactive, discover and adapt the changes quickly in order to gain competitive advantages before others have done this. Therefore the center of the house is the ‘continuous improvement’. Just in time and Jidoka are the pillars of the house, they are there to support pull system and improving quality of products. At the top, the roof of the house is the ultimate goal of lean: best quality, lowest cost, shortest lead time, best safety and high morale. These methods will be described in detail in the coming chapters.

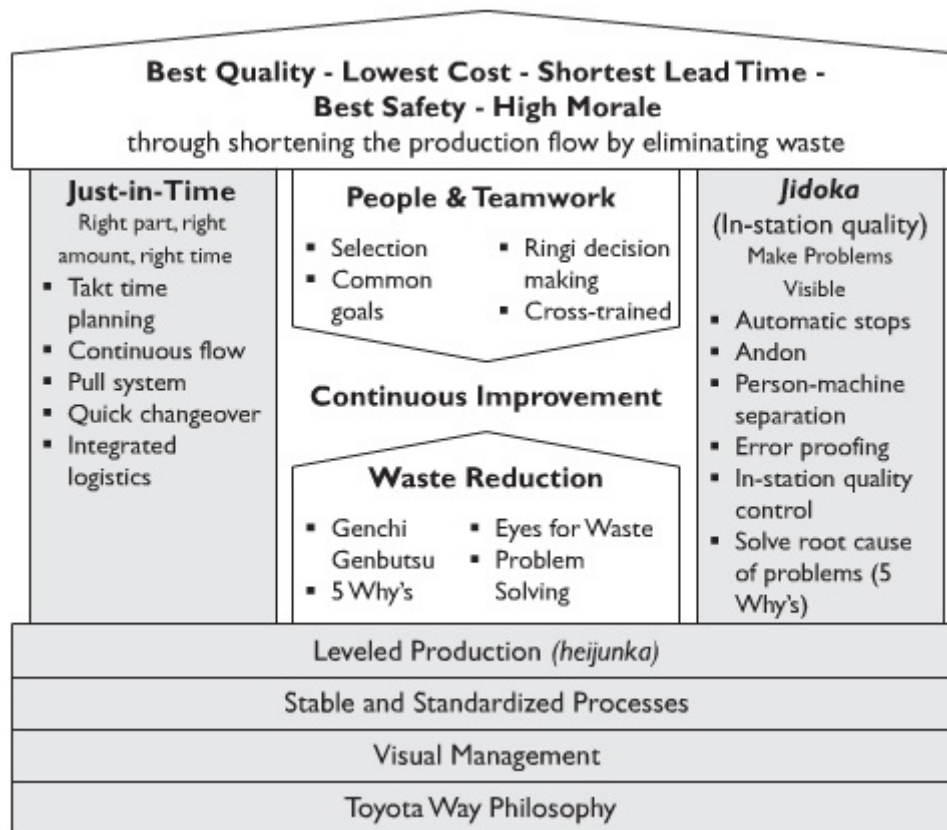


Figure 3: The lean house (Liker, 2004, p.33).

3.2 Five lean principles

Knowledge of lean is essential if we want to integrate lean to the supply chain of fashion retailers, this is the foundation for building of a solid lean house (Liker, 2004). Some of lean methods were briefly presented in the previous subchapter and will be explained in the next subchapter. The existing lean knowledge needs to be adapted and execute in practice by lean experts. The company must have a department, for instance lean promotion office, which knows how lean works in order to train the employees. This will be discussed in subchapter 3.6. First of all I am going to present the 5 fundamental lean principles that guides every lean implementation.



Figure 4: The circle of 5 Lean principles (LeanEnterpriseInstitute, 2016)

The 5 lean principles, as figure 4 shows, are the overall guidelines or framework for every enterprise which want to transform to lean enterprise. Each of the 5 principles is explained in table 1 below. Leaders from automotive industry have developed and researchers have identified many different tools under each principle. However lean transformation will be a long journey (Scherrer-Rathje et al., 2009). It is not feasible for enterprises to become lean within short time period and unfortunately almost 50% companies failed at their first attempt to become lean. (Myerson, 2012). That is why the 5 principles go in a continuous circle. Once an improvement is done, the process should be started all over again to pursue continuous competitive advantages, because a more globalized market changes radically, the competitive advantages that the enterprise has right now will no longer be competitive advantage in the near future. Perfection is almost impossible to achieve, but we gain lots of advantages during the process of seeking perfection.

Table 1: Description of 5 Lean principles (Womack and Jones, 1996)

Principles	Description
1, Identify customers and specify the value	Identify who the customers are and take a standpoint of the end customer to specify the values for them. In that way, we could find out what customer really want and eliminate the features of a product or services that do not add any value for end customer. Activities that add non-value should be identified and targeted as <u>wastes for removal</u> .
2, Map the value stream	The value stream is the set of activities throughout all the departments of the organization or even the supply chain. By mapping the value stream we could get an overview of different business activities, wastes could become <u>visible</u> and therefore we could find the non-value adding activities more easily.
3, Create flow	Make all the value adding activities in a <u>sequence</u> to ensure that your products or services will be delivered to the end customers in a <u>smooth flow without interruption, defects or long lead time</u> .
4, Establish a pull system along the value stream	Creating a system that allows you to respond rapidly to the customer demand. Produce exactly what the customer wants at when the customer wants it.
5, Pursue perfection	The ultimate goal of lean is super hard to achieve, that is why the 5 steps are in an endless circle. When new system is designed, new problems might occur. Continuous improvement (<u>Kaizen</u>) must be integrated as a <u>part of company culture</u> . When all the previous 4 steps are executed, begin the process again until the ultimate goal of lean is reached.

3.3 Lean management methods in practice

The 5 lean principles only provide us a general framework. A list of practical lean management methods have been developed by practitioners in order to execute the principles in production functions. Even though these tools have been developed in the production function, some of them seems to be useful for implementation of ‘lean’ throughout the entire supply chain (Myerson, 2012).

As I explained in the definition of ‘lean’, different articles and books are describing lean from different aspects, the most common two aspects were ‘Toolbox lean’ and ‘Lean thinking’ (Čiarnienė and Vienažindienė, 2012, Mi Dahlgaard-Park and Pettersen, 2009). Lean thinking is a very broad concept which 5 lean principles and Kaizen (continuous incremental improvement) were the core (Jones and Womack, 1996). In this thesis Kaizen is considered to be one of the lean methods parallel with other lean management methods. In the coming section I will present some most important lean methods which I think will be most relevant and interesting for supply chains in fashion industry.

3.3.1 Waste Elimination

The manufacturing operation contains many different type of activities. According to Hines& Taylor (2000) there are 3 different types of activities which should be clearly defined:

Table 2: Description of 3 different types of activities

Type of activity	Description
Value adding activities	Activities that <u>create value for the end customers</u> , take standpoint from the targeted end customers’ perspective.
Non-value adding activities (wastes)	Activities that create non-value for the end customers and are feasible to be eliminated in the sequence without affecting the production. Those kind of activities should be removed within short time.
Necessary non-value adding activities (wastes)	Activities that create non-value for the end customers, but is necessary to have in the production, due to technological limitations.

Taking wastes out of the operations is an important way to reduce the total cost. Wastes are everywhere in your business. Toyota managers defined 7 types of wastes (Strandhagen, 2015). Over the time, enterprises which have done lean practice conceptual system defined the 9 type of wastes, each of them is specified below (Barac et al., 2010).

- I. Transportation: Unnecessary moving or handling of components and handling of equipment moving which is empty or part loaded should be eliminated.
- II. Inventory: Do not keep extra inventory which is not needed.
- III. Motion: Any unnecessary or excessive walking, bending, turning and reaching are wastes.
- IV. Waiting (Idle time): The inactivity of machine or operator during process circle should be avoided.
- V. Over-production: Produce more than what customers require.
- VI. Over-processing: Unnecessary machining processes which do not add any value.
- VII. Defects: Scrap of products requiring rework which will increase the total cost of producing
- VIII. Incoherence of knowledge: Knowledge and information are not available when needed.
- IX. Correction: Any errors in production that could lead to correction of products should be eliminated.

3.3.2 Value Stream Mapping (VSM)

A typical industrial enterprise has complex flows of materials and information. It is difficult for everyone to get an overview of the enterprise without a "big picture" of how different elements are connected with each other. VSM is an efficient tool to map the value streams within the enterprise and therefore makes it easier to identify value adding activities and wastes (Rother and Shook, 2003, Myerson, 2012). Figure 5 below provides an example of how a value stream map could look like.

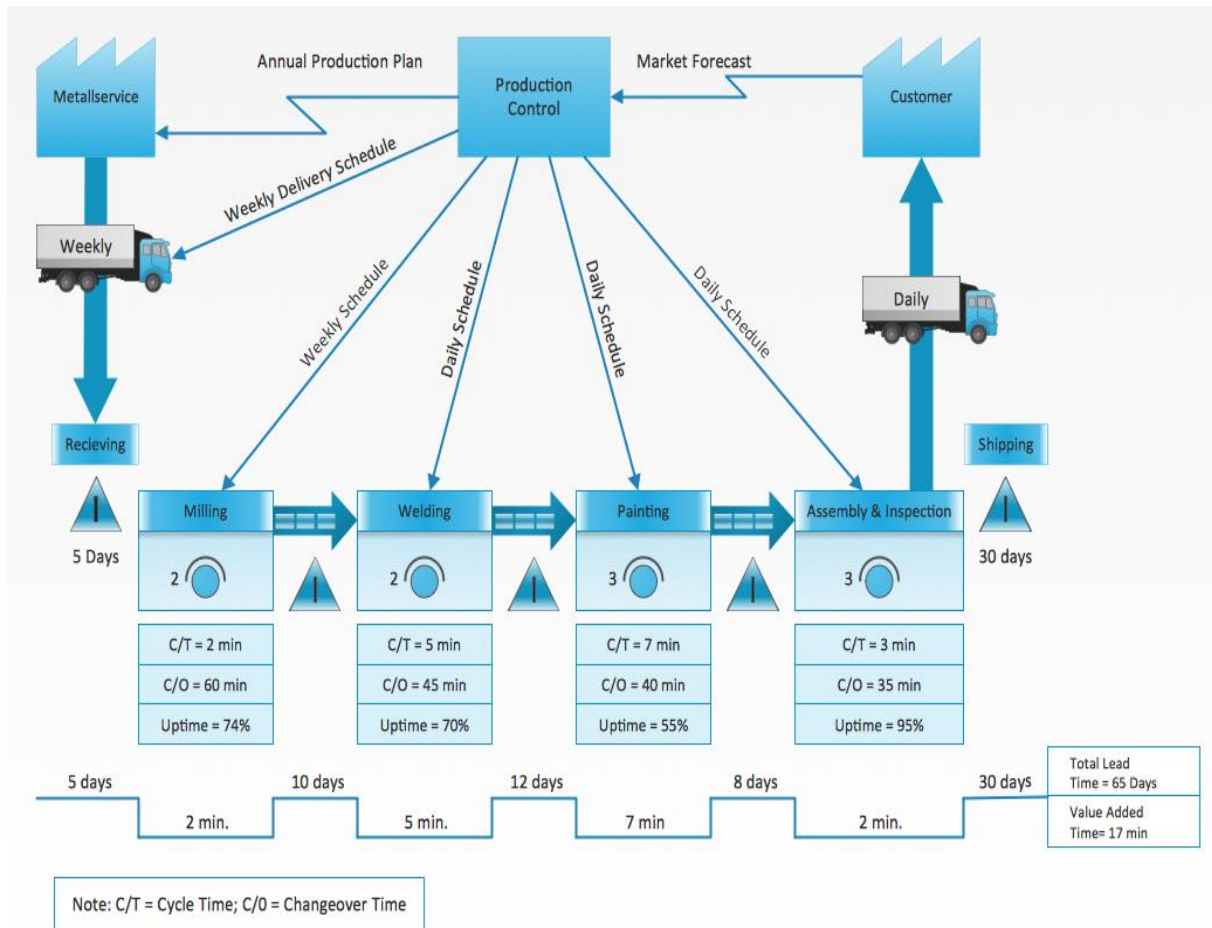


Figure 5: An example of a value stream map for manufacturing (Conceptdraw.com, 2016).

The enterprise might have many different types of products which requires different manufacturing processes. Different products have their own supply chains or value streams. The first step of VSM is to define product family by grouping products with common process steps together (Rother and Shook, 2003). The VSM team should walk around the plant and using the predefined symbols to map the flows of both material and information. The map should include everything "door-to-door" from the raw material stage to the stage how the finished product is delivered to customers. Lead time between stations and processing time should be calculated. The Current State Map (CSM) describes how the production system actually works and is the foundation for designing the Future State Map (FSM). Wastes should be identified and eliminated from the CSM and VSM team should then design the FSM. How the VSM team is going to redesign the flows is situation dependent. But the fundamental lean thinking should be respected. For instance, to produce Just-In-Time. When the FSM is done, The VSM team is going to create a feasible implementation plan.

Accountability and timeframe is important aspects when creating the implementation plan. Just as the 5 lean principles tells us, this process should be repeated to seek perfection. After the implementation is done, new problems might appear, then the VSM team's job is to map the new CSM and the process starts again (Strandhagen, 2015).

3.3.3 5S Method

The goal with 5S is creating a clean and orderly workplace that exposes waste and make abnormalities immediately visible (Myerson, 2012). All the parts in a company are working together towards a common goal, they are in interaction with each other and thus will affect each other. 5S is as important in the administrative processes as in the shop floor (Liker, 2004). The list below present what the 5S exactly mean (Barac et al., 2010, Myerson 2012):

- I. Seiri (Sort): Sort and arrange production tools. Keep only necessary ones.
- II. Seiton (Set in order): Each operator need different tools, setting them in order makes most important tools easily accessible for the operator. In that way it prevents waste of time and make the workplace smooth.
- III. Seiso (Shine): It is about to keep the shop floor safe, clean ad pleasing to work at, so it will be easier to detect dusts which could possibly leads to defects of products and errors of machines, especially in high-technology company.
- IV. Seiketsu (Standardize): Standardize all the three previous rules and present them to the operators.
- V. Shitsuke (Sustain): Integrate 5S as one part of organizational recognition and sustain the 5S among workers.

3.3.4 Visual Management

Most of our daily communication are through visual signals. Visualization makes things easier to be understand. Think about how the traffic would be when there is no signboard on the roads and no traffic lights at the road cross. Visual workplace provides a suitable ‘‘hardware’’ for lean and is one fundamental element of lean (Myerson, 2012).



Figure 6: One example of visual management at workplace (Visualworkplaceinc.com, 2016) .

Visual management at the workplace visualize production procedures, current status and other relevant matters which could be visualized, so that they will be carried out to the employees in a best efficient way (Barac et al., 2010, Myerson, 2012). For instance large display in the production halls could enable workers to gather information more quickly and accurately than by reading written reports.

3.3.5 Stable and Standardized Work

Most workers do their jobs in the way which they learned in the training period or based on their own experiences (Myerson, 2012). This makes the results of the jobs which could be a finished product or a service will vary depending on which worker has manufactured this product or provided the service. This will probably lead to wastes (Myerson, 2012). How about making standard operating procedures (SOPs) for different jobs?

According to Lean Enterprise Institute (2016) standardized work is one of the most powerful but least used lean element. Standardized work reduces variability in production and the occurrence of injuries and strain (Myerson, 2012). It also makes training of new operators easier and enables the enterprise to expand capacities without impairing production.

Standardized work is also a baseline for improvement activities. In practice standardized work means the description of different production stages must be detailed and precise. When establishing standardized work, we start with collecting and recording of data. Then the data is use for supervisors to design the process. Standardized work might be very strict, but lean organization promotes improvements which are suggested by workers. Because the workers at shop floor are executing the work and know the production activities best. Standardized work consists of three major elements (LeanEnterpriseInstitute, 2016):

- Standard time (takt time): The average time between the start of production of one unit and the next one to meet the customer demand. Takt time is necessary for managers to accurately determine and supervise the rhythm of the production.
- Standard operation sequence: The sequence that a worker has to follow during production. This ensures that every worker is doing the job in a similar way.
- Standard inventory: The minimum inventory of components and equipments that is required to enable a smooth and continuous operation flow.

3.3.6 Heijunka (Leveled Production)

The quantities and sizes of customer orders varies from day to day, instead of producing according to customer orders, Heijunka levels the total demand out in a period so that the same amount and mix of products are produced everyday. Heijunka makes the production smoothly by producing in a constant rate, provides consistency, predictability and control in processes (Barac et al., 2010). The accumulation of inventory within and between batches will be reduced. Heijunka also reduces the physical and psychological stress that workers have regarding to meet demand, since the production tasks do not vary a lot day to day. Therefore the customers will receive more reliable deliveries and the suppliers will receive more stable orders. Figure 7 illustrates an example of how the production plan is changed after Heijunka.

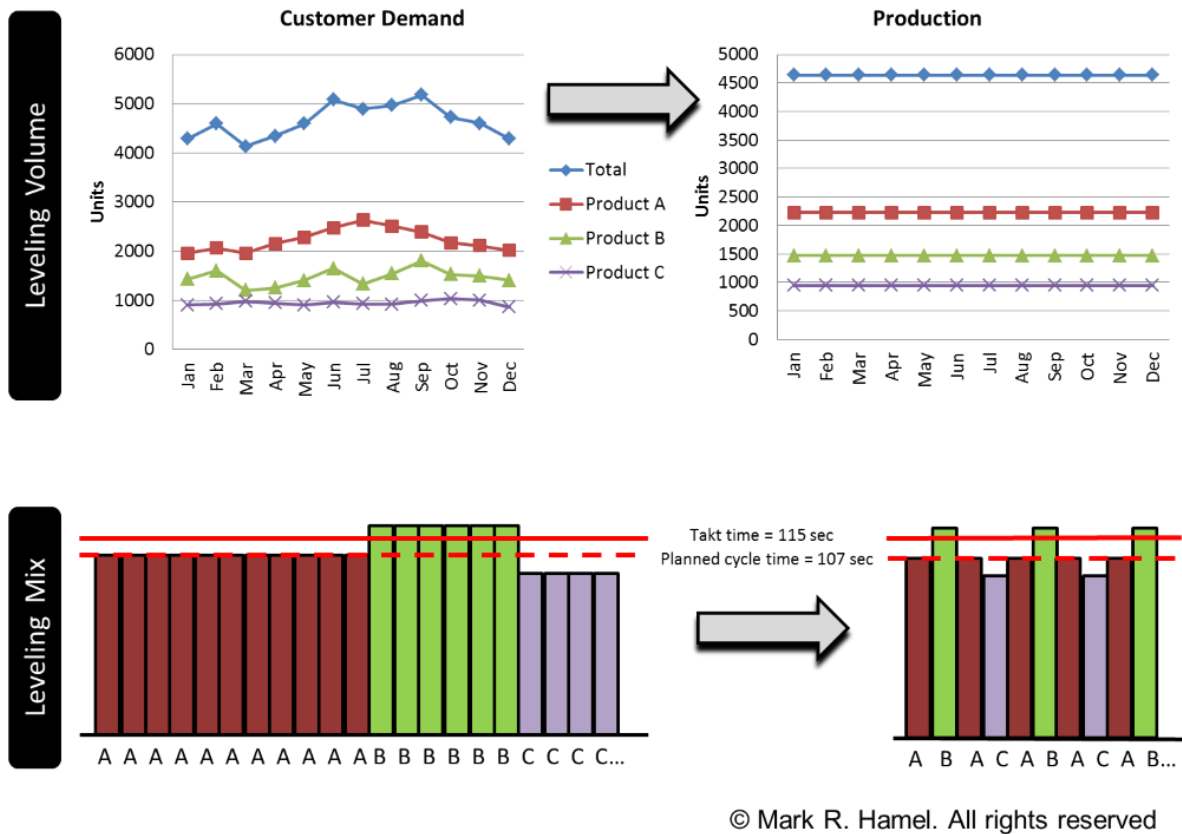


Figure 7: Production plan before and after Heijunka (Leanmath.com, 2015)

3.3.7 Just In Time (JIT)

In a more traditional enterprise, MRP (material requirement planning) and forecasting system are more often used to "push" production. Products are often produced in big batches in order to achieve economies of scale and because of forecasts are always wrong, backlog or stock out happens often. This can be defined as overproduction waste and this makes inventory cost high (Barac et al., 2010). In contrast with push system, pull system allows the lean enterprise to connect the customer demand directly to the shop floor. In a pull system the demand is received from the market before the production (Strandhagen, 2015). This requires that the production system to be flexible and efficient in order to deliver the finished products within required date. Traditional production system could also be responsive and have a pull system, but at a very high cost. Lean allows companies to complete the same tasks at a lower total cost. This lean technique is called JIT (Just-In-Time) (Strandhagen, 2015).

JIT is about producing only what is needed at when it is needed. Lean supply chain should be characterized by smooth flow of materials, short lead times and very little inventory. Every

process is matched to market pull through takt time and delivers products on a just-in-time basis. A list of tools are required to achieve those goals.

JIT production is about to response quickly, production starts after customer order is received and finalize products will be delivered to customer within due date. Often the batch sizes are small. Reduction of throughput time (amount of time it takes for a worker to produce a product) is a main objective in JIT production, because the customers do not want to wait for too long time. Short throughput time is also one of the most common competitive advantages. Flexible production resources are required, so that shop floor does not need to spend time on ordering raw materials or components. Quick set-ups (SMED), stable and standardized work and leveled production are the base to ensure a short throughput time.

Kanban card is often used to make JIT production and delivery more feasible. On a Kanban card there is information about the identification of product, instruction of operations or transport (from where to where). When a worker receives a Kanban card, he will execute the tasks that Kanban card tells and place the Kanban card back after the execution. Then the managers will have information about what has been done, what is right under process and what needs to be done. Kanban system is used to make a continuous information and material flow smoother and more precise (Strandhagen, 2015).

3.3.8 Jidoka (quality at source)

Jidoka means "quality at source". This is the lean way to prevent any defects in the products. When an error is occurred, any worker could shut down the whole production line, come to where the error occurred, together with other workers find out the ultimate causes and find solutions to prevent this situation will happen again. In order to find the root of the cause, it was suggested to ask "why" 5 times. It seems like Jidoka would cost a lot, for instance shut down the production to find root causes, but according to Womack et al. (1990) in a long-term Jidoka will reduce the total cost. Because by identify and solve the problem, the problem will never occur again and the most expensive product is the one with defects is delivered to the market for sale. According to Barac et al. (2010) the main principles of Jidoka are:

- Direct inspection: Inspection which is carried out by the workers, not by quality controllers. Because if this task is done by quality controller, it will be considered as a waste in lean.

- Inspection of the source: Quality controllers are there to find causes of the defect and then eliminate the causes.
- Clear responsibility: This allows workers to be responsible for quality of specific parts which are produced by their operations. Traceability must be created so that if defect occurs, it is possible to determine where the defected component come from and who is responsible for the production of that component.
- Poka-Yoke: Devices are used to quickly check dimensions and other quality attributes in order to find defected products. Bigger mistake will occur when, for example, a defected component is assembled into a finished product. All products must be controlled before transferring to next production stage or next stage in supply chain.
- Deliberate shutdown: When a problem occurs, production is stopped until the ultimate cause of the problem is found, solved and removed from the system. Every worker is allowed to stop the production process, if he detects a problem. This increases the responsibility of workers and motivates them to achieve a better quality of the product.
- 5 Whys: When a problem occurs, we should ask “why” for 5 times. Then we will likely find the root causes of the problem. By identifying the root causes, we could better prevent the same problem occurs.

3.3.9 Lean thinking: Kaizen

Kaizen is the Japanese word for "change for the better" or continuous improvement (CI). This is the heart of lean thinking (Womack and Jones, 2010). Kaizen is focused on gradual improvements which is initiated by the employees. Ideas and improvements are carried out by employees from different functions in the enterprise. Japanese Kaizen philosophy believes in combined power of the many individual small improvements will move the business forward constantly. The basis for Kaizen is the five lean principles that we already presented. Every Kaizen is starting with defining the values for our targeted ultimate customers (Melton, 2005).

Lean philosophy is not only about to use all the tools, but more important we have to integrate Kaizen in our heads. Imai (1986) suggested to integrate Kaizen as a life style and he pointed out companies should adopt Kaizen even if the companies is performing well, because other companies which are doing Kaizen will soon catch up and become more efficient than you if you are among the few companies that do not consider Kaizen as a companywide culture.

Kaizen events have been invented later on to make more radical changes than traditional Kaizen (Manos , 2007). Kaizen events are carried out by cross-functional teams that focus on improvement of a particular business process or working environment in a period of three to five days. The results of Kaizen events are more rapidly and dramatic than traditional Kaizen which focus on small and steady improvements. Only one problem has been focused on during Kaizen event. People in the Kaizen event team is from all functions that the Kaizen event will involve or affect. The team members are dedicated and have to be sequestered from their original works in order to concentrate 100% on the Kaizen event. Kaizen event requires commitment from the top management, just like any other lean methods. The Kaizen event team must be empowered to make their own decisions, the team know the Kaizen event better than their supervisors. However communication in the form of meetings with their supervisors and managers who will be affected by the Kaizen events is necessary to have. So that those managers can better understand why and how the changes are made. After the improvement decisions are made, the Kaizen event team is going to train the workers and managers to adapt the changes. People have a tendency to return to their old working habits, the Kaizen event have to be followed up in order to sustain the result and reap the benefits. In particular the audits could compared the results with the objectives of the Kaizen event and the prediction of the future state made during Kaizen event. Communicating the success of the Kaizen event throughout the company will help the company to build enthusiasm for continuous improvement among the workers and managers. Table 3 describes the difference among Kaizen, Kaizen events and traditional improvements.

Table 3: Kaizen, Kaizen events and traditional improvements (Manos, 2007, p.47)

Type of improvement	<i>Kaizen</i>	<i>Kaizen events</i>	Traditional improvements
Large or small scale improvements	Small, steady improvements over time.	Big, fast, simple improvements in three to five days.	Dramatic, one-time, complex, technologically based.
Who is affected	Individuals or groups.	Team based.	Top-down approach.
Costs	Low cost.	Low cost.	High cost usually.
Buy-in potential	Good because employee(s) came up with the ideas.	Good because employee(s) came up with the ideas.	More difficult because users weren't asked their opinion.
Intended benefits	Can be used for any benefit, including quality of work life.	Usually focused on reducing time or nonvalue added activities.	Meant to revolutionize an organization.

People are more desired for dramatic improvements rather than small, steady and continuous improvements (Manos, 2007, Myerson, 2012). As a manager, you might want to change the organization quickly in order to show the border of directors your excellent management ability. Which type of Kaizen should managers use is depending on the characteristics of the problem. No matter which type of Kaizen is chosen, Kaizen requires a serious commitment from the enterprise to continuously improve their business activities (Manos, 2007).

These management methods that has been presented in subchapter 3.3 have their roots in manufacturing function. They are used to support the ultimate goals of lean production and moreover lean supply chain. New tools might be invented in order to solve new problems or solve old problems in a better way. However the underlying ideas or some of the presented tools could be applied in other functions, for instance administration/office, without problem (Myerson, 2012). One example could be the 5S method. 5S enable a clean and organized workplace that would benefit any kind of work. Since Lean is a very broad concept, sometimes people just do not know where to start or intervene. This subchapter provides some concrete tools for practitioners to use and for inspiring them to invent new lean management methods.

After knowing what the concept of “lean” contains, we also need to know how the supply chain in fashion industry works. Every industry has their own characteristics. Some important research areas within fashion retailing will be discussed in subchapter 3.4 and 3.5 in order to answer sub-question 2. Fashion supply chain will be presented and I will at look at some main factors that affect customer satisfaction and store loyalty in order to get an insight in how the downstream retailing function in fashion industry works.

3.4 The fashion industry

In this subchapter, I am going to present the main characteristics of fashion products first. Later on I will go into how fashion supply chain works in general, for instance how fashion product are designed, made from raw materials and delivered to the ultimate fashion consumers.

3.4.1 Main characteristics of fashion industry

In the past centuries, most customers are purchasing fashion products including clothing, shoes, leather goods, accessories only when they need them. As the productivity has increased, excepted in undeveloped countries, today we are able to produce more than enough clothes to everyone. The purchasing decisions are made when people need those products and when they just want new ones. The design and quality of the clothes become as important as or even more important than the basic functions of clothes, which was cover and protect our bodies and keep warmness. Customers want have broader range of fashion products to choose among (Priest , 2005). Therefore the functional innovation, the design and the use of different fabrics become more and more crucial for the sales of fashion products (Bruce et al., 2005).

Some main characteristics of fashion markets are short product life-cycles, high volatility, low predictability, tremendous product variety, high impulse purchasing, long supply process and complex supply chains (Şen, 2008, Christopher et al., 2004).

The life-cycle of product in fashion industry is very short and seasonal, often the life-cycle is measured in months or even weeks, for instance the Spanish fast fashion company, ZARA, has 20 seasons a year to attract more customers (Christopher et al., 2004). Even though the products in fashion industry have short life-cycles in general, some types of products have shorter life-cycles than other. According to Şen (2008) we could divide the products into three categories:

- I. Fashion products: The life-cycle of fashion products is around 10 weeks or shorter, typically products are trendy merchandises to women.
- II. Seasonal products: The life-cycle of seasonal products is around 20 weeks, merchandises to women are the typical seasonal products.
- III. Basic products: The life-cycle of basic products is throughout the year, men's and children's merchandises is often in this category.

Continue with other characteristic, with high volatility I mean the demand of products is not stable or linear over the time, because fashion is changing all the time. Fashion lovers are not wearing the same cloth as one year ago, because they are constantly observing and following the newest trends and emphasize on their everyday looking. Fashion is influenced by many factors, for instance by weather, film, news, and pop stars (Christopher et al., 2004). This is why it's hard for fashion retailers to predict the next trend and demand in the future.

High impulse purchasing means that in the most cases the buying decisions are made at the moment of purchase, hence ‘‘availability’’ is vital, otherwise the customer ca not see the products at all when in the store, then they will likely never purchase it or purchase it from other stores.

The variety of products in fashion industry is tremendous. Take the example of womenswear provided by ZARA, on the website of ZARA (zara.com, 2016), you will find 15 categories under womenswear (except bags, shoes and accessories). For instance: outerwear, bombers, blazers, dresses, jumpsuits, tops etc. You will further find 10 sub categories under category of ‘‘tops’’: shirts, blouses, tops, plain, crochet, embroidered, stripes, florals, checks, long. There are again many styles in each of the sub categories and ZARA is selling womenswear, menswear, kids clothing and even interior products (ZARA HOME). We could also easily realize this when we go shopping, there are numerous type of clothes and other items in the stores and all the different brands are not selling the same design. Even the clothes with the same design could be made of different materials and in different colors. It will an extremely hard task to calculate how many kinds of new fashion products are introduced to the market each year globally.

The supply chain of fashion industry is moving from fiber and yarn production, to fabric production, then to apparel manufacturers and in the last stage the products are shipped to the retailers. The tremendous product variety requires different types of raw materials and semi-finished components from suppliers. It also requires accurate calculations of how much raw materials and semi-finished components are required to order from suppliers for every manufacturer. The apparel manufacturing requires lots of labors and therefore is often outsourced to manufacturers overseas, to developing countries with lower wages in order to achieve lower total costs (Şen, 2008). This makes the lead time even longer due to the long geographical distance. Like any other global sourced manufacturing, due to the long distance and culture differences, it is hard to communicate accurately and control the quality (Bruce et al., 2004). Thus the supply chain in fashion industry is usually very complex.

3.4.2 Supply chain in fashion industry

The supply chains in fashion industry has become complex and dynamic (Lowson et al., 1999). Brun and Castelli (2008), based on three case studies, pointed out that the supply chain strategy is viewed as an area where they can achieve sustainable competitive advantages by companies in fashion industry. A fashion company that manufactures and distributes their

products are differentiating their supply chain strategy based on three drivers: the characteristics of product, brand and relevance of the retail channel (Brun and Castelli, 2008). The differentiation of supply chain strategy is the choice of different strategies to manage the sectors along the supply chain. For instance, the fashion company choose to keep the manufacturing in-house or outsourcing to other companies, outsourcing to low-cost countries or high-cost countries, share equal amount of information to all the retailers or not, etc. The differentiation of supply chain strategy can be based on one or more of the three drivers. One example on this is ‘Fratelli Rossetti’, based on one of the in-depth case studies that Brun and Castelli (2008) did. Fratelli Rossetti company owns two brands, for the luxury brand Fratelli Rossetti, all the products are manufactured in Italy. While their fusion brand ‘Flexa’ that has a lower brand position, the price has to be lower and ‘made in Italy’ label is no longer needed, the manufacturing of products under the brand ‘Flexa’ is outsourced in Eastern Europe.

A typical supply chain in fashion industry

The competition in the retail segment is especially fierce in a supply chain of fashion industry (Newman and Cullen, 2002). The reasons are for instance major retail buyers have strong power in the market, more and more retailers are establishing their own brands and retail networks, the increasing globalization of supply chain and consumers are seeking for more than only the basic functions of fashion products (will be discussed later on) (Brun and Castelli 2008).

The supply chains of different fashion products could be very different, for instance the supply chain of sunglasses is very different from the supply chain of a T-shirt. In this thesis I am taking the most important product category among fashion products, namely the category of apparel according to Priest (2005), to explain how the general fashion supply chain works. Fashion retailing is one downstream sector in the fashion industry. While a typical supply chain in the fashion industry includes 4 main sectors: fiber and yarn production, fabric production, apparel production and retail operations (Şen, 2008). Each of the sectors are described in the coming paragraphs.

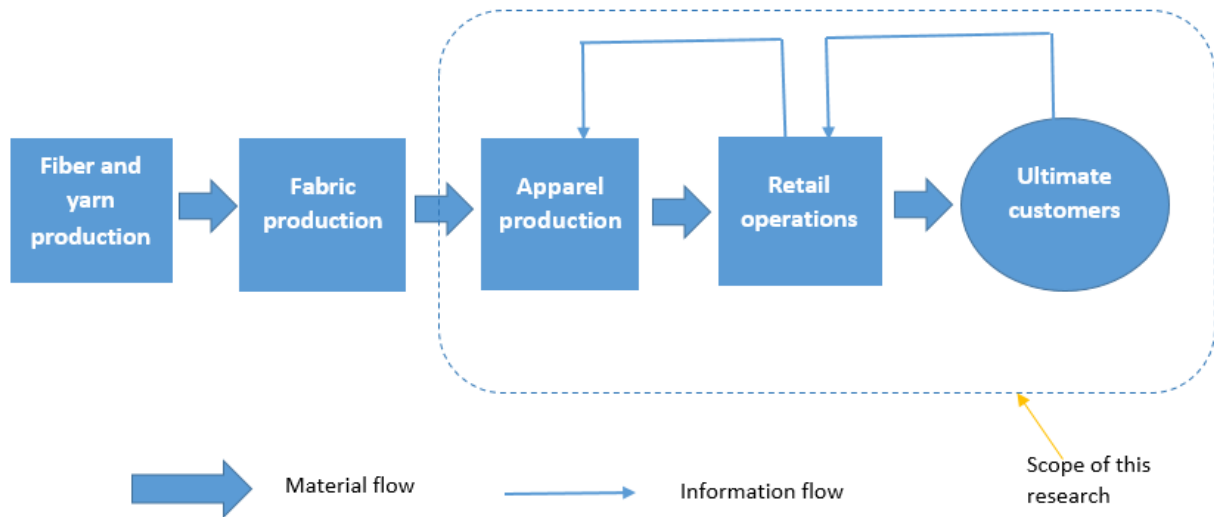


Figure 8: A typical supply chain in fashion industry (Şen, 2008).

As the title of this thesis reveals, the research will focus on how fashion retailers can better manage their supply chains, direct suppliers for fashion retailers are fashion companies which are doing the design and production of fashion products and their direct customers are the ultimate fashion consumers. Thus I am going to present how a typical supply chain would look like from the manufacturing to the end customers in detail, while briefly describe fiber and yarn production and fabric production.

I. Fiber and yarn production

Two main categories of fiber are natural fiber and man-made fiber. Agricultural companies stand for the production of natural fibers, such as cotton, linen and wool etc. Synthetic fiber producers stand for the production of man-made fibers, such as nylon, acrylic and polyester. Yarn is made of one or more than one type of fibers by spinners.

II. Fabric production

Yarned is transformed into fabric by various methods, for instance weaving, knitting or non-woven process as well. Yarn might be dyed first before transforming into fabric or in the opposite way (dyeing the produced fabric to different colors).

III. Apparel production

The first stage in the apparel production is always the design, because ultimate customer are looking for good designs as trend changes all the time. Before the designers design the products, they have to analyze and predict the trend based the sales data last same season, observations of the targeting customer groups and the works of other designers (Barnes et al., 2006, Şen, 2008). Some companies also using professional fashion-consulting services. Then the design is done in-house or will be outsourced to professional design companies. How early the design starts varies from company to company, fast fashion companies, like ZARA and H&M, 17 weeks before the season is enough (Şen, 2008). While for other companies, the period might be 40 weeks and up to 1 year (Barnes et al., 2006). When the design period is reduced, the responsiveness is increased (Şen, 2008). The predictions of coming trends and demand will likely be more accurate. Therefore fashion companies are using software systems, like CAD (computer-aided design) and PLM (product lifecycle management), to reduce the design period and improve the communication throughout the supply chain. Prototype merchandises are usually made for final decision making process.

After the design process, the company will make samples of the final designs. The samples will be presented in for instance fashion weeks to the buyers from different retailers, for example local retailers from Trondheim. Then the buyers are ordering the designs from the fashion companies, if they find the designs are going to be popular in their markets. The fashion company will accumulate all the orders and find out if the demand is big enough to carry out production of particular designs. If the demand of one design is too low, the fashion company need then to cancel the order of that particular design. According to Şen (2008), the fashion company would probably accept the order, even if the order quantity from one retailer is too low, when they want to maintain a long-term relationship with the retailer. The time between receiving orders from retailer and the season begins is usually short and large amount of products have to be produced. Some fashion companies start to produce the products before they receive the orders from the retailer, in order to leverage the production plan.

The manufacturing operations of the merchandises are taking place within the fashion company owned facilities or by outsourcing to contractors or by using both. The capital investment will be lower and the flexibility will be increased when the fashion company is using contractors. When the fashion company is using their own facilities, there will be less communication problems and they will have more control over the operation. The fashion

company should also consider where the manufacturers should be located. For instance, when the market is US and the manufacturer is located in Asia, the shipping time will be much longer than using a domestic manufacturer. Long lead time from oversea manufacturers increase the risk of obsolescence of products (Christopher et al., 2004). However the manufacturing costs will be lower by using contractors in developing countries. The advantage with domestic manufacturers is that the shipping time will be much shorter and then the fashion company will be more responsive to the market. Some companies are using different type of sourcing strategies simultaneously. They are outsourcing the basic products to contractors overseas and meanwhile producing the fashion and seasonal products in the domestic facilities.

The finalized products are distributed to a central warehouse that the fashion company owns. The products are placed in different portfolios that retailers ordered and then the portfolios are shipped to different retailers. The products are then in the ‘retail operations’ in the supply chain. For any market-oriented business, the close contact with the ultimate customers are crucial, especially in fashion industry (Christopher et al., 2004). Retailers are the ones in the supply chain of fashion industry who work closest to the consumers. Therefore retailer has an important role in fashion industry.

IV. Retail operations

The buying of merchandises is a critical part that generate margins for the retailers (Şen, 2008). Because what kind of merchandises will be in the store for sale is decided in this process. The buyers will decide what to buy and how much to buy. Before the buyers go the different fashion weeks, they have to predict the sales for the season by using previous sales data, doing market research, studying fashion shows and magazines etc. (Bohdanowicz and Clamp, 1994). The buying decision are usually made 6 – 9 months before the season starts. A budget has to be estimated, this will constrain the buying process. Each buyer has different budget, depending on their previous performance and the predicted sales of the merchandise category that the buyer is responsible for. OTB (open-to-buy) is the term that often used for the maximum amount of capital that the buyer can allocate. Some retailers are using centralized buying strategy, while some other retailers are using decentralized buying strategy. A centralized buying is that all the departments of the retailer are using the same buying function. The main advantage of centralized buying is that the transportation and inventory costs will be lower, since the buying function are ordering products in bigger

quantities. But at the same time the buying function could not take in consideration of every department. Therefore some retailers are using centralized buying for some merchandise categories and decentralized buying for other merchandise categories.

The buyers are visiting different markets, for instance fashion weeks and showrooms, to make preliminary orders about 5 months before the selling season. The buyers are establishing contacts with their suppliers at the fashion weeks. Prior personal contacts, relationships and recommendations are would be an advantage when buying from the suppliers. Bigger retailers often have strategic alliance with their main suppliers. Some buyers chose to spend all their OTB before the season, while some buyers will keep some of the OTB and spend them after they find out more about the trend in the selling season.

When a retailer has more than one store, the suppliers will ship the merchandises to the retailer's central warehouse or direct to the stores (drop-ship). In a more traditional practice, the retailer will receive all the merchandises that they ordered before the season start, but more and more retailer want the supplier to ship the merchandises in different groups throughout the season. The production plan of the supplier will be more smooth and the retailer store could refresh their merchandises constantly buy receiving the merchandises in different groups over time. Even the transportation costs will be higher, but both the supplier and the retailer do not have to keep a large inventory, therefore the inventory costs will be lower. The retailer will easily capture the consumers' attention by present new merchandises constantly and make them willing to visit the store more often to discover new merchandises.

Before some merchandises are sold out, the retailer has to reorder the merchandises. Previous sales data should be used both in buying process and re-ordering decisions. According to (Şen, 2008) buyers in some retail operations are not using sales data efficiently. The retailers are adapting software systems, for example i2 Technology's Demand Planner, in order to make appropriate replenishment decisions. When there is a need for moving the merchandises between the stores, the merchandise is transported either through the central warehouse or directly between the stores. There is a higher risk for miscounts and mishandling of the goods when transporting the goods directly between stores. Some retailers are also marketing their own labels, they are then operating in both manufacturing part and retailing part in the supply chain, and maybe even fiber and yard production and fabric production part.

It is common for retailers in fashion industry to use a cost-based pricing for the initial prices of the merchandised. So the initial price of an item is equal to the cost of the particular item

plus a percentage mark-on. The retailers often have a company specific simple rules to determine the initial price for all merchandises, rather than have item-specific rules. The revenue would cover the total cost including all expenses in the business, for instance the cost of buying the products from the supplier, the cost of logistics, the cost to operate the stores, etc. The revenue also includes a reasonable profit for the retailers. A general practice for small stores is that they will multiply the cost of products by 2 or 2.2 to set the initial prices. The mark-on percentage also depends on the predicted sales, for fashion products, the uncertainty of demand is high, therefore retailer will usually charge higher mark-on percentage (Bohdanowicz and Clamp, 1994). Department stores often have a higher mark-on percentage than specialty stores, like ZARA. Therefore department stores have usually deep mark-down sales in the end of the season, while specialty stores have stable prices over the season.

Fashion companies, the supplier for retailers, are usually share different amount of information to different retailers (Brun and Castelli 2008). They are sharing more information and provide first priority to choose products and delivery to retailer that have a long-term loyal relationship with them. Therefore for a retailer to establish a long-term relationship to their suppliers is crucial, because this type of relationship allows the retailer to get access to a wider range of products and delivery choices than their competitors do.

Compare to other industries, the life-cycle of the products is very short and the value of the products in fashion industry is decreasing in an enormous speed. The new merchandises are coming to the retailer very frequently, therefore the retailer need to make space for the new merchandises in the stores and also in the inventory. The retailer changes the prices throughout the season in order to maximize the profit. The retailer would likely never mark-up the initial prices during the season, even the particular products are very ‘‘hot’’ (Şen, 2008). Neither does the suppliers to the retailers, but sometimes the supplier will bundle the super ‘‘hot’’ product with other less popular products or require some other additional conditions when retailers reorder the popular products.

The sales are not only happening in the end of the season. According to Pashigian et al. (1995), there are three types of sales:

- Pre-season sales: The mark-down percentage is not very big in the pre-season sales. The purpose is to get increased store traffic and the retailer would get an insight in the

popular colors, styles and fabric for appropriate replenishments planning within the season.

- Within-season promotional sales: The purpose with within-season promotional sales is mainly to increase the store traffic. When more customers come to the store, not only sales of the mark-down merchandises will be improved. The sales of other merchandises will also be improved, because the customers will also take a look at them when they first are already in the store.
- End-of-season clearance sales: In The end of each selling season, the stores have to make enough space for new arrived items, therefore end-of-season clearance sales is used to liquidate the stock before next selling season. However the timing and depth of the mark-down will affect the margins. When the sale starts too early and the mark-down percentage is too deep, the retailers will lose some of their revenues. But when the sale starts too late and the mark-down percentage is not appropriately deep, there will be obsolete stock that only make problems for the coming season.

The marked down merchandises will have consolidated shelf places or moved to a particular area in the store, in order to make space for new arrived items. The mark-down decisions in practice are not following any scientific rules (Şen, 2008). Software companies have developed several software systems for price optimization and mark-down optimization for the fashion retail industry, for example ProfitLogic. However the adapting of optimization software systems is going slowly in the fashion retail industry (Şen, 2008).

3.5 The retailing of high end fashion goods

Different fashion consumer groups emphasize on different features of fashion products and different fashion retailers target different consumer groups. In this thesis I choose to focus on the consumer group that emphasize more on product quality and brand, rather than price. This does not mean these fashion consumers do not consider price, this mean these fashion consumers are more aware of product quality. I would like call this group of consumer luxury fashion consumers. In this section, I would like to present theoretical background in order to understand consumption behavior of luxury fashion consumers. Some readers might think, why would behavior of luxury fashion consumers matter in a research of lean management of fashion supply chain? The reason is that customers are the last joint in a supply chain and the first (maybe most important) step of every lean implementation is identifying customer

values. There is no way to identify customer values precisely without an insight in the consumption behavior of luxury fashion consumers. This chapter will help researcher to better understand values for customers in fashion supply chain, so that it will be feasible to evaluate if an activity is a waste or not.

3.5.1 Luxury fashion consumption

An averagely priced bag from Louis Vuitton might cost 15000 NOK, while a similar bag from H&M might only cost 500 NOK. The quality of a Louis Vuitton bag is obviously better, but is the quality of the bag from Louis Vuitton 30 times better than a bag from H&M? The difference between the prices does not necessarily refer to the difference of quality of the bag itself. In this case, I will explain first the possible reasons for why luxury fashion consumers would like to pay a high premium to purchase a luxury product.

Why do people spend so much money on purchasing high-end fashion goods?

Every consumer is a unique individual and they emphasize on different values. Luxury consumers are purchasing luxury goods based on different values that luxury good provide to them: perceived conspicuous value, unique value, social value, emotional value, quality value, Shopping experience (Husic and Cicic, 2009) . Luxury fashion consumer consider some of these values when they make purchase decisions.

Excellent quality has always been a ‘‘must’’ feature for Luxury goods (Chadha and Husband, 2010). This is without question that the luxury fashion consumers will enjoy the quality value provided the products. Luxury goods are also usually linked to exclusivity. Luxury companies only produce a limited amount of one type product. The prices of luxury goods are so high that not anyone could afford luxury goods. This makes the owners of luxury goods often stand out and get attention from the public. This kind of perceived conspicuous value gives the owners of luxury goods the feeling of being unique and different in a good way.

Luxury goods are usually associated of prestige, exclusiveness, high quality, high price and social visibility (Giovannini, 2015). The different features of fashion products have always been a display of which social class the owner is belonging to (Okonkwo, 2007). For instance the quality of the fabrics, the product design, the richness of materials. This refers to the social value that luxury good bring to the owners. Think how weird it will be if people shout out to others in the public that they are belonging to a higher social class. But when people

meet others, their clothes and accessories will be observed with once. Luxury goods do not only serve the consumers with their basic functions, more importantly they are serving their owners as a tool to express themselves to the public (Belk, 1988 in Giovannini, 2015). Luxury goods consumers are using luxury products to show others their wealth. People believe that luxury goods bring prestige to their owners (Grossman and Shapiro, 1986).

Another reason for that consumers prefer purchasing luxury or well-known branded goods is that the risk involved in purchasing is reduced (Liao and Wang, 2009). There is always a risk relying in purchasing, for example wrong purchasing decisions would lead to the waste of time and mental frustration for the consumers and might lead to other indirect costs additionally. Consumers believe that the risk is clearly reduced by purchasing goods from well-known brands.

Even the economic development in the world is not even, some nations are more wealthy than others, luxury consumers tend to behave the same way in different countries, use luxury goods to impress others and position themselves in the group they desire to be in (Husic and Cicic, 2009). Wealthiest group in the society consumes the most, less wealthy group treat themselves with few luxury goods each year. Husic and Cicic (2009) pointed out that snob effect is proved in luxury consumption, which means people want something unique from others and therefore limited supply has a higher value.

The underlying psychological process

In the previous section we have addressed some main reasons of why there is a market for luxury goods, every decision people make is driven by a psychological process. Why are there some consumers who love luxury good more than others and thus would pay a higher amount of money to buy. Even every luxury brand could bring prestige for the users, but why do particular consumer prefer the one over the other? I am going to introduce some concept in order to answer those two questions.

There are two concepts which influence consumers' choice regarding purchasing luxury goods, public self-consciousness and self-esteem. Public self-consciousness refers to how people's awareness of themselves as public objects (Fenigstein et al., 1975). Self-esteem is how people evaluate or view themselves (Pyszczynski et al., 2004). Consumers who have high public self-consciousness are more willing to use branded goods to create favorable impressions to the public, because they concern more about their social identities and want gain approval from others (Burnkrant and Page Jr, 1982). While consumers with low self-

esteem seem doing the same. Because they tend to adopt activities or use products that could help them to improve their self-esteem and gain social acceptance from others.

Individuals that are concerned about the impression, physical appearance and fashion, they communicate with the items on their body (Twitchell, 2012). A display of wealth is important. You are not just what you wear, you are who you wear. Different consumer groups want different products, some prefer big logos, some do not. Consumers prefer to own products and brands that are in consistency with their own self-image, these types of products and brands could enhance the consumers' self-image (Sirgy, 1982, Deeter-Schmelz et al., 2000). For instance, people who view themselves to be in a higher class would likely to own products that people from that class use. By owning these products and brands, consumers express their self-image to the public and their self-esteem is promoted by receiving positive feedbacks from people around them (Aaker, 1997, Sirgy, 1982).

3.5.2 Brand equity

Why introduce brand and brand equity?

In today's market, it is hard to find any companies that do not have a brand on their products or services that they provide. Husic and Cicic (2009) proposed based on their investigation that consumers consider brand as an indicator for quality. In the fashion world, you are not only what you wear, but more importantly which brands you wear (Twitchell, 2012). Brand plays an important role for the process of decision making for consumers.

For a retailer, what kind of brands they are carrying affects strongly on the perception of the retailer in the consumers' mind (Birtwistle et al., 1999). Brand is a very convenient way to communicate to the consumers, for example, we as normal consumers consider products from Apple to have a better quality than a random electronic product brand. Over the years, Apple has built up the reputation among the consumers by its excellent marketing strategy and more importantly, the great user experiences and service. Apple contributes its retailers with a strong brand that makes the retailers more trustful for the consumers. The retailers also own brands themselves. The perception of the retailers' brands is an important factor for their business performance. I want to briefly present the functions of brand and address some major concepts regarding brand equity.

The functions of brand

A brand could be a name, a logo, a symbol, an image etc. A particular brand identifies the company, represents the core values of the company and the quality that the company provides, protects the company from copying (Tuominen, 1999, De Chernatony and McDonald, 1992). Brand has the function of differentiating the products from the similar products offered by other brands. Take the example of filtered water. Even though the different brands produced the same product, pure drinking water, the price might differ a lot. Even the products are the same in quality and functionality, some brand spend more capital in advertisement, packaging etc. Brand label on fashion products serve the owners to express themselves (De Chernatony and McDonald, 1992). Every brand has its own culture and values, people could get know the taste of a person by observing what products and which brands he or she is using,

As we explained earlier, some consumers buy luxury goods to show their social status. Let us imagine a situation, what will happen if a consumer wears an expensive product from a brand which nobody has heard about and the intention of the consumer was to show his/her wealth to the public. The result will probably be that he/she would be very disappointed. Hence those kind of consumer would always buy well-known brands. Even for consumer who care much about the quality of products they are using, well-known brands with a good reputation is absolutely an advantage. Ask ourselves, we all have the experience to go shopping clothes, but how many of us take the time to do research on the quality of the fabric, the chemicals used to dye the fabrics and the underlying manufacturing process of the clothes we are buying etc. We just do not have enough time to do all the researches, but we trust more on a brand that we are familiar with and that we have some intrinsic thinking of than a strange brand. The history and reputation of a well-known brands reduces risk of purchasing a product of poor quality for consumers. Thus brand works as communicator and risk reducer for the brands to the consumers (De Chernatony and McDonald, 1992). For those fashion consumers the brands on the merchandise in the store vital for their purchasing decision making. One proof on this is that brand labels on clothes has been moved from inside to outside, so that consumers could easily recognize it (Husic and Cicic, 2009).

Lastly, brand server the company as a legal device (De Chernatony and McDonald, 1992). The brand is protecting the company's Intellectual Properties (IP), for instance innovative designs.

If some other companies are copying our design, but put their own brand label on the product. We could easily trace which company they are and protect ourselves by using legal tools.

The concept of brand equity

The value of a product is not only determined by the tangible characteristics of the product, but also the shopping experience and the spirits and feelings that the brand conveys (Danziger, 2006). A company's real value is depending on what kind of perception its potential consumers have towards the company. The concept "brand equity" was introduced in order to understand how brand affects the performance of a company. There are different definitions for brand equity (Tuominen, 1999). In this thesis I am going to use the definition by Aaker in 1991, he defined brand equity as:

“A set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers” (Aaker, 1991,p.15).

Tuominen (1999) pointed out that brand is a source of value, especially for fashion companies. Brand equity provides value for both the company which sells the branded products and the customers who buy the branded products. The company receives increased value by brand equity, because brand equity would increase the marketing efficiency, differentiate the products from products provided by competitors, make the consumers loyal to the brand, improve profit margins, enhance competitive strength ((Aaker, 1991, Bagozzi, rosa, et al., 1998) in Tuominen, 1999). Brand equity provides the customers quick information exchange, confidence in purchasing decision making and enhance the customers' self-esteem by creating positive mental association linked to the brand ((Aaker, 1991, Bagozzi, rosa, et al., 1998) in Tuominen,1999).

When a company receives bad reputation, the brand will be affected, so is the sales of its products and the stock price will be significantly affected (Aaker, 1996). In order to understand how brand equity would affect the consumption, we have to find out the relationship between brand equity and performance of the brand. According to Aaker (1991) the brand equity is composed of 5 different assets:

- I. Brand loyalty: The extent of how loyal customers are toward a brand. A loyal customer is a satisfied customer that has a favorable attitude toward a brand and therefore would repurchase the brand over time. Aaker (1991) defined five loyalty

levels: 1) Non-loyal buyer, the brand name has little to say for them when making purchase decision. 2) Satisfied buyers, the buyers were satisfied with the purchased product. 3) Switching-cost loyal buyers, satisfied buyers which will have additional switching costs when switching to other brands. 4) Buyers who really like the brand, they enjoy the use experience and quality that the products bring to them. 5) Committed buyers, buyers who feel extra proud for owning products from a brand and using products from the brand means a lot for them. Brand loyalty lead to reduced marketing cost, trade leverage, new buyers and extended time to respond to competitive threats. The marketing costs to retain existing loyal customers are much less than attracting new customer. Loyal customers are a stable source of sales revenue and they would recommend the brand to their family and friends which might become new customers of the brand. It is difficult for competitors to communicate with loyal customers of the particular brand, because loyal customers are very satisfied with the current product and therefore would pay little attention to other brands. This also provide the brand extended time to respond if there would be any competitive threats.

- II. Brand awareness: The extent of how famous a brand is among the public. It is easy for buyers to recognize and/or recall a brand when the brand has a strong brand awareness. Two levels of brand awareness are brand recognition and brand recall. Brand recognition is the lower level, it is the customer's ability to come with their prior experience with the brand when given the brand name. While the brand recall is when given a particular product category, how easy it is for customers to retrieve the brand. Brand awareness provides value to the brand, for the first customer are more willing to buy products from a familiar brand, and brand recall makes the brand one of the brands in selection set in customers' mind when they need some particular products.
- III. Perceived quality: The extent of how good the quality of the products or services which a brand provides is in the customer's mind. A good perceived quality offers a reason to purchase the brand and differentiate the brand from alternatives. The brand could then charge a premium price for the products or services. A brand with strong perceived quality will have higher opportunity to succeed when extending the product scale and category, because the customers know that the products or services provided by the brand have excellent quality and therefore more willing to purchase their new products than other brands. The sales channels prefer to sell merchandises with a good

quality, thus the brand with a strong perceived quality could sell their products through more diversified sales channels.

- IV. Brand associations: The overall image of a brand in customers' mind. There are three forms of brand association: attributes, benefits and attitudes. Brand attributes are the descriptive features that a product or service has. It is further divided into two types: 1) Product-related attributes are the features which are necessary to have in order to fulfill the original functions that a product or service has. 2) Non product related attributes are external aspects that the product or service has, for instance prices and packaging. Brand benefits are the individual value and meaning that each user attach to the product or service. Brand benefits are distinguished in 3 types: 1) Functional benefits, the benefits which is linked directly to the functions of the product or service, intrinsic advantages, how the product or service fulfill the users' needs 2) Experimental benefits is about how the users are feeling when using the product or service. 3) Symbolic benefits: the extrinsic advantages that the product or service provides. They are usually related to social approval and/or personal expression, for instance some people buy branded goods for showing off their wealth and gain respect from society. Brand attitudes are about how the brand is viewed by its customers. Every brand has its history, culture and values. Brand attitudes are important considerations for customers when they are choosing between brands. (Keller and Lehmann, 2006, Keller, 1993).
- V. Other proprietary assets: The brand will have higher brand equity by owning more proprietary assets, such as intellectual property rights, patents, established relationships with vendors and customers etc.

3.5.3 Store loyalty

There are so many fashion stores in the city that sometime we get confused which stores we should go. We can not visit every single one on a Saturday, otherwise we have to finish one store within 1 minute? The consumers are not dealing with a working task and they want to enjoy the shopping time. They have to make up their mind and decide which store to visit. How could one particular store come to their minds and attract them to visit the store? This is a huge topic. Have you thought about why you are visiting some particular stores more frequently than others? Was it because of the new arriving merchandise, the atmosphere, the location, the good service, the sales staffs or the brands they carry? Lot of factor affects our

decision to visit a particular store or not. We are going to discuss some important factors that affect consumers' loyalty to a fashion retailer in this chapter.

Factors that affect the loyalty of customers to a store

Consumers today are not going to the stores where they can find and buy what they want, they are looking for stores that offer the "complete shopping experience" (Danziger, 2006). In order to satisfy the consumers, the tasks for retailers are not only having the high quality goods available in store, at the same time they have to build a great shopping environment and service. The young fashion consumers today are looking for both functional and symbolic benefits provided by the product they purchase and the store they visit (Leung et al., 2000).

Companies in the fashion industry could achieve sustainable improvement in sales by managing brand loyalty (Reichel, 1994), especially for the sector of fashion retail (Birtwistle et al., 1998). Store loyalty is usually measured by the proportion of purchase and purchase intention (Macintosh and Lockshin, 1997). True loyalty implies commitment to a brand, not just repurchase (Bloemer and Kasper, 1995), customers just do repurchase from a brand could easily switch to other brands, when other brands could offer better products or same products with a lower price.

One concrete example of how store loyalty affect the sales was that store environment and music play important roles and made Topshop a successful apparel chain (Newman and Patel, 2004). The store environment should for instance match with the style of the merchandises sold in the store. Both store environment and merchandises should be aligned with targeted customers' expectations. Improved retail store image would lead to improved sales performance (Davies and Brooks, 1989)

Market orientation has been identified to have impact on market performance (Harris, 2000, Hurley and Hult, 1998). In practice, it is hard to be market-oriented all the time. The employees have many tasks to deal with at the same moment in a complex and dynamic market, their focus may move to other areas instead of being aware of market changes and identifying the most recent customer needs. Even the biggest player in the fashion retail industry fails to constantly maintain customer focus (Newman and Patel, 2004).

Retail store image was identified to be one critical factor for achieving success (Davies and Brooks, 1989, Amirani and Gates, 1993). It is about how a particular retail store is viewed from the perspective of consumers. The retail managers' perception of the brand/retail image

should align with the customers' perception (Birtwistle et al., 1999). This also refer to that marketing should be market/customer oriented. For many fashion consumers, the purchase of fashion items consists high risk. A well-administered refund procedure would be preferred by fashion consumers (Birtwistle and Shearer, 2001 in Newman and Patel, 2004).

Customers' perceptions of a retailer brand

Newman and Patel (2004) identified 9 elements that has been used to measure the customers' perceptions of a retailer brand: staff, store atmosphere, store layout, reputation, advertising, quality, location, price and merchandise. They did two case studies on the Topshop and Gap, focusing on their marketing strategies. Their conclusion is that staff and store atmosphere are the most important factors for customers of both Topshop and Gap, even the two brands are pursuing different marketing strategies. Sales staffs which are knowledgeable and helpful will efficiently establish and maintain the interpersonal relationship and relationship between the customers and the store. Help from the sales staff is especially important when the customers' time is limited and need to find the exact merchandises. Inappropriate messages from sales staff would lead to ambiguous situations and dissatisfy consumers. It is important for the company that the sales staffs are well trained and have the ability to help the customers in different situations.

The store environment is affecting the behavior of the customers in the store and customers' overall evaluation of the store (Newman and Patel, 2004). Even small changes in the store environment could have a significant impact on customers' perception and experience of shopping in the store (Turley and Milliman, 2000 in Newman and Patel, 2004). Kotler (1997) identified that store environment consists of physical, ambient and social environment (Kotler, 1997 in Sivadas and Baker-Prewitt, 2000). The physical store environment are how the store layout looks like, for instance the placement and design of entrance, merchandise shelves, checkout facilities, décor etc. The ambient environment is for instance the temperature, the lighting and the music played in the store. The social environment is affected by the behavior of the sales staff and other customers in the store. Store environment is an important element to use in order to differentiate from competitive offerings (Moore and Fairhurst, 2003, Newman and Patel, 2004). The overall store environment should reflect and support the brand positioning decisions and enhance the merchandise selections in the store (Newman and Patel, 2004).

How the store presents the merchandises? As one part of the image differentiation. The store should ensure the most fashionable items are available in the store in order to maintain the brand image/ brand equity (Newman and Cullen, 2002). For instance, Top shop had fast response to the newest fashion trends, always have the most fashion items available or take advantage of the trends to do advertising or promotions (Armstrong, 2002).

The service part and customer satisfaction

The value of the merchandises in the store is composed of both the value of the product itself and the value contributed by the services provided by the particular store (Newman and Patel 2004). The services could be for instance help from the sales staff, exchange and return policy, waiting time for getting help, the atmosphere in the store etc. Birtwistle et al. (1998) pointed out the importance of store service that over time the quality of the service could strengthen the market position of the retailer. However a research conducted by Moore and Fairhurst (2003) shows that customer service capability has no significant impact on the firm performance, one reason is that all the fashion retailers are aware of the service element and provide very good service in general. Therefore the customer service capability of a particular retailer does not make them more successful than others. Even though the store services provided by different stores are usually at the same quality level, the attributes of the services are however different, because of different company cultures. Companies could therefore take advantage of store service in order to differentiate them from others (Turnbull and Wilson, 1989).

Newman and Patel (2004) pointed out one important reason of why Gap had poor sales performance in UK is that the management failed to identify the targeted customers' needs. The lifestyle that Gap promised was not in consistency with the products that they provided.

How the vision and image of a retailer is depends on both the brands that the retailer carries and requirements of the targeted consumers (Burt and sparks , 2002, Forsythe , 1991). The buying function and the marketing function should be aligned, otherwise the company would lose sight of target market (Newman and Patel 2004). Moreover, all the elements that have been mentioned should be constantly realigned with customers' Expectations. Iacobucci et al. (1995) point out, the improvement in quality which is not based on customer needs are not going to lead to improved customer satisfaction. Companies must be customer oriented (Kotler, 1997). Especially in a high competitive industry like fashion industry.

Key aspects that prior researches have focus on regarding store loyalty are the relationship between the store and customers, as well as the relationship between salespersons and customers. Store satisfaction, store trust, store attitude and purchase intention are some important aspects to consider (Macintosh and Lockshin, 1997).

Store satisfaction for one particular customer is based on her or his prior shopping experience in that store and how she/he would evaluate the store. Satisfaction is an antecedent of relative attitude (towards the store or a brand that the store carries), an experience that compares the received quality with the expected quality (Anderson et al., 1994). Hence the stores should be in front of the customers, provides quality goods beyond customers' expectations. Greater customer satisfaction resulted in greater intent to repurchase (Rust and Williams, 1994).

Store trust is not directly linked to purchase decision making, neither is the trust in the salesperson (Doney and Cannon, 1997). But store trust and sales person trust is related to purchase intention, therefore the customers will with higher opportunity consider the store which they trust in than store which they do not.

Managers should increase service quality in order to improve customer satisfaction level and favorable relative attitude. But improved quality is not directly correlated with loyalty (visit the store more often than others in this case study) (Sivadas and Baker-Prewitt, 2000).

Satisfied customer might not be loyal, but unsatisfied customer will switch to other stores (Bloemer and Kasper, 1995, Sivadas and Baker-Prewitt, 2000). Therefore an integrated view of this topic will help particular retailer to deal with store loyalty. This is understandable, because consumers are not going to sit down and determine in detail to decide which store they will visit. In the most cases, they are following of their intuition which is their relative attitude toward a store, which is again formed by different factors that have been discussed (store satisfaction, brand equity, store loyalty etc.).

3.5.4 Trends in fashion retailing

Market and industry are constantly in a change. Companies who are refusing the change or react slowly to the change will lose the market very quickly. Two good examples are Kodak and Nokia, which was the strongest players in their own field once. The sliding in business performance happened suddenly mainly because of the wrong prediction of the market trends. The fashion industry is not a monopoly market and no company seems to be the number 1 in the industry forever. So is fashion retailing. Other companies are always ready to take a bite

of your market share if you make the wrong strategy. In this subchapter, I want to address some main trends in the fashion retailing world today.

Şen (2008) based on his research on the fashion industry in the US suggested 5 major trends. Even his finding is based on the data of the fashion industry in the US, but as the fashion industry is very globalized and US is the biggest economic power in the world, I think we can apply his finding to the general fashion industry.

- Own label and vertical integration: There is a trend that there has become fewer but stronger fashion retail companies. Since they buy a lot from fashion companies, they have the bargain power to require favorable terms in the contracts. The retailer wants to order as late as possible, because then they can predict the demand more accurately. They also want continuous replenishment in smaller quantities throughout the whole selling season, in that way they could have a lower inventory level, so they could save inventory holding cost. But these terms would put a higher risk on the manufacturers. More and more retail companies are offering their own private labels. They are having direct contact with the factories in for instance China and therefore eliminate costs of the intermediaries which are the fashion companies. A forward vertical integration is also happening, that retail companies acquire fashion companies which is the upper joint in the supply chain. The retail companies will respond more quickly to the change in demand, meet consumer requirements and have a better control on the merchandises which they sell are also some of the reasons to have own labels and doing vertical integration.
- Outsourcing overseas: Not like the production of beer which the machines can take biggest part of the production, fashion products are often labor intensive and the capital requirement to start a manufacturing operation is not very high. Therefore the productions has been move to underdeveloped or developing countries, since the 1960s. Due to the low wages in these countries, the reduced trade regulations, modern transportation and communication technology, the costs of the production overseas has become much lower, but because of the geographical boundaries, the lead times are often much longer. Taiwan, Hong Kong and South-Korea are the first countries that supplied the US market, but as the wage level in these countries grow, fashion companies are seeking for other countries which have an even lower manufacturing costs, for instance, China, India and Bangladesh. The typical fashion products to outsource overseas are the basic products, because the styles do not change much from

season to season. Therefore the long lead time does not affect the demand much. Retailer and fashion companies are still working with the company restructuring to increase the foreign manufacturing.

- ‘Quick Response’: The low entre boundaries make the fashion retail industry very competitive. Even the manufacturing cost is reduced by outsourcing overseas, but the costs of forced mark-downs, excess inventory and stock-outs are very still very big. ‘Quick Response’ was initiated in the fashion industry in order to meet the increasing customer needs (Lowson et al., 1999, Birtwistle et al., 2003). To be quick responsive is demand information driven, at the last possible moment in time ensuring that diversity of offering is maximized and lead-times, expenditure, cost and inventory minimized (Lowson et al., 1999). Emphasis on flexibility is necessary in order to meet a competitive, volatile, and dynamic market (Christopher et al., 2004). Fast and accurate adaption to market change is an important element. So is timely and accurate information flow. Partnerships and alliances with other enterprises is an effective way to deal with changing market conditions. A number of information technologies are used to make ‘Quick Response’ happen in practice. For instance CAD/CAM equipment, POS scanners, EDI systems. Substantial information sharing and coordination between the retail companies and fashion companies are required in order to successfully implement ‘Quick Response’ system.
- Supplier selection: The criteria for supplier selection is not only based on the physical cost of the supply chain which are for instance production costs, inventory costs and transportation costs (Fisher et al., 1997). Responsiveness of the supply chain also plays an important role. Responsiveness is about how accurate and efficient the supply chain is able to meet the customer demand. The lack of responsiveness will result loss of sales and loss of dissatisfied consumers. This is called market mediation costs (Fisher et al., 1997). The retail company should consider both physical cost and market mediation costs at same time. Outsourcing overseas will make the physical cost lower, but at same time the retail company will be less responsive, thus the market mediation cost will increase.
- E-commerce: The advancement of information technologies and more and more people are used to shop on internet, fashion retailers started doing business since the mid 1990s (Şen, 2008). Two different types of electronic commerce are business-to-business (B2B) and business-to-consumer (B2C). The B2C sector in e-commerce is often dominated by retailers which have bricks-and-mortar stores. Retailer with

internet operation achieve increased store traffic in their bricks-and-mortar stores, there are shoppers who come to the stores after they visited the retailer's retail website. The retailer could achieve a wider range of consumers. The bricks-and-mortar stores can work as a place for online customers to pick up and return the merchandises. While the online store could be used to handle slow-moving merchandises and to test the coming trend among consumers. However it is difficult to manage multiple retail channels in order to achieve consistency in delivered quality, prices and the 'complete shopping experience. B2B allows companies to exchange information, services and products in a higher speed. Companies across the fashion supply chain could more easily find right business partner for sourcing the production, reordering products, selling excess stock, negotiation and collaboration.

After presentation of the fundamental theoretical background of lean methods and fashion retailing, I want move into the process of implementation of lean within the enterprise, further to driving lean procurement and finally developing lean supply chain. The theory in this part is based on previous researches conducted by other researchers. One thing to notice is that this theory of lean implementation throughout the entire enterprise (with focus on procurement function) and supply chain is not based on enterprises and supply chains in fashion industry.

3.6 Lean implementation within the enterprise

Implementation of lean in an enterprise would affect everyone in the company.

Implementation of lean would require lots resources, leadership and high degree of commitment from both management and employees. The biggest and most common mistake when companies try to pursue a lean strategy is that they still want to keep a traditional organizational structure (Byrne, 2013). The company is pretending to be lean by not changing organizational structure and only adopt lean management methods. Because structure drives behavior and the behavior of the employees is strongly related to the organizational outcomes. In a traditional organizational structure, senior manager of a department is responsible for different product categories. But in a lean driven organizational structure, for each product category there is a value stream manager who are responsible for all functions (Purchasing, inventory, manufacturing, sales.) required to create sustainable profitability. Thus it is

essential to change the organizational structure, the employees and their environment before we doing the first Kaizen (Byrne, 2013).

3.6.1 Reorganize the value streams

A lean promotion office, or in other places called Kaizen promotion office (KPO) or continuous improvement office should be establish at first, to ensure the lean principles re implemented throughout the entire enterprise. According to Lean Enterprise Institute, the main responsibilities for lean promotion office is to teach employees lean methods, conducting Kaizen events, measuring and facilitating the implementation. The lean promotion office should compose of change agents from throughout the enterprise and people outside lean experts. The leader of this office should be at least equal in stature with the other team leaders. The size could be 2 or 3 percent of the hourly workforce in the enterprise as Byrne (2013) suggested.

Team leaders are new critical positions in a lean enterprise. A team leader is leader for a product family or value stream. An enterprise might have different products families. Every product requires different suppliers, engineering, operations and sales strategies. Therefore every product family has its own value stream. In a traditional approach, an enterprise has centralized purchasing, R&D, production, finance, sales, marketing, IT, human resources. Each of them controls a part of the value streams, no one is responsible for the whole value stream. When for example purchasing department has to purchase components for 12 product families, it is difficult for them to get insight in and understands every value stream in order to purchase the most suitable components. Team leaders are in contrast only responsible for one entire value stream, understand what end customers want and understand deeply how his/her value stream works. In that way they could make the best decision for purchasing, marketing etc. Every team leader is like running an "independent business" inside the enterprise. They have all the equipment necessary to production the products and own the key measurement of the products. They report the progress frequently to the CEO and senior management team. Byrne (2013) suggested that people who can lead and are self-motivated problem solvers capable of running a small business could be the candidates for the team leaders.

When enterprises are transferring lean knowledge, the underlying process and factors that impact the process should be fully understood before executing the transfer. In the coming

section, we are going to take a look at the transfer mechanism and corporate competencies in order to successfully transfer lean knowledge.

3.6.2 Transfer lean knowledge

When the enterprises transfer lean management methods, as explained in last chapter 1, between the departments within the organization, replication and adaption are the central elements of the transfer mechanism. Replication is the process that the recipient uses the transferred knowledge and try to be just like the sender. But adaption ensures that the recipient modify the received knowledge in its own situation, remain the valuable part of it, combines different knowledge with practices or further develop the knowledge that the knowledge would suit the company better (Chen et al., 2014). The same lean management methods could be adapted differently in different departments or in different industries. It is important to keep in mind every enterprise is different and it takes time to further apply the lean management methods to the unique context in different enterprises.

According to Chen et al. (2014), three types of cooperative competencies are critical to achieve an efficient knowledge transferring between departments: Trust, communication and coordination. Mutual trust prevents opportunistic behaviors in the relationship. Trust also reduce the cost for each of the partners, since there is no need for them to spend resources on searching and verifying each other's knowledge. Communication is formal and informal sharing of information, good communication contributes to common understanding, transparency, precision and feedbacks from the recipients that will make the knowledge transfer more easily and smooth. Coordination is the extent to which activities, human resources, routines and tasks work together to accomplish objectives (Van de Ven et al., 1976). Those three competencies could be used when enterprises develop method to transfer lean knowledge.

3.6.3 Some critical factors

Even though the principles, methods and what managers should do in order to make their companies leaner, many lean implementations did fail at the first try (Scherrer-Rathje et al., 2009). Around 50 % of lean implementations have failed (Myerson, 2012). What are the critical factors to successfully implement lean in an enterprise? According to Myerson (2011)

a proper organizational culture to support the change than lean implementation does to the company, commitment from top management down and participation of every employee are the most important factors for a successful lean implementation. Liker (2004) point out committed management for lean implementation, training employees to adapt lean methods and a well formed environment which enable continuous improvement are critical for changing toward a lean organization. Saad et al. (2006) proposed a similar list based on a research on companies that had experience with successful lean implementation. Research conducted by Saas et al. (2006) is based on SMEs and is identified to be more suitable as a theoretical foundation for this research and these critical factors identified by Saad et al. (2006) are not very different from the ones that Myerson (2012) and Liker (2004) identified anyway. The 4 critical factors defined by Saad et al. (2006) are described in detail below.

- I. Strong leadership: A strong leadership facilitates a smooth integration of all infrastructures within the enterprise and could generate and permit a flexible organizational structure. A good leadership also fosters knowledge enhancement among employees, so that employees are more willing to learn and acquire new ideas and new skills in order to increase the corporate competitiveness. Then the enterprise is willing and able to implement Lean throughout the whole organization successfully.
- II. Financial capabilities: It requires enterprise financial resources on hiring outside lean experts, training employees to utilize the lean techniques and the actual implementation of lean ideas. Byrne (2013) also pointed out that to become a lean enterprise is not equal to have immediately the lowest cost and provide the cheapest products in the market. Lean aims to focus on the long-term. The enterprise might experience some financial difficulties at the beginning, but the benefits would show up later and provide the enterprise competitive advantages compared with its competitors. Therefore enterprises should have availability of capital to enable investment and a strong financial management team.
- III. Skills and expertise: This term mean the skills and expertise of the employees within the enterprise. According to Saad et al. (2006), the future of manufacturing in the developed economies is to innovate and differentiate. Once a new product is introduced in the market, the copycats in the developing countries would copy and develop similar products and provide them in a much lower price. Then we will lose our competitive advantages, because the cost for us to produce the same thing is higher. However, the copy process would take some time, we should utilize that time

to develop some new products. So one the copycats release their products to compete with us, we have even better products to offer. In order to achieve this, employees with high skills and expertise are more likely to contribute to technology development.

- IV. Organizational culture: A supportive and flexible organizational culture is an essential platform for lean implementation. The management team should have the ability to operate in diverse environment and focus on the long-term organizational goals. Saad et al. (2006) concluded that enterprises with a culture of sustainable and proactive behavior tends to be high-performing. This conclusion is also pointed out by Frohman (1998) and Frese and Fay (2001). A proactive culture enables the lean enterprise to be always in the very front of the trend, to accept and adapt the changes quickly.

3.6.4 Resistance to change

Lean is much more than just a set of tools, it is also a philosophy that must be fully understood by all the employees in the company (Liker, 2004). Leader team should promote and spread "lean thinking" inside the enterprise and integrate lean as a part of organization culture. It could be a challenge for everyone in the enterprise to change the way they think and they have to learn skills to organize their work. Just as any other changings, the implementation of lean will experience resistance along the process. The resistance is everywhere in the company, from shop floor workers to middle managers to top leaders. The important sources of the resistance are often the uncertainty of the change, and conflicts of interests, extra work to learn new knowledge etc. (Axelsson et al., 2005). People have their own comfort zones, to step out to anything uncertain is considered as "risky". This is within our human DNA, those human who not were afraid of uncertainty died out in evolution. Facing an organizational change process, someone is afraid of losing status, while someone is afraid for the unknown which is going to come. The ultimate sources of resistance should be identified and understood (Mento et al., 2002). When organizational change is implementing, everyone in the organization will be affected. The organizational structure will likely be changed and so is power distribution. Especially some managers will lose their benefits, therefore they can be very against the transformation. Organizational changes always lead to new knowledge must be acquired by the employees and this creates "unnecessary" working for them.

According to Balogun et al. (2005) 70% of organizational change programs fails. A clear strategy should be developed in order to have a successful lean implementation. Kotter (1995) recommended an eight step procedure for successful organizational transformation based on his numerous observations of different companies. Transformations in more than 100 companies have been observed. These companies differ from each other in company size, industry and nationality. Some of them are having very difficult situations and some of them are earning good money, but they all see the potential crises in the future by not changing. Table 4 provides the eight steps procedure of transforming suggested by Kotter (1995).

Table 4: Eight Steps to Transforming Your Organization (Kotter,1995)

Steps	Description
1	Establish a sense of Urgency
2	Forming a powerful guiding coalition
3	Creating a vision
4	Communicating the vision
5	Empowering others to act on the vision
6	Planning for and creating short-term wins
7	Consolidating improvements and producing still more changes
8	Institutionalizing new approaches

A strong leadership is absolutely necessary before and during the process (Kotter, 1995). A frank discussion of the potential trends is required to create a big picture of the industry and market. Then based on the discussion the top managers have to make clear the existing crises, potential crises and new opportunities. Managers have to make the urgency situation visual for all employees, communicate and let employees recognize the urgency just like top managers, and motivate them to change. Of course no one knows if the organization transformation is going to succeed or not. But let employees see that the current urgency is actually more dangerous than step into ‘‘uncertain’’ transformation.

Top managers in the company are used to form the guiding coalition. It is not common that the top managers are working so closely in a team, and the guiding coalition has more members when the size of company is larger. What is needed is to bring them together, facilitate the team work, help them to develop a shared assessment of current problems and opportunities, build up a minimum level of mutual trust and communication.

The company would easily be confused and going nowhere or into a wrong direction without a vision. The vision will likely confuse the employees if it is too complicated and the vision should point where the company is going in the future. Therefore the vision should be simple and sensible and hard to achieve. Strategy should also have been created in order to achieve the vision.

When the company has a clear vision and strategy, the next step is to spread the vision across functions in the whole organization and make the vision understood and supported by the employees. It is obviously difficult to change people's mind. This step is time consuming. Managers should use every possible channel to communicate the vision with employees. Making boring information channels more interesting, for instance having an exciting discussion of transformation instead of ritualistic meetings. It is often a more powerful way to communicate to show the employees concrete behaviors, than just verbal communication or newsletter.

The more people the transformation involves the better the outcomes will be. When the workers recognize the needs of change and participate actively in the change process, managers should create an environment for that by removing obstacles. External obstacles could be for example narrow job categories or a manager who is against transformation. Since organization is moving into a new direction, no one knows how the path is going to be. Innovative ideas, activities and actions initiated by employees should be encouraged by managers, so far they fit within the broad parameters of the transformation vision.

Transformation usually takes long time. Employees will be unmotivated or even turn to be resisting, when they can not see any beneficial results within short-term. It is necessary to create some short-term wins to make the progress visual and motivate the employees.

Creating short-term wins does not mean we are waiting passively for short-term goals to be achieved. The former is active. Managers are looking for ways to indicate improvements, establish goals and achieve them within short time (for instance 1 year), make the improvements visual for everyone and reward employees involved.

In a transformation, there are change initiators, change follower and change resisters. Both change initiators and change resisters have a tendency to create a premature victory declaring. For change initiators, the victory makes them proud and for change resisters this is opportunity to stop the change. The new introduced changes are fragile. In many cases that Kotter has observed the useful changes disappeared within two more years after victory

declaring. Therefore instead of declaring victory, managers should go after and change systems and structures that do not fit the transformation vision. Additionally managers should reinvigorate the transformation with new projects, themes and change agents.

The new introduced changes should be anchored in the organization's culture, so that they are not subject to degradation when the pressure for change is removed. Kotter suggested two ways to institutionalize the change. The first one is to show people how the new approaches, attitudes and behaviors contribute positively to improved organization outcomes. The second is to make sure that the next generation of top management team adopts the transformation. And, make sure that the new managers understand the new approaches in way that they can apply them in different situations.

Even though we had some advices to deal with the resistance that for sure will be received from employees. Some people are extra difficult to convince. Byrne (2013) pointed out that the biggest resistance always come from the senior or middle management in the enterprise. Some of them just cannot change, cannot give away their most obvious interest and want to protect their own fiefdom, instead of thinking about the future of the whole enterprise. Give naysayers a chance, but the waiting time should never be too long. Keep in mind that even some people could be convinced or liked lean strategy, it might be just on the surface. So always keep an eye out on backsliding of some staffs.

Every company is seeking profits and lean can be the key to develop competitive advantages. All the companies today are parts of the supply chain. Then procurement department is obviously an import department of the enterprise. Since purchased components make up a large percentage of the total cost of finished goods. Purchasing behavior should match the goals of a lean value stream (Harris and Streeter, 2010). In order to chase the lowest cost of purchasing, we are going to look at the concept of 'lean procurement'.

3.7 Drive lean procurement

Procurement is considered to be an important department of the enterprise, since purchased components make up a large percentage of the total cost of finished products. On average 70 percent of a company's purchasing cost is linked to what has been bought, the remained 30 percent is the costs of inventory, inventory carrying, purchasing personnel and "maverick

buying" (Reisman and Burns, 2006, Myerson, 2012). Purchasing strategy should align with the corporate strategy (Cox, 1996, Axelsson et al., 2005).

When we talk about lean, it is very much about to produce high quality goods while having the lowest total cost. In order to chase the lowest cost of purchasing, we are going to look at the concept of 'lean purchasing'. Purchasing behavior should match the goals of a lean value stream. An efficient purchasing would be a source for competitive advantage. In order to achieve lower cost, improved quality and higher profitability, different procurement approaches have been carried out by academics over time. Somehow the tendency of these approaches is: 'Leverage bad, partnership good, networks better, lean supply best' (Cox, 1996). Lean procurement or supply is not the end state (Cox, 1996). Cox (1996) pointed out an approach which works successfully in a particular enterprise in a specific business environment might not work elsewhere, when the characteristics of enterprises, for instance organizational structure and culture, industry, environment, could be totally different.

3.7.1 Is purchasing and procurement the same?

First, I want to make clear the difference between the two concepts, purchasing and procurement. I believe the scope of the two functions are applied differently in different enterprise. According to Van Weele (2009), procurement is a broader term than purchasing. Purchasing composes of following processes: Determining specification, selecting suppliers, contracting, ordering, expediting and evaluation, follow-up and evaluation (Van Weele, 2009, Myerson 2012). Procurement involves the whole purchasing process, and additionally inventory management, logistics management, incoming inspection, quality control and assurance. The goal is to provide the appropriate components or raw materials from an internal or external sources to better accomplish the organizational goals. According to Murray (2009), procurement is a further stage of purchasing. Procurement is linking purchasing with other functions within the enterprise to better align with the corporate strategy. Figure 9 illustrates the scopes of purchasing, procurement and commissioning as Murray (2009) stated. As we could see on the figure, and according to both Van Weele (2009) and Murray (2009), procurement function includes a bigger scope than purchasing and involves more departments within the enterprise.

The Commissioning and Purchasing Cycles, and Procurement

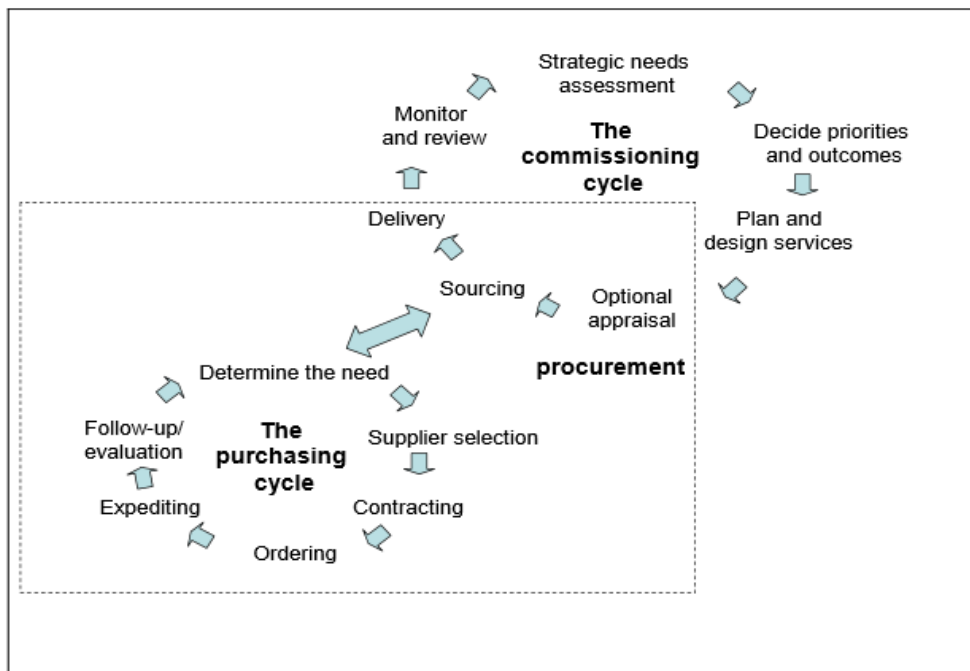


Figure 9: The commissioning and purchasing cycles and procurement (Murray 2009, p 94)

As lean principles tell us, to identify and eliminate wastes is a fundamental process for lean implementation and we should look at all opportunities in order to expose hidden wastes. Purchasing department must be linked with other functions, for instance sales and marketing, in order to define the hidden wastes. Thus I think procurement is a better suited concept for this section where we want to link different functions together. This will be explained further in the coming chapters. In this thesis the word ‘purchasing’ is used to describe the actual purchasing as an important segment of procurement.

3.7.2 A new thought process

What should the purchasing agents consider when they select suppliers or sourcing opportunities? As the principle of lean say, we should always take the standpoint of the end customers. But unfortunately from the view of traditional purchasing, the piece price cost of a component is the metric that measures the performance of a purchasing agent by the managers. Then the agents are going to select the cheapest offer. Because this is how they will be evaluated by their managers (Harris, 2013). But lowest piece price cost is not necessarily the lowest cost for the value stream as a whole, there inventory levels,

transportation costs and quality etc. are also parts of the total cost. Inspection of the incoming components costs money as well. Thus the company should change the metric in order to get lowest total cost. Because a purchasing agent does not care about the development of the whole enterprise, this is the CEO's work. The purchasing agent only cares about his/her career, in other words how their managers would evaluate them.

As lean principles tell us, the value of the purchased component is not showing until it is assembled on the final product which the end customers are willing to pay for. For the purchasing agents, their direct customer is the manufacturing department. But for the value streams, the users or end customers are the most important. Differs from the traditional approach where piece price seems to be most important, the purchasing agents should be trained to have a new thought process when they face a list of potential suppliers and make decisions (Harris and Streeter, 2010).

A component is going to be assembled on to the final products and raw material is going to be processed in the shop floor. When the production department receive the purchased goods or materials, it costs to store them, transport them, place them in right sequence and quantity and the actual assembly process. How much value do the components add on the final products is only determined by the end customer, therefore employees from marketing and sales should also be involved in the decision making process.

All the managers, are just like the purchasing agents, are making decision only based on their own area (purchasing, production, marketing etc.) if their performance is evaluated only from their production area by supervisors. They do not take account others perspective, drawbacks or benefits. Each of the managers could improve their performance, but at a cost of the entire flow of value for our customer. Thus, an important role, value stream manager or team leader, is necessary. Except this position no one in the supply chain is going to make decision which is best for the whole supply chain (Harris, 2013).

3.7.3 Metric to drive lean purchasing

What the purchasing agent should look at is not only prices of the components, the true cost of a components is much more than just the price of the component. For example, one supplier might provide a component at a very low piece price, but the component will take the floor shop workers more time to assemble, therefore costs the company more in the manufacturing department. The total cost might be even higher than another component

which has a higher piece price but very easy to be assembled on the final product. According to Harris and Streeter (2010), there are three types of cost that should be considered when we calculate the true cost: ongoing cost, risk cost and change cost.

The ongoing cost composed of piece price, transportation cost, inventory carrying cost, customs and duties that occur on an ongoing basis. Risk cost is the cost of downtime and reorder, when some quality problems occur. Even worse if the final products with a poor quality component is released in the market, the cost of recall and bad reputation will be huge. If the enterprise can expect a quality problem from a single supplier, this risk cost should be considered as one part of the true cost of component. It cost a lot to switch suppliers. There could be many reasons for changing suppliers, when a supplier constantly could not satisfy our requirements, when we develop give up the old business models and develop new ones, or when the supplier found other better customers etc. When the enterprise will change to a new suppliers, the costs would for instance be we have to do research in the market and then send experts to the potential suppliers to validate them, testing the new components, maybe purchase new tools in order to assemble the new components, trainee the shop floor workers how to assembly the new components etc. From traditional view, the risk cost and change costs are considered as "cost of doing business". However it's totally possible to calculate the amount of these costs and they should definitely be a part of the true cost of purchased components.

Harris (2013) further developed his original idea and suggested a metric for purchasing department to purchase in a lean way. It is composed of 25% piece price cost, 25% inventory levels, 25% transportation cost and 25% quality. The piece price cost is the cost of each component unit, the purchasing agent could lower this kind of cost by their negotiation ability. Lean enterprises could efficiently reduce lead-time by reducing inventory levels. High delivery frequency is necessary to keep the inventory levels low but high frequency of delivery increases the transportation cost for our suppliers. A supplier with longer geographical distance are more likely to have longer lead time and higher transportation cost than a closer supplier. Poor quality affects the flow of value, when a problem occurs, it takes time to solve, which will cost a lot for the labor, machines, etc. Inspection is a way to prevent the quality problem, sorting is performed when the purchased components are received into the production facility. In a traditional view, this cost is considered as cost of "doing business". Look at the history of the potential suppliers is a way to evaluate or maybe visit them to get an insight how their production facility is running. Poor quality leads also to

bigger safety stock level, since we have to keep a larger stock to cover the quality problem. Agents are doing their jobs based on how they will be evaluated by the management team (Harris, 2013). Structure drives behavior. When supervisor evaluates purchasing agents based on all the four attributes, the agents will more likely work in consistence with the top management in lean enterprises.

3.7.4 Reduce the base of suppliers and Long-term strategic partnership

A company which tends to have many supplier seems like to have many options and the risk is diversified. But this is absolutely a hinder for building strategic partnership with the suppliers (Harris, 2010). The company is only a little fraction of the supplier's business, therefore the supplier will just treat the company as their many other customers. What if the company chooses the best supplier of that particular component and gives all the contracts to this supplier. This supplier will suddenly concern more about the company, because the company is their most important customer. There are many benefits related to decrease the supply base. And this is essential for developing a long-term strategic partnership with the supplier. We have less amount of suppliers to manage wen reduce the supply base, the complexity is reduced, but we need to commit more to the remained suppliers. A contract framework should be developed in order to encourage the cooperation (Womack et al., 1990). A system of measurement and control of the performance of supplier bring benefits to both partners. The system must be transparent and the supplier has the right to know the results.

In the time when mass production was the mainstream, the company is focusing on saving money from the trade with the suppliers and keep the suppliers benefits very low (Womack et al., 1990). But when the suppliers have very little profits to gain, their innovative capabilities are very limited and the quality of products might not satisfy the needs in the market.

Lean purchasing focus on to learn about everything of the supplier (people, technology, costs, quality, production etc.). According to Baudin (2004) this is the start point of transferring to lean purchasing. Throughout this process of knowing each other, through communication, the mutual trust has been built up (Van de Ven et al., 1976). Then the two parties are willing to work together towards a common goal for mutual benefits. A commitment has been created from both parties, and the relationship has been developed from supplier-customer relationship to long-term mutually beneficial partnership.

According to Womack et al. (1990), the buyer could offer a higher price in the beginning and gradually decline the price over the life of a model. Because lean companies know the suppliers have invested a lot in developing the new components. And the cost of producing the same model will be decreasing over the time. This strategy also enables the suppliers to be more innovative, so that they do not only rely on their old models.

Liker and Choi (2004) pointed out that a partnership and mutual trust do not mean we do not need to measure the performance of our supplier. Control is as important as trust. Penalty is needed when the suppliers fall short on quality or reliability. How serious the penalty is going to be is depending on the situation and the relationship. Good communication should be there to ensure there is no misunderstanding between the parties, in this sensitive period. For most of the cases, the customer does not just end the contract and switch to another supplier, but instead the customer gives away a fraction to other alternative suppliers for a given period of time. According to Womack et al. (1990), Toyota and other Japanese companies found this is an effective way to keep the supplier on their toes while sustaining the established relationship.

3.7.5 Adapting lean management methods

Lean purchasing should address where dollars are spent and sort their expenditures in categories (Reisman and Burns, 2006). This is linked to one of the 5 lean principles, mapping the value stream. Define the value adding, non-value adding and necessary non-value adding activities. In this way, the company will more easily find out where significant saving opportunities are and which initiatives will impact the company the most.

Creating joint activities is a good way to build a relationship between the company and the suppliers. Some joint activities, such as joint product innovations, could benefit both parties (Reisman and Burns, 2006). As it has been explained before, in today's global economy, an efficient supply chain is most critical for success, the competition is between supply chains. All team member should participate and communicate openly, get a comprehensive view of the issues that impact the company.

JIT is one of the most important lean management methods, it is about produce only what is needed when it is needed. If we apply JIT to lean purchasing, the supplier should only deliver what the customer needs at when the customer needs it in order to reduce wastes related to inventory, transportation etc. The delivery must be more frequently and in small batches.

Moreover, could the components be placed in right sequence from the supplier? So that the assembler does not need to spend time to put the components in right sequence.

The benefits of changing to lean purchasing cannot be seen in short time. It also requires a lot of resources and time from both parties, when they for example mapping the value stream, doing joint activities, etc. Reisman and Burns (2006) pointed out that lean is like Eastern medicine which will treat the ‘‘corporate patient’’ holistically over long time. Aspects which have been discussed in subchapter 3.6, for instance knowledge transfer and change management, could be incorporated while implementing lean management in procurement function.

Customers, in most industries, are desired for lower prices, shorter lead time and smaller order sizes (Myerson, 2012). The most enterprises do not produce every component of a product by its own. Some of the components are provided by its suppliers. Enterprises are, in other words, involved in supply chains. In order to achieve the requirements of end customers, a more efficient supply chain must be created. In the coming chapters, we are moving beyond the enterprise level and take a perspective of the entire supply chain. We are going to first look at the concept of supply chain, then apply lean principles to supply chain management and create a Kaizen culture throughout the supply chain.

3.8 Develop lean supply chain

We have now discussed how different lean management methods are incorporated in the management of business activities within the enterprise. Management of supply chain is different, because the enterprise are cooperating with other independent enterprises and it is not easy to make other enterprises to follow your strategies. In this subchapter, we will look at what management of supply chain is and how a lean supply chain works.

3.8.1 Supply Chain Management Definition

All we have discussed in the previous chapters is about the internal management within the enterprise, each enterprise is interacting with other enterprises. Already in 1958, Forrester pointed out the importance of organizational relationships and argued that the industrial dynamics can affect the performance of the functions of an organization, for instance research and development, sales and marketing etc. As I already mentioned in previous chapter, all the

enterprises are a part of bigger supply chains. However it is possible that an enterprise could own the whole supply chain (except the end customers), but as we could observe in the global industry today, this is not common to own the entire supply chain. Even one of the most powerful company, Apple, is not manufacturing their products by themselves. Apple has a large number of suppliers and its suppliers have their suppliers. Apple is then a part of a very complex "supply chain". Supply chain is defined as:

"A set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products services, finances, and/or information from a source to a customer" (Mentzer et al., 2001, p.4).

Figure 10 shows the three types of supply chain defined by Mentzer et al. (2001) with respect to the degree of complexity of the supply chain.

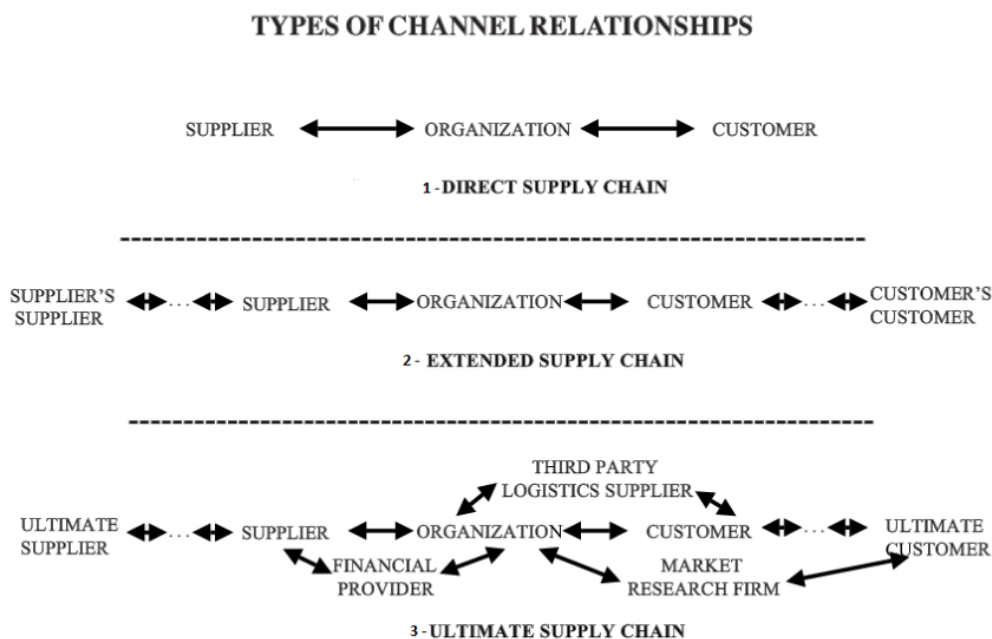


Figure 10: Three types of supply chain defined by Mentzer et al. p.5 (2001).

Supply chain has been always existed, while Supply chain management requires management effort by the organization (Mentzer et al., 2001). As we could see from figure 10, an ultimate supply chain could be very long and complex. An organization could be part of numerous supply chains, for instance Wal-Mart is part of supply chains for the products categories that Wal-Mart provides. An organization could also have different roles in supply chains, for instance AT&T could be the supplier, partner, customer and competitor to Motorola in

different supply chains (Mentzer et al., 2001). Today global sourcing strategy makes the ultimate supply chains even more complex, since an organization will have suppliers and customers from countries with a long geographical distances and cultural differences. It is easy to manage a simple supply chain, but when a supply chain becomes so complex, it requires much more resources and skills to manage.

It is the organization's choice if the organization wants to coordinate the supply chain so that the supply chain could be more efficient. If the organization is not aware of how important the supply chain is, the top management team will never do anything with the supply chain.

Mentzer et al. (2001) defined supply chain orientation as

"The recognition by an organization of the systemic, strategic implications of the tactical activities involved in managing the various flows in a supply chain". (Mentzer et al. 2001, p.11).

While the supply chain management was defined as:

"The systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole" (Mentzer et al. 2001, p.18).

According to the Council of Supply Chain Professionals (2016), supply chain management composes of functions like procurement, conversion and logistics management. Coordination and collaboration with supplier, intermediaries, third party service agent and customers is also an important part of supply chain management. Myerson (2011) pointed out that supply chain management is a much broader concept than logistics management. For instance Customer service, in particular order management and customer satisfaction, which usually is not included in logistics management is one important segment of supply chain management.

Enterprise can be involved in different types of supply chains and there are different strategies to manage supply chain. For example, CODP (Customer Order Decoupling Point) and ERP (Enterprise Resource Planning) system. We are going to take a closer look at what lean supply chain is and how to create a lean supply chain.

3.8.2 What is Lean Supply Chain?

The concept of ‘lean’ is first developed in the production function of Toyota. Early researchers did focus their research on lean production rather than lean supply chain. In the beginning of 21th century, as the economic benefits of lean and pressure for other business competitors to spread lead throughout the supply chain show up, lean began to move to supply chain management (Myerson 2012). The ultimate goals of lean supply chain is in consistency with lean production, namely to achieve improved quality while using less resources. Lean production and lean enterprise could not be successfully implemented without the support of lean supplier (Keller, 1991 in Chun Wu, 2003). According to Liker (2004), JIT production is the most important pillar of ‘lean house’. How can enterprise achieve JIT production if the suppliers are not able to steady distribute the components in right quantity, right order at right time to the production function of the enterprise. Therefore the suppliers should be encouraged to adopt JIT production and JIT delivery. JIT delivery from suppliers is critical when we want to keep the inventory level low in the entire supply chain in order to decrease inventory cost.

Lean supply chain also focuses on quick response to orders or volatility of demand. Lean management methods, for instance Kanban and standardized work, are used to react more efficiently. Standardized work design in the supply chain, for instance standardized containers to transport components, make the material flow smoother and easier (Lu, 1986 in Chun Wu, 2003).

Value Stream Mapping could apply to improve the efficiency of supply chain. Value Stream Mapping expose the wastes which should be eliminated in the supply chain. Kaizen is applied in lean supply that as a lean enterprise we should be proactive to constantly analyze the efficiency of the internal and external functions, so that non value adding activities could be detected and create base for improvements (Cox, 1996).

Lean supply model is where the customer only focus on the core-activities and let the suppliers take full responsibility for developing and delivery of sub-systems (Lamming, 1993). Lean supply is focusing on close and long-term collaboration with suppliers. Lamming pointed out that in in the relationship the customer and supplier are equal partner which working together to solve problem and achieve sustainable margin. If there is a major problem between our supplier and us, in a lean supply model we are not going to find a new supplier, instead we will work together to solve the emerged problem. A loyal and skilled

supplier base is a critical factor to determine the corporate competitive advantage (Helper, 1991).

3.8.3 Strategic Alliance with Suppliers

A supply chain composes of at least three organizations and the supply chain is not going to be efficient if one of the organizations in the supply chain is not willing to implement supply chain management. For instance JIT production which is the heart of lean production cannot be achieved without we receive JIT delivery from our supplier (Chun Wu, 2003). The prevalent buyer-supplier relationship has shifted from adversarial relationship where price was the major concern to a collaborative relationship where mutual benefits are created for both parties (Morrissey and Pittaway, 2006). A successful collaborative relationship where both the buyer and the supplier are committed leads to sustainable improvement in business performance (Kannan and Choon Tan, 2006).

The organization must have supply chain orientation before implementing supply chain management (Mentzer et al., 2001). This is common for different types of strategic alliance, including lean transformation of supply chain. Even though we want to create a lean supply chain, it is impossible to do it all alone. Collaboration with every part in the supply chain is required. Figure 11 shows the antecedents and consequences of an efficient supply chain. It helps us to better understand which determinants are important to consider when we develop alliance with suppliers and customers and the underlying process of successful supply chain management.

SUPPLY CHAIN MANAGEMENT ANTECEDENTS AND CONSEQUENCES

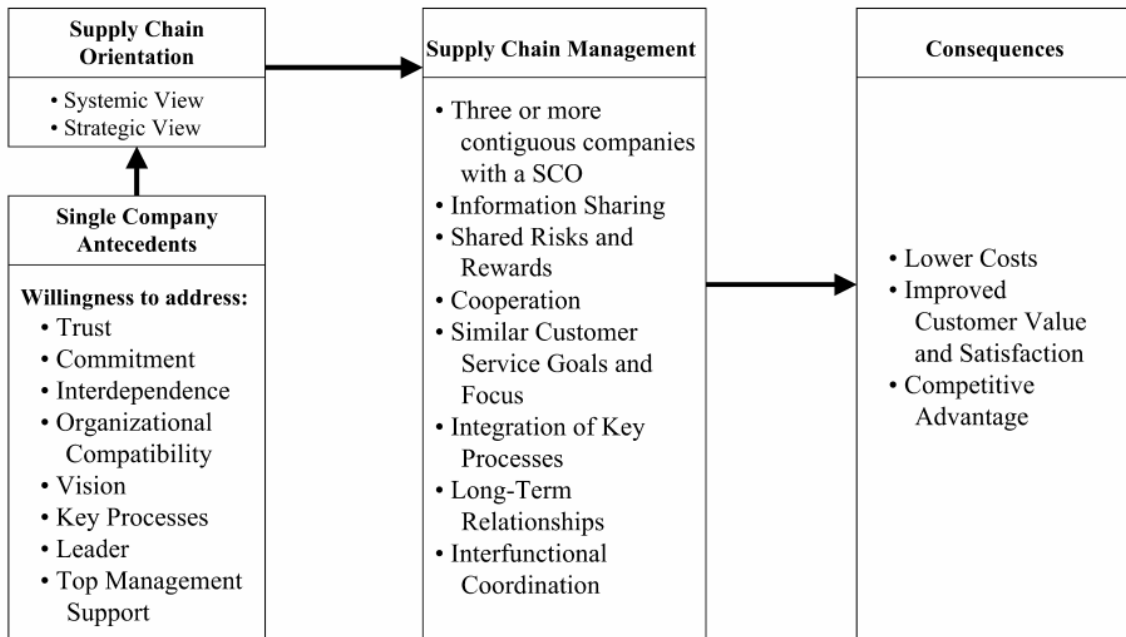


Figure 11: Supply Chain Management Antecedents and Consequences (Mentzer et al., 2001, p.12)

Trust and commitment are the direct sources of cooperation (Morgan and Hunt, 1994 in Mentzer et al., 2001). Without mutual trust, it's difficult for both partner to overcome difficult situations, for instance profit distribution and conflicts. Long-term alliance requires commitment of both resources and empowerment. According to Morgan and Hunt (1994) trust and commitment is critical to prevent opportunistic decision making which do not bring any mutual long-term benefits (Mentzer et al., 2001).

By interdependence we mean the enterprise's need to maintain this relationship instead of just switching to other suppliers, that the cooperation is valuable for both partners. The interdependence motivates both partners to work together to solve emerged problems. Enterprise and its supplier also should agree on supply chain management visions and key processes before they go into an alliance. A common supply chain management vision provides a direction for the cooperation. By key processes, I mean both partners should agree on which functions, for instance marketing, production, logistics etc., are involved in the scope of supply chain management.

In order to better coordinate and evaluate/measure the cooperation, a leader role should be taken by one company in the supply chain (Lambert et al., 1998 in Mentzer et al., 2001).

Which company is going to be the leader company is depending on factors such as, company size, economic power, experience, the initiation of cooperation (Bowersox and Closs, 1996 in Mentzer et al., 2001). Support from top management team has a sustainable impact on organizational performance and lack of top management support would be a barrier create successful lean supply chain.

Managers should consider the presented determinants when developing lean supplier. In the next subchapter we are going to review some case studies of lean enterprises like Toyota and Honda and learn from them in terms of developing lean suppliers.

3.8.4 Develop Lean Suppliers

An enterprise cannot become lean, unless its suppliers also become lean. A company could search for suppliers which are already lean, so why do not company just switch to lean supplier instead of training the old suppliers to become lean? The answer is the company will lose all the benefits, such as mutual trust and personal relationships, related to the strategic long-term relationship which required time and resource from both parties. This behavior of the company will also bring bad reputation to the company, because other suppliers are observing. Additionally, lean supplier might already have their key customers, thus it is not easy for a newcomer to build up a solid relationship (high responsive) within short time ((MacDuffie and Helper, 1997). Customer is more effective than other companies outside the supply chain to transfer lean knowledge. Through the transferring process the supplier will be loyal to its "teacher", and this is a good basis for a long-term, marriage-like relationship which lean philosophy emphasizes.

Knowledge is a dominant source for a company to keep innovation capability and sustain competitive advantages. Technology and market are always changing and every firm is in a interacting with others. We have to learn the best from each other cross the organizational boundaries, seeking newest knowledge outside the organization. Knowledge transfer is a process that requires resources, time, attention and effort (Chen et al., 2014). According to Chun Wu (2003), the total cost for the supplier and the initiator will increase in the beginning due to the cost of spending of resources and outside lean experts, especially logistics cost because of more frequently delivery (JIT). But over time the benefits will show and the total

cost will be reduced to a lower level compared with suppliers which do not adopt lean production.

According to MacDuffie and Helper (1997), a supplier development group must be established to ensure effective development activities. Once a supplier is chosen for lean transferring, some staffs from the group and employees from other departments in the company will form a team to teach the supplier at the supplier's facility. The chosen suppliers must meet some criteria, such as they have to be motivated to learn and become lean, willing to make their operations completely accessible and commit to a long-term partnership.

Technical knowledge could be very difficult to transfer if it is very abstract and complex, fragile (does not work consistently), "competence-destroying" etc. Luckily, the lean knowledge is relatively concrete and simple (Macduffie and helper, 1997). But lean is still composed of many different parts. We should structure the learning process and gather "before and after" data to evaluate the learning process.

A process of six stages to develop lean suppliers was suggested by Liker and Choi ((Liker and Choi, 2004). Figure 12 presents the process to build deep supplier relationships.



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Figure 12: The supplier-partnering hierarchy (HarvardBusinessReview, 2015).

In the very beginning, we should understand our supplier as much as they know about themselves (Liker and Choi, 2004). We could send executives to the supplier' plants to see and understanding how they are managing the working. This step is valuable for both partners. Throughout the frequent communication, the recipients (suppliers) and senders (enterprises) will gradually create a shared language, build mutual trust and friendship (Chen et al., 2014).

Different suppliers have different "absorptive capability" and "identity". The " absorptive capability" is capability of a company to absorb new technologies, depends on the related technologies that the company already knows. "Identity" of a company is defined by its employees (interactions), by shared goals and values, by common framework for actions (Kogut and Zander, 1996). The lean company must keep this in mind when transferring lean knowledge. To better understand the supplier helps us to understand the absorptive capability and identity of our supplier, this will again increase the efficiency of lean transfer. Experiments of knowledge transfer could be carried out in order to test the absorptive capability of a specific supplier.

Lean enterprises should also encourage competitions between the suppliers of a specific components. But lean enterprises do not tend to choose the last supplier standing survived from the competition. They tend to ‘‘help’’ all the suppliers in the competition, so they the suppliers could develop better products because of the pressure of the competition and they could benefit from the result of the competition as well.

Lean enterprises do trust their suppliers so that supplier could do their own things. But it does not mean lean enterprises are taking a hand-off approach. The enterprises do set target and monitor the suppliers' performance constantly. A good balance between ‘‘trust’’ and ‘‘control’’ is needed (MacDuffie and Helper, 1997). When some unexpected issues occur, lean enterprises give the suppliers immediately feedbacks and the top managers of the suppliers should be involved to solve the problem.

The innovation capabilities of the suppliers are more important than cost saving by switching to supplier without low innovation capability but which provides cheaper components. Reducing of cost is important in lean production, meanwhile to improve quality is as important as cost cutting. Lean enterprise tends to encourage and help their suppliers to develop problem-solving skills and innovation capability. For instance Toyota and Honda invites engineers from the first-tier supplier to come to their production function and

understand the development and manufacturing process in Toyota and Honda. Those engineers are then more likely come up with new design ideas which would better suit for the production in Toyota and Honda.

Lean enterprises tend to share information in a structured fashion. The meeting has specific times, places and agenda. Information is shared selectively with suppliers. Enterprises do not need to share information which is not relevant the particular supplier, because too much information would confuse people.

One of the lean principles is to seek perfection. Lean enterprise transfers their lean knowledge and best practices to the suppliers by sending them lean expert to reorganize their organizational structure, workshop layout, job design etc. Lean enterprises should also conduct joint improvement activities, such as Kaizen events. Transferring the philosophy is more important than techniques. After learned the management methods, Kaizen (continuous improvement) need to be carry on. Kaizen should be integrated as part of the supplier's company culture or identity.

3.9 Theoretical framework

In the supply chain of fashion retailer we have fashion consumers as customers and fashion companies as supplier. A broad range of concepts and theories has been discussed earlier in this chapter. Some of them are more related to the customer joint in the supply chain, some are more related to the fashion retailer joint and others are related to the supplier base joint. We have to analyze different lean methods in the light of characteristic of a fashion supply chain in order to find a feasible framework. The starting point should be the actual supply chain of fashion retailers. In order to achieve a lean fashion supply chain, every joint in the supply chains should be analyzed and aligned (Myerson, 2012). Since there are different theories for different joint in the supply chain, different joint should be analyzed with the suitable theory. For instance it will be not suitable to emphasize store loyalty when we analyze the supplier base for a particular fashion retailer.

Figure 13 below shows the theoretical framework that I suggest for how lean management methods could be incorporated in fashion supply chain. In the framework we can see which parts of the theoretical foundation are suitable for analyzing of which joint. Some theories are found to be suitable for analysis of more than one joint. Because both joints are involved in

the domain of those theories. For instance characteristic of fashion industry, seems to be suitable for the analysis of both the fashion retailing operation and supplier base management.

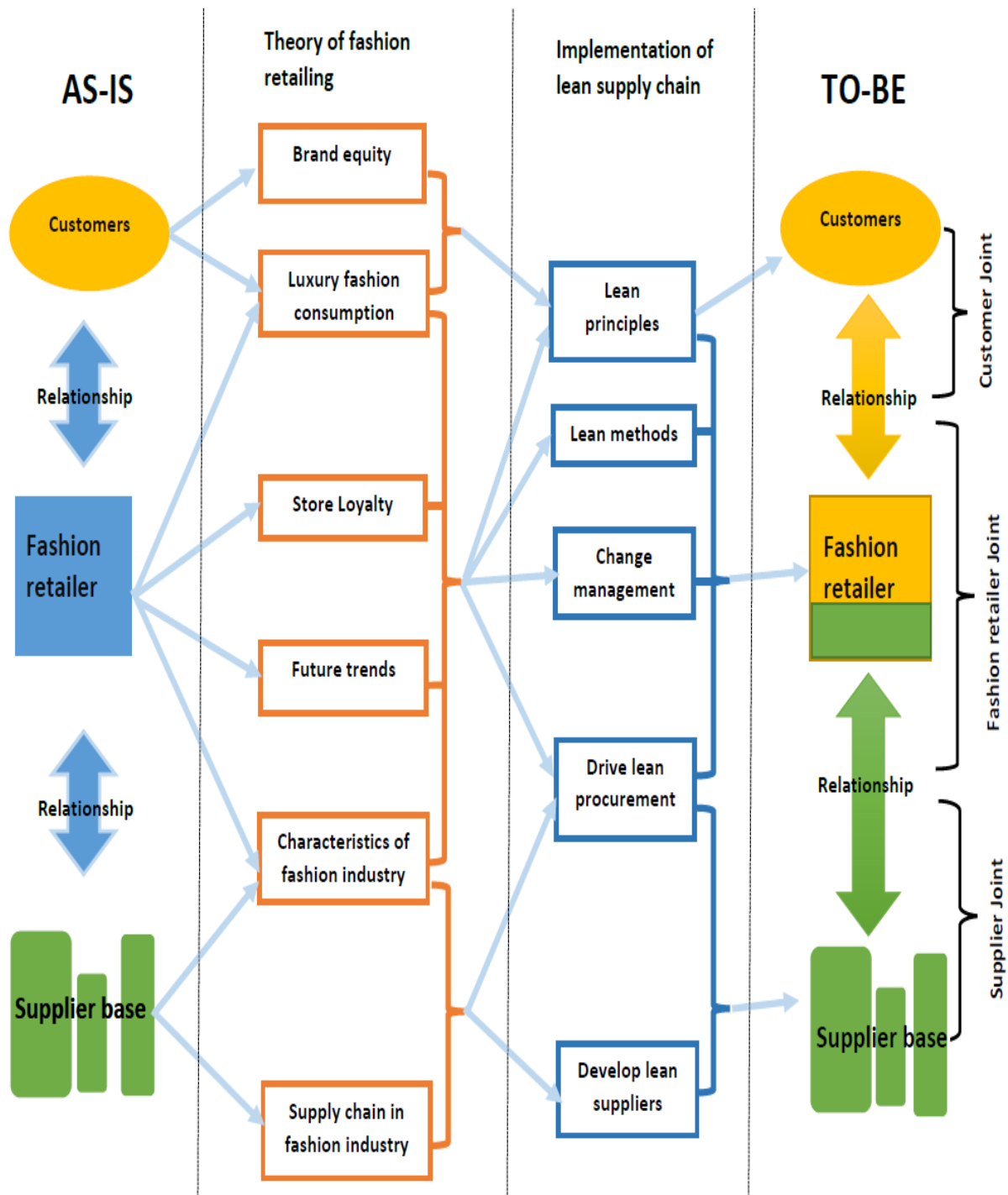


Figure 13: The theoretical framework for lean implementation in fashion supply chain

On the very left side of the theoretical framework, we have the current supply chain of a particular fashion retailer (AS-IS). A lean supply chain (TO-BE) will probably be achieved through analysis in the light of theories of both fashion retailing and lean supply chain management. All three joints in the current supply chain should be analyzed with an integrated view. A cost reduction in one area which is going to lead to increased cost in another area, which makes the total cost higher is not worth it. The arrows, in the framework, between the fashion retailer and customers and between fashion retailer and supplier base are the relationship and management of relationships between them.

Customer joint

Customer joint composes of the targeted customers for fashion retailer and the relationship that exists between fashion retailer and customers. This dyadic relationship is affected by behaviors of both parties involved. But do we really know our customer so well? Do we really understand why our customers behave in the way as they behave?

As 5 lean principles tells us, identifying values for customers is always where lean starts at. The value for fashion consumers should be clearly defined. Brand equity and luxury fashion consumption are theories that has been addressed to affect fashion consumers' perception of a retailer and their consumption behavior. Thus these theories are suggested to help fashion retailer to identify the values for their customers. As this is the first principle of 5 lean principles, it is necessary to complete the process of identifying customer values before all other processes. Clearly identified customer values are essential for identifying the value adding and non-value adding activities. We cannot categorize some activities to non-value adding activities when we do not even know what 'values' exactly are.

Fashion retailer joint

Fashion retailer joint composes of fashion retailer company and the management of customer relationship and supplier relationship from the perspective of fashion retailers. Different types of strategies could be used by fashion retailer in order to manage their customers and supplier base. Fashion retailers could not control their suppliers and customers, but they choose how they are going to manage the relationship and so impact behaviors of their suppliers and customers.

This joint is where the operation and management of supply chain going on. Fashion retailing and its characteristics should be considered when assessing lean opportunities in supply chain management. Theories of luxury fashion consumption, store loyalty, future trends within fashion retailing and characteristics of fashion industry are identified to be relevant for fashion retailers to consider when evaluating their own management. Then 5 lean principles and different lean management methods should be assessed in the light of fashion supply chain. However, it is difficult to change old working habits of employees and resistance is going to occur. Thus change management is required to deal with this problem. Appropriate change management will ensure that the lean transformation will happen smoothly. The procurement function within any organization is the function which has most contact with its suppliers. Thus theory of lean procurement has been identified to be necessary to consider in this joint as well as in the supplier joint.

Supplier joint

Supplier joint composes of supplier base for fashion retailer and the relationship that exists between fashion retailer and its suppliers. The way the supply chain in fashion industry is limits the way fashion retailers work with their suppliers. In order to analyze lean opportunity in the relationships between fashion retailers and their suppliers, insight in both characteristics of fashion industry and supply chain in fashion industry are necessary. These knowledge explains how fashion retailers work with their suppliers in general and will be used to judge which of the lean management methods will be suitable or not suitable for managing suppliers of fashion retailers. Then different management strategies of lean procurement and developing of lean suppliers will be discussed in the light of the particular fashion supply chain.

Finally a lean supply chain "TO-BE" for the particular fashion retailer is formed and should the goal for lean transformation. The target "user" of this theoretical framework is small- and medium-sized fashion retailer. SMEs have often very limited financial and human resources to spend on lean implementation (Saad et al., 2006). Another fundamental problem that SMEs have when developing lean procurement is to form the partnership with suppliers due to lack of power and the firm size (Morrissey and Pittaway, 2006). This framework will help the small- and medium-sized fashion retailer to identify the wastes in their supply chain and define a potential future state in the light of lean knowledge.

Chapter 4 Methodology

In this chapter I am going to present how the overall research process was designed and how the choice of research methods was made and executed.

4.1 Research process

This subchapter is going to be an overview of the main steps in the research process. The process started with the definition of research question based on the problem definition. The problem definition has been an indicative point for the different choice along the whole research process. For instance, the choice of case company was totally based on the research question. Research design has been chosen based on the research question. Relevant data has been collected and analyzed. The results of analysis will be discussed in the light of research question and the theoretical framework will be modified and the finding will be presented in the conclusion.

The research process has not been straight forward. The development of research design process has been reviewed and modified several times during research process, for instance when some unexpected data of the case company has been collected or some interesting results are discovered in the analysis. The data collection process lasted for two months and interview-guide has also been modified several time based on the analysis of previous interviews and observations. Even at the last stage in the process, discussion and conclusion, I still addressed some special data which should have been collected. This was why a final interview has been conducted through emails which will be presented in subchapter 4.3.

Figure 14 below shows the main steps in the process. The blue arrows represent the designed flow and the yellow arrows are when the researcher find out some parts need to be reviewed and modified. Each of the stages will be explained in detail in the coming subchapters.

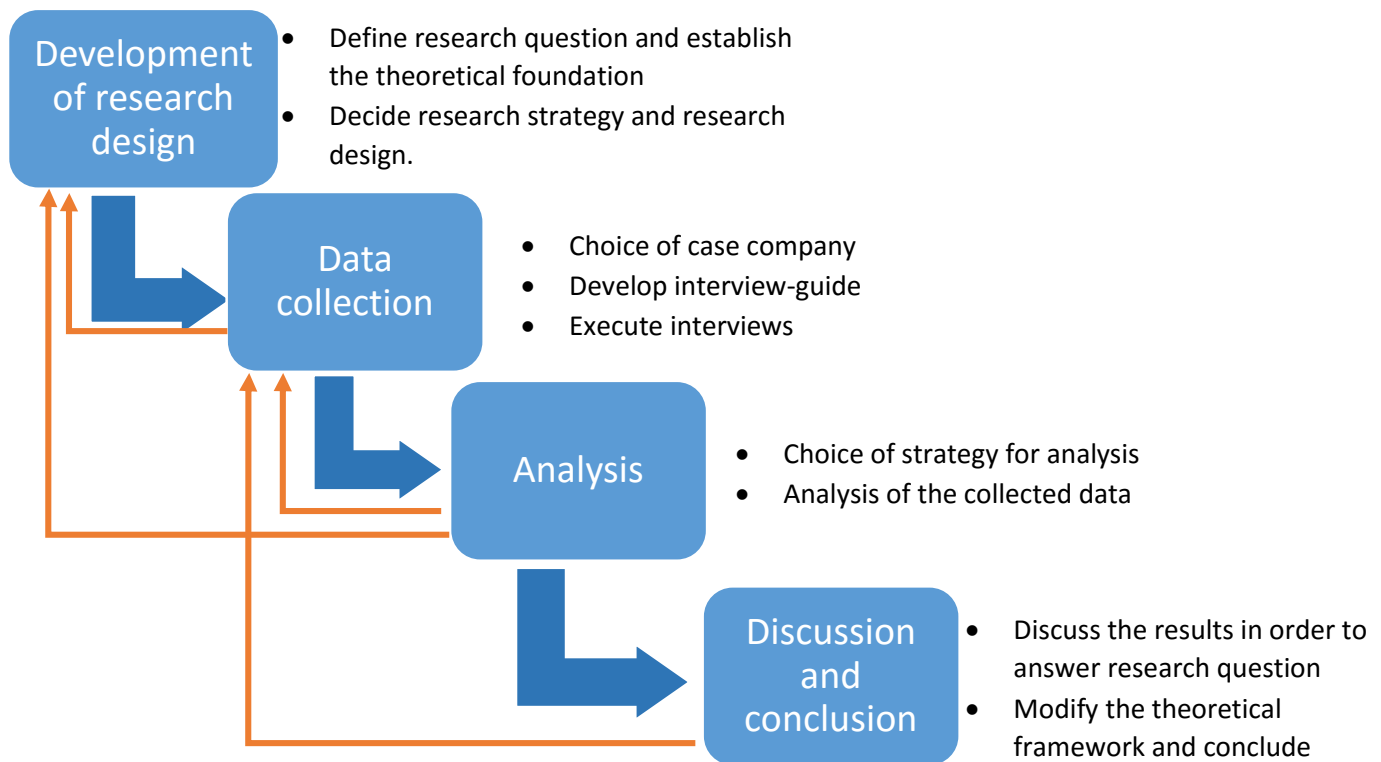


Figure 14: Illustration of the research process

4.2 Development of research design

In this step, some of the most important decisions, for instance decision for research strategy, have been made in order to achieve best possible quality of this research. The following 4 subchapters will explain step by step how the researcher come to the final research design.

4.2.1 Define research question

The first step in research design is to define the problem and research question. The research question should base on a real challenge for business practitioners today, and must be at same time feasible to achieve within this semester. After two discussions with my supervisors, we defined the research question and sub-questions as described chapter 2. The research question is based on my project work ‘‘Create Lean Supply Chain’’ from 2015 and a real challenge in the world of fashion retailers. The research question is as following:

How could lean management methods be incorporated in the supply chain management of a small and medium-sized fashion retailer in order to reduce total cost and as well as to improve the service quality?

4.2.2 Establish theoretical foundation

A good theoretical foundation is required no matter what kind of researches researchers are conducting (Wacker, 1998). Because the theoretical foundation will give us insight in the research area by providing broadly accepted definitions and theories. The theoretical foundation will form the base for research and will provide guideline for the data collection. For instance, it will be meaningless to research on something which already has an accepted theory from before.

What kind of theory is needed was clear after the research question has been defined. The next step was to collect literatures. Both literature on lean and fashion retailing are relevant for this research. My project work from fall semester 2015 forms a literature base for lean. Therefore a complete review of project work is done before identifying complementary literature. After the review I clearly see that the literature of fashion retailing is missing. And since the research question is about create lean supply chain in the current supply chain of fashion retailers. Literatures that include both research area will be very valuable. At the stage of finding complementary literature, I searched for literature on fashion retailing, lean supply chain (articles and book which have not been reviewed in the project work) and lean in fashion industry. Whenever new keywords come in my mind or I found some new concepts when I reviewed the found articles and books, I went back to this stage of finding complementary literature to search for more relevant literature. Figure 15 below illustrates the searching process in order to form the theoretical foundation.

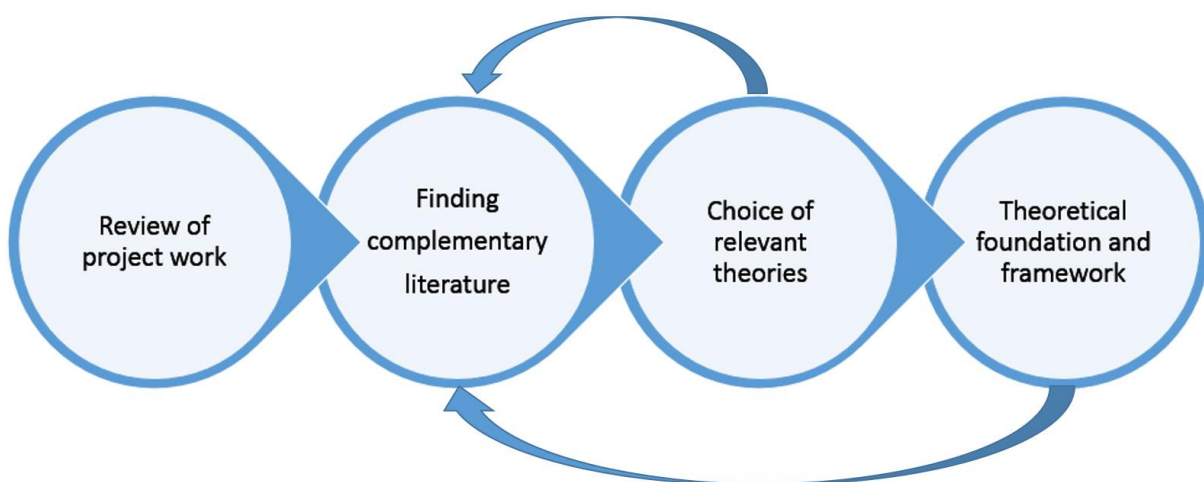


Figure 15: Illustration of literature searching process.

I. Searching strategy

In order to find relevant literature, I choose to go for a narrative approach for the searching process rather than systematic approach. According Bryman and Bell (2007), narrative approach will provide an impression of a research area that the researcher want to get insight in. I have to predefine keywords for the searching if I choose to go for a systematic approach. But I did not know much about the research areas that I want to understand and therefore could not predefine what terminologies will be relevant or not. This is the main reason for me to not choose systematic approach. Many key words or terminologies have been discovered while I read the articles and books.

Bryman and Bell (2007) proposed two types of literature searching: keyword and journal. No specific journal seems to be able to provide enough theory for my research, as my research covers very different research areas. Thus I decided to go for the option keyword searching.

II. Data base and searching executing

Scopus, Oria and Google Scholar are used actively as search engines for searching academic literatures. Since our research question covers some broad research areas, such as lean production, purchasing management, supply chain management, fashion management, retailing management etc. A brainstorming process was carried out in order to find keywords for searching, for instance: Lean production, lean manufacturing, Just-In-Time, lean logistics, lean purchasing, lean suppliers, supply chain management, lean supply chain, lean thinking, supply chain fashion, fashion retailing, luxury fashion, lean supply chain fashion industry, lean fashion retailing, lean logistics fashion, supply chain in fashion industry, lean store management etc. I wrote all the key words down in my notebook in order to get an overview of which keywords have been searched.

I write one of the keywords from my notebook in the search field on each of the three search engines, and searched for articles and books. I did this for all the keyword. Some keywords lead to much more results than others. In the case of very many results, I will use my predefined selection criteria (as presented later on) to select the most relevant ones. Then I read through the abstract of the selected articles and books in order to decide to download them or not. Selected books have been loaned from the library at NTNU. I did this for all the keywords. Sometimes I also combine two keywords in order to find literature which combines both research areas, for instance I searched ‘lean supply chain fashion industry’.

Downloaded articles and loaned books have been read through and brief summaries have

been written, so that I do not have to read the whole article again to know what the key point or finding are in each particular article and the summaries also make it easier to refer to the articles and books when writing the thesis.

More keywords were showing up after I started to review the found literatures, for instance: Knowledge transfer, lean implementation, transformation management, critical factors lean, selection of supplier, change management, brand equity, apparel industry, etc. This is why I chosen narrative approach for reviewing literature, because I was not familiar with many terminologies within the two research areas.

I also look at the references in the found articles, in order to find more relevant literature that not have the desired key words in the tittle but have the relevant contents. For example, the famous ‘‘The Machine that Changed the World’’ by Womack et al. does not seem like it is talking about lean production, but it is actually one of the most important books about lean production. I also used sources such as the lectures I had last semester in ‘‘Production Management’’. Some non-profitable internet sites of high reliability are also used as part of the sources. For instance Lean Enterprise Institute (2016) which is founded by James P. Womack who is one of the biggest and most famous researchers with in the field of lean. Compared with the articles, those websites are frequently updated makes them more applicable for today’s market.

III. Selection criteria

I read the abstracts or conclusion in order to find out if the article or book is relevant or not. Which journal the article is published in is critical for the selection as top ranked and peer reviewed journals tends to have better quality (Bryman and Bell, 2007). How many other researchers have sited the article and the year of publishing is also important. The old articles would provide us the original definition or thinking of the concept. Some of the older articles formed the foundation for recently researches. Newer articles are more related to business conditions today. However articles in some specific research areas tends to be very difficult to find or does not exist at all. In this case, even the article does not fit all the criteria, I will go through the article to check the quality and choose the article if the quality is good.

IV. Choice of relevant theories

Notes of the theories addressed in the selected articles and books are made after reviewing them. It happens often new keywords, relevant concepts and new aspects in the research areas show up when reviewing the selected articles. The searching and reviewing process of

literature ends up with lots of definitions, concepts, aspects to view the research areas and theories. Some theories seem to be more relevant for our research problem than others. The relevance between the particular and research question is the biggest consideration when I decide to keep some of the found theories and exclude some others. At this stage “choice of relevant theories”, I chosen some concepts which will be presented in detail in the theoretical foundation and at the same time some other concepts were chosen to not be discussed in detail/studied further.

I am taking a broader perspective so that I could understand the relationships between the different concepts and find a framework to solve our research question. I will take more resources than what I have for this research if I want to go into every aspect that seems to affect the lean management in fashion supply chain. I choose to keep the aspects and concepts that has a bigger scope that as a whole will directly affect the solution of my research question. One example is shown in figure 16. Reputation, staff, store layout and some other factors have been identified to affect customer perception of a fashion retailer which will again affect the business performance of fashion retailer (Newman and Patel, 2004). There are likely many factors (factors A, B, C, D in the figure) that affect the decision of store layout. I decided to keep the theory of customer perception of a fashion retailer. And I decided to not go into the concept of store layout and study every single factor (neglect A, B, C and D) that affects store layout. Otherwise the research will be very fragmented. The key point here is that many other concepts are in correlation with the presented concepts in the theoretical foundation. I had to make the decision to include some concepts and exclude some other concepts.

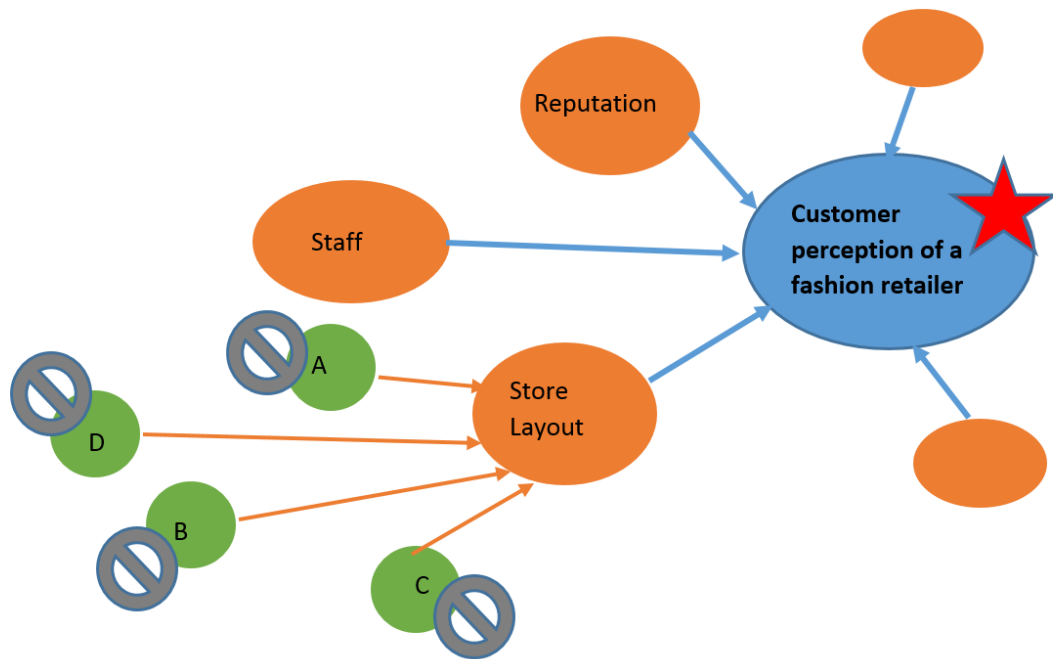


Figure 16: Choice of relevant theories.

V. Theoretical foundation and framework

Finally the theoretical foundation has been formed based on the selected concepts and theories. And a theoretical framework has been designed by the researcher based on the theoretical foundation. The theoretical foundation and framework provides guidelines for how the case study should be designed and what kind of data should be collected. For example I used theoretical foundation to decide what kind of data that is necessary to be collected and what questions that I must have during the interviews and the theoretical framework would function as the method for how I am going to analysis the collected data.

4.2.3 Research strategy

Theory, explained in the most common way, is the explanations of observed phenomenon of regularity (Bryman and Bell, 2007). This indicates that in order to conclude any theories, there must be some regular phenomena (either natural or experimental). We have to study some lean fashion supply chains in order to conclude any findings or theories. The reality that lean management methods is not widely adapted in current supply chains in the fashion industry (lack of phenomena to study) makes it impossible to conclude some final theories. This research is designed to be an exploratory research which is intended to explore defined research question and provide a basis for more conclusive researches in the future (Research-

methodology.net, 2016). According to Brown (2006), exploratory research is suitable for problems that very little or no researches has been conducted. This research is intended to explore the possibilities when fashion retailers incorporate lean management and forms a basis, in the form of a framework, for lean management implementation by practitioners and conclusive research could be done by researchers afterwards.

Another important choice should be made is to choose between the options of qualitative or quantitative research (Bryman and Bell, 2007). Qualitative research emphasizes on words and perceptions when researchers collect and analyze data. Qualitative research is addressed to be useful when assess complex causal relationships. (Bennet t and Elman, 2006) and understanding the organizational process (Doz , 2011). Qualitative research which emphasizes on description of detailed data allows the researchers to study the problem in depth (Hyde, 2000). On the other side, quantitative research emphasized more on the quantification in the collection and analysis of data. Quantitative research is used to examine the relationships between variables in order to test the hypotheses and conclude findings (Creswell, 2013). In other cases, quantitative research is conducted to describe the main characteristics of a population without emphasis on details of single elements (Hyde, 2000).

I have to study the management of fashion supply chains in depth, for instance how fashion retailers manage their relationship with their customers and suppliers, and understand every detail of how fashion retailers today conduct their business. Qualitative research that could help researchers to get a deep understanding in organizational process and complex relationships seems absolutely more suitable for my research. Therefore I decide to go for a qualitative research.

4.2.4 Research design

According to Bryman and Bell (2007), after the design strategy is decided, we should consider research design and research method. Research design and research method are two different concepts, even though they are used interchangeably in many cases (Bryman and Bell, 2007). Research design will guide execution of research method and the analysis of data, while research method will describe the concrete way of how data will be collected. The choice of research design should be based on the purpose of the research and what the researchers prioritize to find out (Bryman and Bell, 2007, Yin 1994). Final research design is decided after evaluation of 5 research design that Bryman and Bell (2007) suggested and three conditions that Yin (1994) proposed for choosing right research design.

Bryman and Bell (2007) proposed 5 different research designs within social science:

- I. Experimental design: Examine the variable in an experiment by controlling other factors that might affect the result.
- II. Cross-sectional design: Examine one variable in different sections of individuals that are similar in other aspects.
- III. Longitudinal design: Researcher do observations of the same subjects over a long time period.
- IV. Case study: In-depth investigation of a particular company, group or individual.
- V. Comparative design: Compare several cases in order to address similarities and differences.

As we could understand from the brief explanations of the 5 different research designs, case study turns out to be suitable for this research. This research wants to identify the current status of fashion supply chain and incorporate lean management methods, this does not to control any factor or manipulate any behavioral events. It is not about to examine any variable either. Experimental and cross-sectional design is then out of the list. Longitudinal design focus how subjects change over long time, while this research is about to explore the contemporary fashion supply chain. And we are obviously not compare different supply chains in different industries, in different countries etc. Then we could delete longitudinal design and comparative design from the list as well.

According to Yin (1994) identification of units of analysis is an important step in development of research design. The research question and sub-question 3 and 4 requires an in-depth illustration of how a fashion supply chain works. A typical supply chain of a company composed of suppliers, company and customers that all involved in the upstream and downstream flow of products, information and finance (Mentzer et al., 2001). In the case of this thesis, the research is based on supply chain of fashion retailers. However the task will be too complex and demanding to solve within a period of one semester for one researcher alone if the researcher analyzes all the three joints in the supply chain: supplier base, company and customers. Due to that limitation, data for analysis is decided to be the detailed description of how fashion retailers are conducting their business and managing their supply chain in practice. The source of the data will then be the fashion retailers. There are different functions within the retailing company and different organizational and interorganizational processes going on all the time. One unit of analysis has been identified in this research and it

is the case company, in particular the management of daily operations within the case company and how the case company manage their supply chain currently (customer relationships, procurement process and relationships with their suppliers).

Fashion supply chains has become complex and dynamic (Brun and Castelli, 2008, Bruce et al., 2004). Supply chain management has a very broad domain and include many different functions (Myerson, 2012). These makes the unit of analysis, fashion retailers, a complex entity. Case study could tackle large data of entities which are difficult and complex in structure and provide insights into the characteristic of the phenomena (Easton, 2010). Because result of case study will retain the holistic view and characteristic of complex phenomena in real-life (Yin, 1994). Therefore case study where researchers conduct in-depth investigation and will provide a deep understanding of the current fashion supply chain is identified to be suitable for this research. The same research design could be identified by Yin's criteria for choosing research design. Three conditions have been proposed by Yin (1994):

“The three conditions consist of (a) the type of research question posed, (b) the extent of control an investigator has over actual behavioral events, and (c) the degree of focus on contemporary as opposed to historical events.” (Yin, 1994, s.4)

We could easily see, in the light of research question, that investigator has very little control over the behavioral events. Because investigator in this thesis is meant to standing outside the fashion supply chain and view the fashion supply chain from a researcher's perspective. The problem that this research has addressed is contemporary problem, thus the focus is on contemporary events. Yin (1994) stated that if no control is required and focus is on contemporary events, then the suitable research design would be survey and case study. Survey is more suitable for “what”, “who” or “where” questions and case study favors “how” and “why” questions (Yin, 1994). Our research question starts with “how” and case study become obviously the right choice.

Yin (1994) pointed out case study could be used for different research purposes: exploratory, descriptive and explanatory. Some brief explanations are provided below:

- Explorative case studies: Initial research of a defined problem and form the basis for future researches.
- Descriptive case studies: Describe a phenomenon in detail, provide additional information and in-depth understanding.

- Explanatory case studies: Conclude and explain the ultimate causes of a phenomena, relationships between variables and effects of factors.

This research was defined to be exploratory and qualitative as overall research strategy and case study was decided to be research design. Based on my defined problem and research question, the case study in this research is going to have both characteristics of explorative and descriptive case studies. In this research I am going to explore the possibilities of lean management methods in a lean supply chain. The case study is used to describe the current fashion supply chain in detail and explore/identify potential areas in the supply chain for future improvement. Thus the case study is designed for both descriptive and exploratory purposes.

Case study could be further divided into single- and multiple-case studies and this is considered to be a major distinction (Yin, 1994). The nature of the research question indicates that researcher have to get an in-depth understanding of a current fashion supply chain. Research resources is limited and less resource will be distributed to each case if we go for a multiple-case study. Single-case study compare with multiple-case study provides more in-depth insight in the phenomena (Dubois and Gadde, 2002). Single-case study is also suitable as an exploratory device for further studies (Yin, 1994) which is the research purpose of this research. Suggestion of a framework for future implementation of lean management methods will be problematic when researcher has several unique fashion supply chains to analyze. Because they all have different strengthens and weaknesses in their supply chain management. Thus, because of the complexity of supply chain management and the ultimate purpose of this research, single-case study is identified to be more suitable for this research.

As we explained earlier in this subchapter there is only one unit of analysis in this research. The basic types of case studies proposed by Yin (1994) is illustrated below in figure 17. According to the categories defined by Yin (1994), the case study in this thesis is a holistic case study (single unit of analysis). A major pitfall by holistic case study is that the case study might have fragmented focuses on different subunits of analysis rather than the overall larger unit of analysis (Yin, 1994). Thus by having only one unit of analysis (holistic design) it will be easier to keep focus on lean implementation in the entire fashion supply chain.

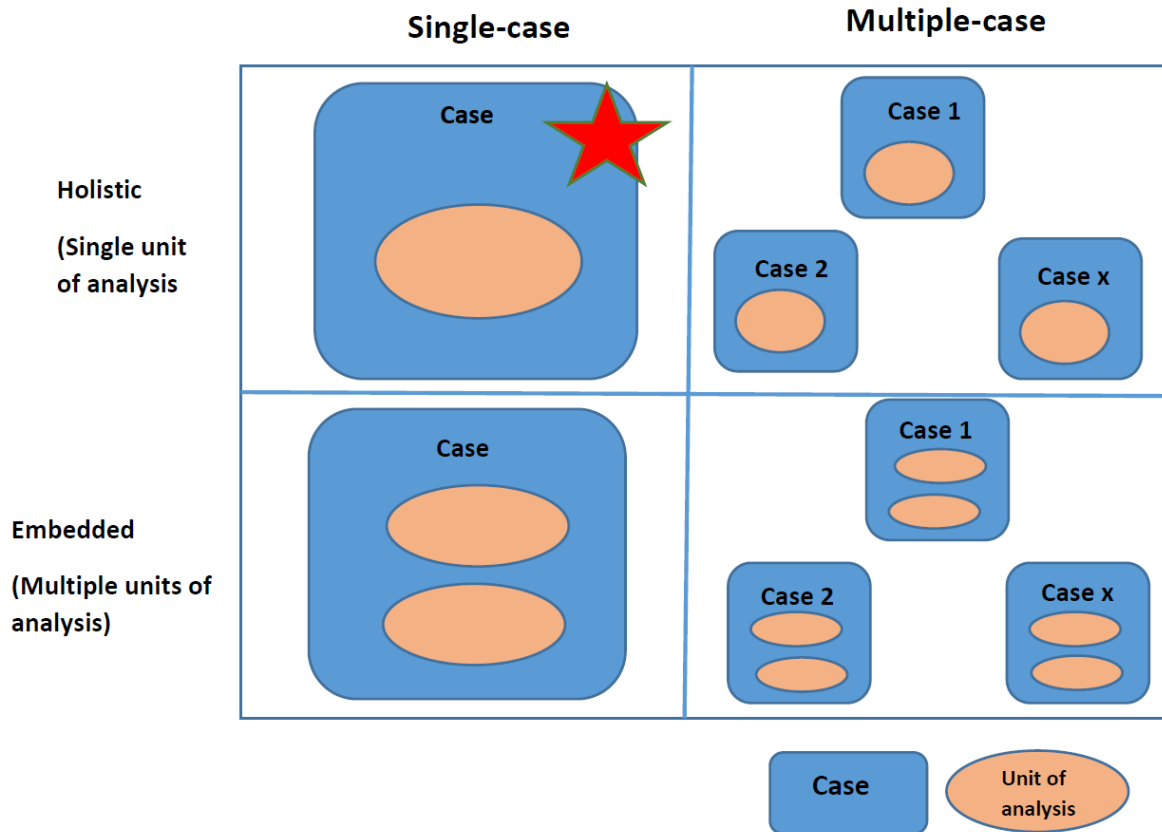


Figure 17: Basic types of designs for case studies (Yin, 1994, p.39).

To sum up, the identified research design in this research is a holistic single-case study. In the next subchapter the technique used to collect data, namely research method according to Bryman and Bell (2007), will be discussed.

4.3 Data collection

After chosen suitable research strategy and research design, based on the purpose of this research and the research question, researcher has to decide how the relevant data should be collected. In this subchapter, decision for research method will be discussed and process of data collection will be described.

4.3.1 Research method

Research method is about how the useful data should be collected within the frame of research design (Bryman and Bell, 2007). Three criteria should be considered when researcher decides research method for case study: units of analysis, choice of case and what kind of data should be collected and how (Johnston et al., 1999). Since units of analysis have been discussed in the previous subchapter, I will discuss the latter two here.

The research design that has been identified indicates one single case for this research. Unlike some abstract research questions, for instance “how does proactive behavior affect the overall business performance of one company?”, research question in this thesis is targeting a specific type of companies. The research question is very clear about what type of entities the case study should focus on, both type of industry and company size are defined, high-end small- and medium-sized fashion retailers. Local small- and medium-sized fashion retailers has been identified to be more suitable, because of the convenience of collecting data, for instance I could just make appointment with them and observe the operation process without traveling too far.

Next question is who should be the informant in the case. In order to limit the bias in collection of data, knowledgeable informants have been identified (Eisenhardt and Graebner, 2007). Leaders in the organizations are considered to be a more reliable source of information (Vickery et al., 2003). Since this research is focused on the supply chain on a strategic level, the individuals in the organization who are part of the top management team are addressed to be most knowledgeable individuals about the supply chain of the particular organization. Since procurement is identified as a central function within supply chain management (Myerson, 2012) and procurement process is identified as one of the units of analysis, head of procurement will be an important informant for this research as well.

I did research on local high-end fashion retailers and found a list of them. Emails were used to initiate the cooperation. Four local fashion retailer have been contacted by email where two of them were interested in being part of this research. However due to the limited time to execute the research, one of them was identified to be the case company in this single case study. The decision was made based on two considerations: (1) the case company is only focusing on retailing business which makes their supply chain to be more like a typical supply chain of fashion retailers, (2) the supplier base of the case company is identified to be more diversified and will provide a more in-depth understanding of fashion supply chain. Data were collected mainly from two informants of the case company, general manager (at same time head of purchasing) and head of Inventory and Logistics.

4.3.2 Data collection

The most common methods of data collecting are interviews, observations, documentation etc. (Yin, 1994, Yang et al., 2006). These methods could be combined during case study. Case study can also include different degrees of quantitative evidence (Yin, 1994, Bryman and Bell, 2007). All the three methods have been used in this research although interviews are the primary one.

Semi-structured interview is used in this research rather than unstructured interview. An unstructured interview is like a conversation between the informant and researcher (Bryman and Bell, 2007). While for a semi-structured interview, an interview guide is developed before the interview and the interview will focus on some particular topic, but still the informant is free to choose how he/she will answer the questions (Bryman and Bell, 2007). Researcher is flexible to exclude some of the questions from interview guide. Complementary question could be added when necessary, for instance when informant proposed something the researcher never thought about before.

Direct observations have been done at the operation facility (the store), storage rooms and offices of the case company. Direct observations are very useful when the focus of the case study is on the contemporary events (Yin, 1994). ‘‘Some relevant behaviors or environmental conditions will be available for observation’’ (Yin, 1994, p86). The identified relevant behaviors and environmental conditions within the company indicate something about the working dynamic and culture in the case company. For instance, a clear and organized working environment will ensure that defects will be more easily detected and lead to improved efficiency and quality (Myerson, 2012, Strandhagen, 2015). The image of the working environment will be easily understood through visual signals by direct observation.

I talked spontaneously to the sales staff who worked at the store when I notice some special phenomena. For instance, I talked to the sale staff at the basement floor when I notice that there is not a clear system for how the merchandise are placed, compared to that merchandise on first floor and second floor are placed based on their brands and categories.

Documentation, as an important source of evidence, has also been reviewed before, during and after researcher started interviews and observations. Documentations that has been looked at are the website of the case company, a book about 30 years’ anniversary and media channels (Instagram, Facebook and Blog). Documentations has been reviewed to get familiar with the case company before the interviews and observations, and is used to corroborate the

data from other sources during and after the interviews and observations. Something to keep in mind when reviewing the documentations is that the documentations usually contains bias, because the documentation is designed and reported for some specific purposes and to achieve some specific goals (Yin, 1994). The original purposes with the documentations should be identified in order to be correctly critical in extract data from these documentations.

Anonymity

According to Yin (1994), it is better to keep the identities of both the case and the individuals. For the first, it enables the readers to recall and integrate this research with previous information given about the same case. Second, the whole research will be more readily and data could be checked. After a discussion with the leader of the case company, we choose to keep the identities of both the case companies and individuals who have been interviewed. However some sensitive data that would affect their business performance were decided to not be disclosed, due to the fierce competition in the market that the case company is operating in currently.

In a total, four interviews and three observations (one of the observation was conducted during the interview) have been conducted and will be described in table 5 below:

Table 5: Overview of interviews and observations conducted

Type of method	Informant's position	Topics	Duration
Interview 1	General manager	Background of the company, company structure, identifying of main supplier and customers, relationships with suppliers and customers	180 minutes (with some short breaks in between)
Observation 1	--	Working behaviors of employees, environmental conditions in the main operation within the company (in less hectic period)	120 minutes
Observation 2 + Interview 2	Head of Inventory and Logistics	<u>Observation</u> (guided by head of Inventory and logistics): Working environment in office, inventory solutions and all storage rooms. <u>Interview</u> : Inbound logistics, inventory management, and activities in the office (Preparing price tags, management of merchandise data, communication with supplier etc.)	120 minutes
Interview 3	General manager	Purchasing process, supply chain management, material flow and information flow within and outside (with suppliers and customers) the company	90 minutes
Observation 3	--	Working behaviors of employees, environmental conditions in the main operation within the company (in hectic period)	120 minutes
Interview 4*	General manager	Complementary questions and confirmation of researcher's interpreting of data, lean opportunity assessment.	Email

* Because of some unexpected issues, interview 4 was not conducted face to face. The questions have been send to general manager of the case company by email and the answers have been send back to the researcher by email as well.

4.4 Analysis and results

Analysis of data in a qualitative case study is most difficult aspect when conducting case study (Yin, 1994). Data collected from the three methods we discussed in previous subchapter are almost just qualitative and semi-structured data. According to both Yin (1994) and Bryman and Bell (2007) this is no clear defined rules to analyze qualitative data. However some methods could provide results in better quality and accuracy. A clear strategy yields priorities for what to analyze and provide guidelines for the actual analysis process. Such big portion of semi-structured qualitative data needs more a well-defined strategy than for instance standardized survey (Yin, 1994). Yin (1994) proposed that analysis strategy should be further divided into general strategy and analysis techniques. ‘‘The ultimate goal is to treat the evidence fairly, to produce compelling analytic conclusions, and to rule out alternative interpretations’’ (Yin, 1994, p.103).

4.4.1 General strategy for analysis:

Two general strategies have been suggested by Yin (1994): (1) The data could be analyzed in the light of the theoretical propositions and (2) develop a descriptive framework in order to organize the case study. The latter one is common to use when theoretical propositions are absent (Yin, 1994). As been discussed earlier, this research is designed to be an exploratory research by conducting a holistic and single case study. A theoretical framework based on reviewed literature has been suggested in the end of chapter and is meant to be ‘‘empirically explored’’ in this research. The theoretical framework is in a way the proposition in this case. Therefore the strategy of relying on theoretical propositions tends to be suitable for analysis process in this research.

4.4.2 Analysis techniques

The ultimate goal/product of this research is a modified framework (based on theoretical framework) in order to explain how lean management method could be incorporated in fashion supply chain. In order to achieve that goal, researcher is going to develop the suggested theoretical framework based on analysis of a real fashion supply chain. The suggested framework in itself is a framework for analysis of fashion supply chain. Therefore

during the analysis the theoretical framework will be used as framework. Based on this purpose, none of the analysis techniques which Yin (1994) has proposed has been identified to be the analysis technique. Pattern-matching has been once considered as suitable, since this technique would allow researcher to use the case to evaluate the predicted propositions. However, this technique is meant to be used for propositions with independent and depend variables and more relevant for explanatory and descriptive case studies (Yin, 1994). As this case study has been identified to have both characteristics of exploratory and descriptive case studies, the mentioned analysis technique does not seem to suit our research purpose. In summary, the theoretical framework will be used as the framework for analysis. The results of analysis will be presented in chapter 5.

4.5 Discussion and conclusion

The whole results will be discussed to evaluate how the theoretical framework works. All the elements of the framework will be discussed systematically in order to address the most relevant ones based the results from analysis. Some elements might be excluded from the theoretical framework, some new elements might be added and some elements will be pointed out to be critical ones, while the reasons of excluding, adding and ranking will be discussed. Finally the theoretical framework will be modified and transformed to the framework for lean opportunity analysis of fashion supply chain.

Some unexpected findings, especially regarding the current fashion supply of small- and medium-sized fashion retailer which researcher is not familiar with, will be included in discussion part as well. Because this might inspire new research ideas. Implications of the findings, limitations of the research and suggestions for future research will also be discussed. Implications of the findings will include implications for both fashion retailers and academic researchers, so that both parties will not get confused when reading this thesis.

The conclusion part will include overall assessment of this research. Key findings will be presented and assessed with the research purpose. The research purpose will be discussed in the light of the final framework. This research, which been defined as exploratory research, will probably provide some new understandings and address interesting ideas for future research.

4.6 Evaluation of quality

Research design or the overall research process use a logical set of methods to provide results and conclusions. The quality of any research design could be judged (Yin, 1994). Four tests have been proposed by Yin (1994) in order to judge the overall quality of the research designs: Construct validity, internal validity, external validity and reliability. Internal validity which is about causal relationships is only for explanatory or causal studies (Yin, 1994), and is therefore not considered in this research. The other three tests will be discussed in the coming paragraphs.

Construct validity

Construct validity is measured by how correct the established operational measures in the case study are for the defined relevant concepts. ‘‘People who have been critical of case studies often point to the fact that a case study investigator fails to develop a sufficiently operational set of measures and that ‘’’subjective’’’ judgements are used to collect the data.’’ (Yin, 1994, p.34). It is hard to collect objective information. Leaders are reluctant to share objective information with researchers (Choi and Liker, 2002).

Three tactics has been proposed by Yin (1994) to increase the construct validity: the use of multiple sources of evidence, establish a chain of evidence and key informants should check the draft case study. Data collected should be reviewed by key informants in order to ensure the overall quality and accuracy (Yin, 1994). Additionally the choice of operational measures for the relevant concept should be clearly explained, so that the reader understand exactly why the researcher use these particular measures. In this research, data has been collected from two informants and case study draft has been reviewed by the key informant.

External validity

External validity is in what extent the finding of a case study could be generalized and applied in a broader domain. In this research it is about the extent of the modified framework could be applied in other fashion supply chains or, even broader, supply chains. Critics from other researcher regarding external validity of case studies are often about the generalization of case studies. Statistical generalization has been focused on by these researchers rather than analytical generalization. Analytical generalization generalizes the empirical observation to theory which could apply to situations based on relevance of similar concepts, while statistical generalization emphasizes on generalization of the observation in a sample to the whole

population. However, according to Yin (1994), surveys rely on statistical generalization while case studies rely on analytical generalization and replication logic should be used here rather than sample logic in case study. Sample logic is viewing the case study that either consists of single or multiple cases as a sample in a population. “This analogy to samples and universes are incorrect when dealing with sample studies.” (Yin, 1994, s.36).

Replication logic should be used as tactic here. A theory must be teste with more than one cases (Yin, 1994). This is considered to be a shortage of our research that only has single-case study. However this research is meant to be exploratory research, as it has been argued in the part of research strategy, it will not be any concluded theories which is in the case of conclusive research or explanatory case studies.

Reliability

Reliability is in what extent the research findings will remain the same if the research operations is repeated by another investigator. The errors and biases in a case study should be minimized. A common method is to makes as many operation steps as possible. The detailed description of instrument, the procedures and general rules used in case study is an essential tactic to increase the reliability. Another tactic proposed by Yin (1994) is the development of database. These tactics has been considered in this research in the form of detailed description of the whole research process. Data collection and interpreting has been carefully treated. Interview guide and other relevant documents will be added in the appendix.

In summary,

5 Description of the case company and its supply chain management

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This chapter has been written based on the collected data and functions as a base for analysis of lean opportunity and lean implementation. I will first present some basic information about the case company, BOGART.COSMO. The basic information will probably give you a image of BOGART.COSMO as a company. Then the main part of this chapter is how BOGART.COSMO manage its supply chain currently, by describing how BOGART.COSMO works with their customers and suppliers. Operation will also be covered, because the sales staffs are working directly with customers and the way the store is managed is affecting their relationships with customers in the case of fashion retailers.

5.1 Historical background

BOGART.COSMO AS, ESTABLISHED 1985, is a Trondheim based fashion retailer and has its multi-brand flagship store in the downtown of the city. BOGART.COSMO is claimed to be one of the biggest multi-brand fashion stores in Europe with an area of the single store of 1200 square meters. The company is proud of to provide fashion consumers in Trondheim area a wide selection of high-end fashion merchandise, mainly clothes.

We have to go all the way back to 1905 in order to address the origin of BOGART.COSMO. The family Klein created and owned the brand ‘‘Tiger of Norway’’ and operated the company until 1970s. Somehow the family started a new path, BOGART AS was established in 1985 and opened its first boutique BOGART one year later. HUGO BOSS boutique was opened by the family in 2000. In 2003 HUGO BOSS boutique was reorganized and changed to the new brand name COSMO. BOGART and COSMO were merged to BOGART.COSMO AS and moved to their flagship store as where they are operating today in 2014.

5.2 Organization structure

The company has 19 (21, two new, need to confirm that!!) employees today. Because of the size of the company, like other typical SMEs, managers and employees are working across the different functions within the company. The general manager, Cecilie Klein Reinertsen, is also working as the head of finance and purchasing department. Fredrik Tjernsbekk is the

head of human resource department, HSE (health, safety and environment) department and sales of menswear. Even though the company has not clearly defined the typical functions, for instance marketing, sales, human resource etc. After the interviews I could define seven most important functions for BOGART.COSMO. Figure 18 below presents how the functional organization structure of BOGART.COSMO build up:

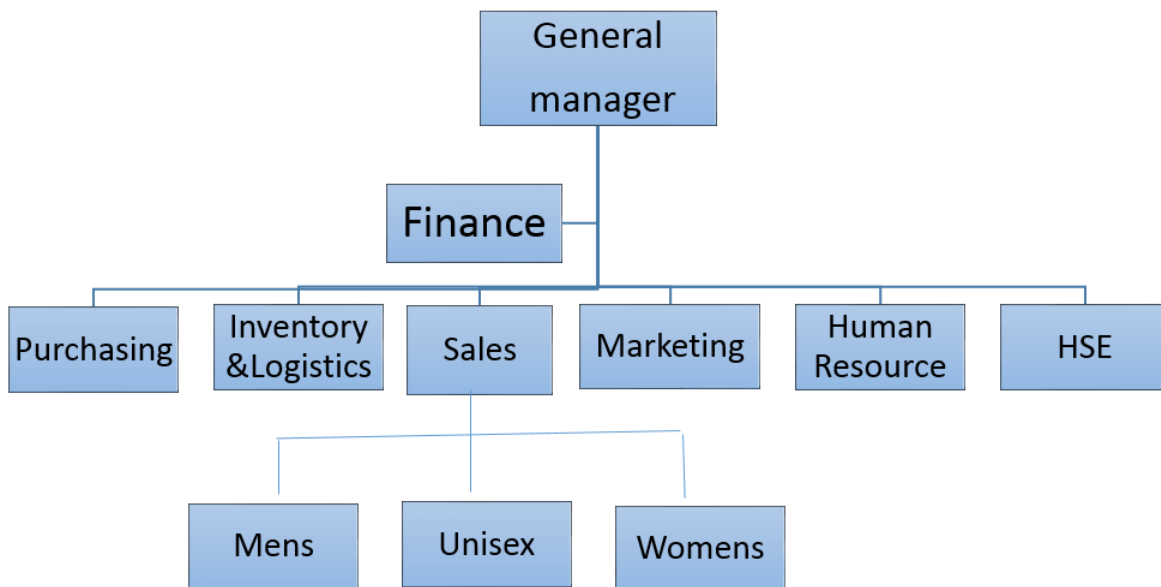


Figure 18: Organizational structure of BOGART.COSMO

Functions like maintenance of store, accounting and tailoring are not showing on the organization structure, because these functions are outsourced to other company that has the right expertise. Sales department is absolutely the biggest department among the seven departments. Even through the general manager works in the store sometimes and sells merchandise to the consumers when she gets time from other working tasks. Some employees in the company is bound to more than one department. All the 19 employees are part of sales department where some of the sales staff only work with selling products at the sales department and others are also working with other tasks at the same time. For instance, two employees who have the main responsibility for marketing are working as sales staff. Reason for many employees has to deal with multi tasks is that working load in all the presented functions are not heavy enough to have one or more employees to work full time. This will be a waste for the company to have a full time position for HSE, marketing etc. Other departments than sales department have usually only 1 - 2 core staffs. Because of the size of

the sales department, it is further divided in 3 sub departments: Man, woman and unsex. Mens department is selling fashion merchandise for men and womens department is selling fashion merchandise for women. Unisex department is a very small department if we consider generated revenue per department and is selling products such as books, chocolate and other small items that suits for both genders.

Cecilie Klein Reinertsen, the general manger, is leading the department of purchasing. The department of purchasing makes the purchasing decisions by sending a purchasing team to the suppliers. The purchasing team is formed of Ms Klein Reinertsen and representatives from department of sales. The representatives are selected depending on which suppliers and what type of products they are planning to purchase. For instance if the company want to purchase bags from Mulberry, then a representative from womens department and has sufficient expertise is selected to join the team. Ms Klein Reinertsen is usually always in the purchasing team, since he is the head of the department of purchasing and need to control the budget.

5.3 Products and service

BOGART.COSMO does not have its own apparel label or production. The company is focusing on retailing high end fashion goods from different brands from Norway and overseas, such as Mulberry from London, Marc Jacobs from New York. Today BOGART.COSMO is presenting 61 brands in their store. The merchandise that consumers could find in BOGART.COSMO store are of very diversified product categories: clothes, shoes, bags and other accessories, underwear, skincare products, jewelry, tech accessories (phone case etc.), perfumes, books and chocolate.

Among the many product categories, the category of cloth is the biggest one among different product categories. Clothes of the classic style has always been the core style for BOGART.COSMO. Additionally the more modern, clean cut, simplism styles and the newest fashion trends are also presented in the store as BOGART.COSMO want to provide a wide collection for its customers.

5.4 Business strategy

Even BOGART.COSMO has not clearly defined the values for the company, I could somehow extract the fundamental values for BOGART.COSMO from the interviews I had

with Cecilie Klein Reinertsen, the general manager of BOGART.COSMO. The fundamental values for the BOGART.COSMO could be described as: Respect, attention and quality. Those three values have been mentioned and explained most when we talked about the history of the company and their business strategies during the interviews. These three values have also been noticed during direct observations of how the sales staff are treating the consumers in the store. All BOGART.COSMO emphasizes on both the excellent quality of the products that the company offers and the customer service. Sales staff greets and pays attention to all the customer in the store in case they need some guidance or advices. Every customer's question or requirement will be treated with respect.

According to Ms Klein Reinertsen (2016), to provide individual consulting for the consumers, high product quality and great service has always been the most important strategy for BOGART.COSMO since 1986, together with shopping experience. Ms Klein Reinertsen (2016) emphasizes the importance of customers' satisfaction during the interviews and propositioned that BOGART.COSMO want to make their customers satisfied both when they are shopping in the store and when they wear the products on.

Both quality and quantity is important to sustain the competitive advantages. Quality is the design, fabric quality and manufacturing quality of the merchandise in the store. Quantity is the sales volume of a particular product or brand. Some products that is predicted to have very big sales volume is not having proper quality. At the same time, products of excellent quality are not necessarily going to sell. Either they are way too expensive or the design makes sense for very few of the local customers. Products of poor quality and high sales volume will negatively affect the perceived store image of BOGART.COSMO. A tradeoff of between quality and quantity is essential for success.

The management team is aware of their social responsibility as an enterprise, even though their liability to help the society is quite limited due to their size. As a SME, BOGART.COSMO is doing the best of what they are capable to do with their social responsibility. For instance, according to Ms Klein Reinertsen, BOGART.COSMO has been helping unemployed people introduced by NAV (Norwegian Labour and Welfare Administration), so that he or she could have relevant work experience. Environmental friendliness of products is concerned by BOGART.COSMO when they select supplier.

5.5 Marketing

The store is located in the downtown of Trondheim which naturally brings high human traffic to the store. Two big show windows are exploited to promote the new merchandises in the store. New concept and design is brought out in the show windows every 15th weeks.

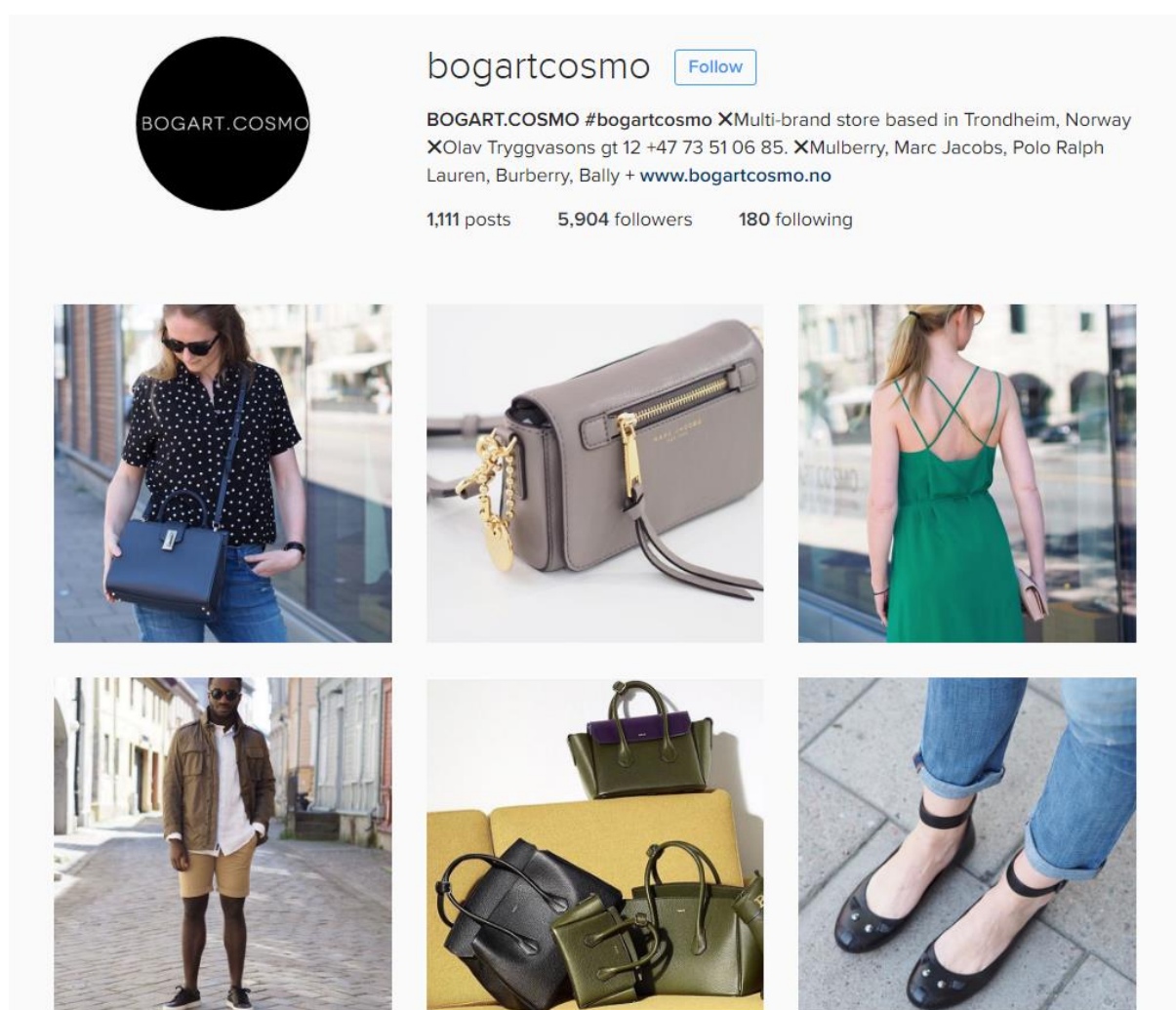


Figure 19: Profile of BOGART.COSMO on Instagram (instagram.com, 2016).

BOGART.COSMO has its own website, <http://www.bogartcosmo.no/>, where people could find information about the new arrived goods, the employees, and inspirations for personal style. BOGART.COSMO has also been actively using social media, such as blog, Instagram and facebook, for promoting. On Instagram BOGART.COSMO has about 6000 follower which is very many when we consider that Trondheim has only a population of approximately 180 000. Their instagram profile is updated every day to hold a close relationship to their followers.

5.6 Operation facility: BOGART.COSMO Store

BOGART.COSMO is currently operating in a store of 3 floors and the total area is 1200 m² (1000 m² for sales operation and 200 m² for inventory and office). Three sales departments are separated from each. If you are a consumer arriving at the store, you are entering the entry on 1. Floor where they sell casual menswear and unisex merchandise. Unisex merchandise is only a very small section of the total merchandise and is placed in the corner next to the escalator on the 1.floor. You will find formal menswear at the 2.floor and womenswear on the basement floor. Two huge show windows are at the 1.floor. Décor and merchandise in the show windows is changed based on the current selling season. The music played on all the three floors are the same. The décor and atmosphere on each floor is quite different. Table 6 explains in detail how the environment on each floor is:

Table 6: Description of shopping environments in BOGART.COSMO store

Floor	Shopping environment description
<p>2. Floor</p> <p>Formal menswear</p>	<p>The 2.floor has a more masculine look with shelves and 3 fitting rooms in the colors of dark grey and metallic grey. The space is very open and all the merchandises are well organized mainly depending on the brands.</p> <p>There is a meeting area with sofa and coffee table in the middle on 2. Floor, it is designed for personal consulting, because the formal menswear on the 2.floor has higher unit price. Volume of the music is low to ensure smooth communication between sales staff and customers. The meeting area is also used when BOGART.COSMO is getting visitors as well.</p>
<p>1. floor</p> <p>Casual menswear and unisex merchandise</p>	<p>The 1. Floor has a more relaxed look, the shelves and 3 fitting rooms here are of the colors of mood yellow and white. It has been placed much more merchandise on the 1.floor, so the space is not as open as on the second floor.</p> <p>Volume of the music here is louder than 2.floor and basement floor. There is often more consumers on the 1.floor than others.</p> <p>Merchandise are organized mainly depending on category. There are shelves for jeans, jackets, sportswear, hats and scarfs, socks and underwear, etc. There is also a ‘shop in shop’ on the 1.floor for Polo Ralph Lauren which has it own décor style.</p>
<p>Basement floor</p> <p>Womenswear</p>	<p>Womens department has a soft and feminine atmosphere, the shelves are of pure white and the 6 fitting rooms has the color of lilac. The space is not as open as 2.floor, but more open than 1.floor.</p> <p>Shoes, accessories and bags has their own shelves. Other merchandise are organized neither depending on brands nor depending on categories, except products from Polo Ralph Lauren and Burberry which has their own shelves. According to the sales staff they are placing a particular product where they think the product will fit in with styles of other products on the same shelf.</p>

BOGART.COSMO has its offices on the 2.floor and only employees has access to the office area. All the administration affairs are going on here. For instance schedule the shift work, managing the documents of the arrived product batches, pricing and printing price tags, meetings etc. There is a mini kitchen and a coffee machine next to the meeting room in the office. The meeting room here is also used as a lounge for the employees, where employees could have some foods and enjoy a cup of coffee.

The store has two types of inventory solutions: storage rooms and inventory in boutique. Most of the inventory is placed in eight separate small storage rooms, two on 2.floor, four on 1.floor and two on basement floor. BOGART.COSMO has a plan to build one more storage room by exploiting a room that is current used for disposal of wastes. Storage in boutique is exploited on 1.floor and basement floor. In the bottom of some shelves there is made drawers which has quite big space for storage of inventory. In the most cases, the storage under the shelf is used to store the same merchandise as the merchandise on the shelf.

5.7 Supply chain of BOGART.COSMO

The size of the case company is relatively small compared with their main supplier, for instance HUGO BOSS, according to the company's website, has approximately 14 000 employees and a revenue of 2.8 billion EUR. (<http://group.hugoboss.com/en/group/about-hugo-boss/group-profile/>). Thus my case company could not have big impact on very upstream joints of the entire supply chain (fiber and yarn production and fabric production). Therefore in this research we are not considering the fiber and yarn production and fabric production in the upstream. We are focusing on the process of purchasing between BOGART.COSMO and its direct suppliers and relationship between BOGART.COSMO and its customers.

5.7.1 Supplier base

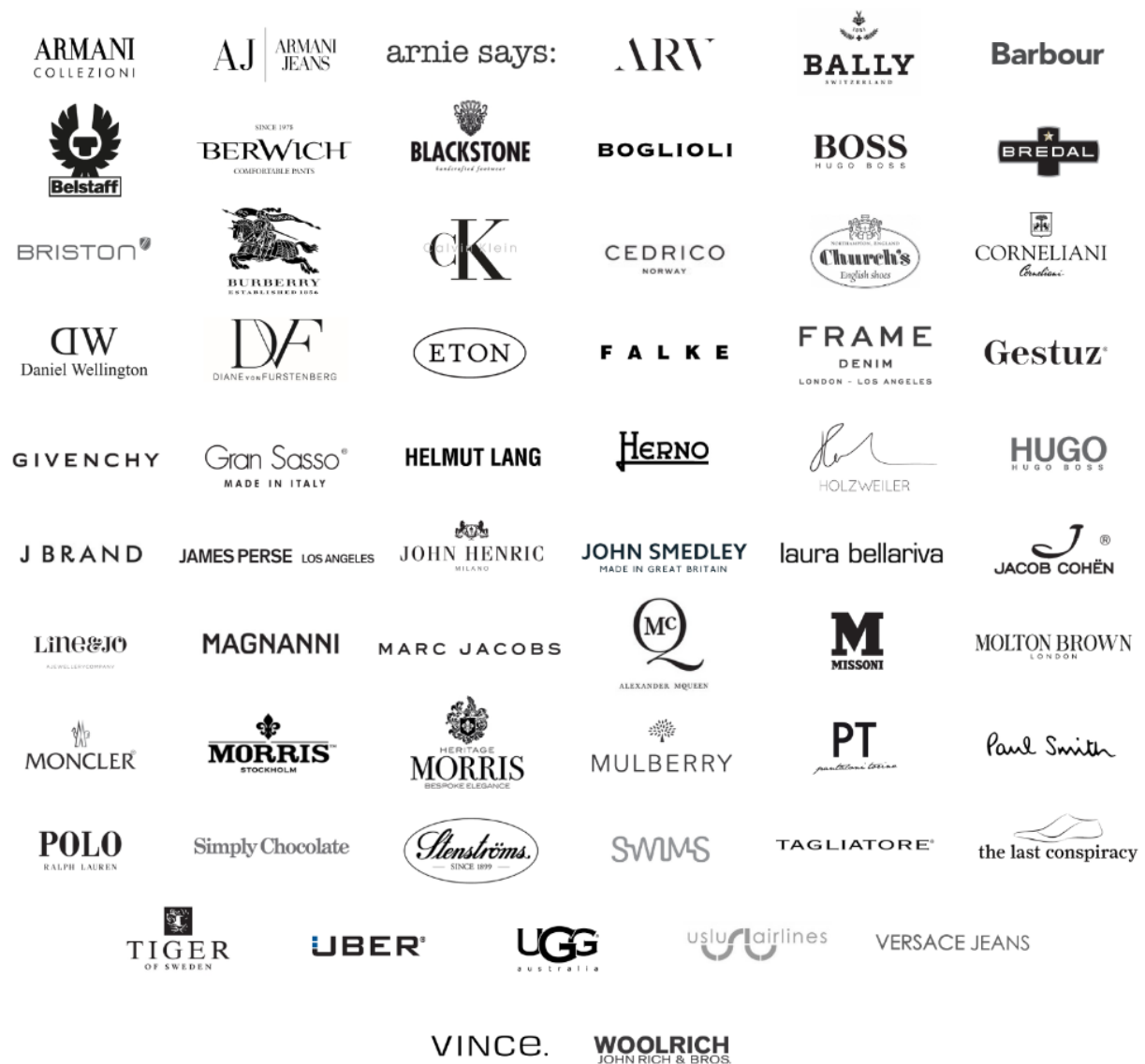


Figure 20: Suppliers of BOGART.COSMO (bogartcosmo.no, 2016).

The suppliers for BOGART.COSMO are different fashion companies from Norway and foreign countries. BOGART.COSMO is currently selling products from 61 suppliers. It will be a too heavy task if I go through each of the 61 relationships and many of the relationships share the common characteristics (Klein Reinertsen, 2016). Table 7 shows the list of 7 important suppliers for BOGART.COSMO based on interviews. The selection criteria for a supplier to be identified as an important supplier is the image of the supplier in the perspective of fashion consumers (brand) and sales volume of the supplier. These 7 suppliers have been picked by general manager of BOGART.COSMO during the first interview.

Table 7: The 7 most important suppliers for BOGART.COSMO (hugoboss.com, 2016, ralphlauren.com, 2016, lvmh.com, 2016, icgroup.net, 2016, mulberry.com, 2016, burberryplc.com, 2016)

Company name	Country of origin	Location of sales office	Number of employees (2015)	Number of purchasing per year
HUGO BOSS	Germany	Copenhagen	13764	2
Polo Ralph Lauren	US	Stockholm	25000	4
Marc Jacobs	US	Paris	1300	4
Tiger of Sweden	Sweden	Oslo	1042 *	4
Mulberry	UK	London	1300	2
Uber	Norway	Oslo	4**	2
Burberry	UK	London	11000	4

*This is the number of employees of IC group that owns the brands ‘‘PeakPerformance’’, ‘‘Tiger of Sweden’’ and ‘‘BY MARLENE BIRGER’’.

** This data is collected by sending email to Uber.

As we could see, the suppliers varies both in size and country of origin. Some of them are among the most successful and leading luxury companies, such as HUGO BOSS, Polo Ralph Lauren and Burberry. On the other end, Uber is a company that was established in 2009 and only has 4 employees. Between the two poles, there are companies like Marc Jacobs, Tiger of Sweden and Mulberry. This sample of suppliers could somehow represent and give an insight of how some BOGAR.COSMO works with its suppliers.

HUGO BOSS and Polo Ralph Lauren have their sales office in Copenhagen and Stockholm for Scandinavian customers. Tiger of Sweden and Marc Jacobs have their agent sales office in Oslo and Paris. Uber is an Norwegian domestic supplier and has its headquarter in Oslo. Mulberry and Burberry are British brands and have their own sales offices in London. Since the location of the sales office is so diversified, BOGAR.COSMO has to visit all the different cities for purchasing. The process of purchasing will be described in detail later on.

5.7.2 Customers

BOGAR.COSMO is conducting a B2C (Business-To-Consumer) business. Their direct customers are the individual consumers. The targeted customers of BOGART.COSMO are the fashion consumers in Trondheim area who are into high end quality fashion goods. The core customer group are the consumers of age 35 to 55. Those consumers are usually the ones who have worked some years, settled down and have a stable income. Consumers under the age of 35 are either still in education or in the beginning of their career. But one trend that BOGAR.COSMO has experienced is that there are more and more younger consumers in their customer list. One possible reason is that more and more young consumers are more aware of brand, quality and style.

5.7.3 The process of purchasing

As seasons change through the year, consumers need different type of clothes. Fashion companies design their new collections based on the characteristics of the seasons and the newest trends in fashion. BOGART.COSMO has four selling seasons to deliver the newest design from the fashion companies to its customers where two of them are the main seasons. The main selling seasons are more important considering how much BOGART.COSMO purchase from their suppliers for these two seasons. Arrange the four selling seas based on time line, we will have: Spring-Summer (January – March), High-Summer/ Pre-Fall (April-June), Fall-Winter (July-September) and Pre-Spring (October – December). Spring-Summer and Fall-Winter are the main selling seasons.

About 6 months before the selling season, the purchasing team travels to their main supplier to select products for the selling season. Oslo, Stockholm, Copenhagen, Paris, Milano and London are the cities that the purchasing team visits mostly. As explained in the section of organization structure, the purchasing team has usually 2-3 members. The general manager is the leader of the purchasing team, and other team member(s) is selected based on their expertise on the brands they are going to purchase.

Before the purchasing team goes to one particular supplier, an appointment should be agreed with the supplier. The reservations are usually made through emails. A sales staff is assigned by the supplier to the purchasing team when the purchasing team arrives at the supplier's sales office. The whole meeting with the sales staff from the supplier usually takes 4-6 hours, during the meeting they purchasing team visit the supplier's show room, go through the

products that the supplier has to offer and make purchasing decision. How the meeting would be like depends on how the sales staff is. Some sales staffs are more knowledgeable than others. It is good to have a sales staff from the supplier who the purchasing team is familiar with.

Historical sales data from the same selling season last year was one of the determinant factors considered in the process of purchasing decision making. As fashion is changing all the time, the designs from the same brand this year could be very different from last year. The actual products and design that the supplier offers is one determinant factor as well. Then the question is how to judge if the designs are going to be popular or not. The purchasing team is judging the products and designs based on their experiences in the industry. Complaints from consumers are also very important to consider. If it occurs frequently defects of one type product from one particular supplier, then the obvious action would be reduce the total purchasing of this type product from the particular supplier. For instance shoes from Polo Ralph Lauren is identified to have quality problems, the amount of purchased shoes from Polo Ralph Lauren has been reduced while BOGART.COSMO is still purchasing a lot of other types of products from the brand.

It is a common requirement of a minimum amount of products from the suppliers if retailers want to buy from the particular supplier. The minimum is usually calculated in the dimension of money. Brands that have several product categories, there will be a minimum for each of them. For instance Burberry has a minimum for clothes and a different minimum for scarves. This might be a challenge for smaller retailers, but BOGART.COSMO does not experience this requirement as a problem.

The final step is to sign the contract and the contract often lasts only one selling season. BOGART.COSMO could decide when they want the products to be delivered. But the delivery period is often pretty long, around 2 months. So BOGART.COSMO cannot really control when the product will be received. In the most cases the suppliers will pay for the shipment and a third shipping agent is used to deliver the batches.

5.7.4 Supplier relationships

The interviews reveal that relationship between BOGART.COSMO and their most important suppliers usually share common characteristics. As explained in the purchasing process, all the contracts with suppliers are short-term contracts and last only for one selling season. It is

fully possible to pause the cooperation, when poor sales performance of one particular brand occurs or the collection from one particular brand seems to be boring for customers. In this case, BOGART.COSMO would justify the situation with the supplier to achieve mutual understanding. This implies that the cooperation is not terminated forever. New cooperation might be carried out if the supplier has improved their products and service.

BOGART.COSMO terminates cooperation very rarely, but when the cooperation does not work well and the supplier seems to be hopeless for improvement, termination is the only choice. Long-term strategic partnership and personal relationship are hard to be identified within the current supply chain of BOGART.COSMO. However there are small differences from supplier to supplier. These small differences will be described below.

Some suppliers have priority for their own retail stores and want to keep some designs only for their own retail stores. BOGART.COSMO could not select among the whole product range when dealing with this type of suppliers. Mulberry is one company that pursues this retailing strategy. Fortunately most of the suppliers offer the whole collection for BOGART.COSMO. Considering BOGART.COSMO has a long operating history, proper retailing facility and good financial performance which is essential for the supplier to receive payment on time. For instance BOGART.COSMO was one of the only two Norwegian retailers that was selected to sell the "Alice in Wonderland" collection from Marc by Marc Jacobs, because of the store has big enough space to present the whole collection.

Some suppliers send experts to the store to train the sales staff of BOGART.COSMO. The content of the staff training is the knowledge of the particular products and the culture and philosophy of the supplier as a fashion company. BOGART.COSMO do not always say yes to staff training initiated by the suppliers, since this requires commitment from BOGART.COSMO as well. It depends on the importance of the supplier and how busy the daily operation is.

BOGART.COSMO is the sole retailer for some popular brands in Trondheim area. For instance Mulberry, Burberry and Polo Ralph Lauren. However no formal contract is signed regarding this status. Take some examples, for the brand Polo Ralph Lauren, the view from BOGART.COSMO is that the cooperation has existed for a long time (since around 1990) and BOGART.COSMO built up "shop in shop" only for Polo Ralph Lauren (the only one among the 61 brands) in 2014. The "shop in shop" is designed and monitored by experts from Polo Ralph Lauren under construction process. This indicated the commitment from

both parties that would protect BOGART.COSMO's status as the sole retailer for Polo Ralph Lauren.

As 30 years pass away, a lot of things were changed. BOGART.COSMO experienced that their supplier has become more money-driven. Take the example of the relationship with HUGO BOSS, one of the most important suppliers for BOGART.COSMO. In the beginning of their history, the late 1980s, HUGO BOSS used to invite the purchasing team to dinner or other activities like playing golf. However nowadays, after they became a listed company, owned by many stockholders and become much bigger in size, the process of purchasing has been more 'professional' (less degree of personal interactions). This trend can be experienced with most of the suppliers.

5.7.5 Criteria for selecting suppliers

The nature of fashion industry that fashion and trends change all the time, some fashion companies might provide great collection one year and very bad collection the next year. New creative fashion companies are establishing and growing. Introducing products from the hottest fashion brands will attract more customers. There are several ways for BOGART.COSMO to discover potential suppliers. A lot of brands can be discovered by reading fashion magazines and attending fashion weeks. There are many other excellent multi-brand fashion stores out there in other cities, the purchasing team from BOGART.COSMO could be inspired by visiting those fashion stores. That is why BOGART.COSMO is arranging study tours for the purchasing team to for instance New York City to learn how other fashion retailers are doing their business. Network is also one important source.

After 30 years in the fashion industry, established personal networks would help the company with lots of issues, one of them is that the purchasing team from BOGART.COSMO could get suggestions of potential suppliers. The other fashion retailers often purchase brands that BOGART.COSMO does not purchase today and they have the direct sales data of those brands. The suggestions from other similar fashion retailers are often very reliable.

After identifying potential suppliers, the next step is to evaluate these potential suppliers in two dimensions: Store image and sale volume. Some brands could contribute to a better store image of BOGART.COSMO, but not necessarily will contribute much to the total revenue of the company. Somehow some brands could contribute in both dimensions and they are of course 'must have' options for BOGART.COSMO. But in many cases there is a tradeoff

between those two dimensions. Even some brands, for instance NIKE and Michael Kors, are already proved by other retailers to have big sales volume, BOGART.COSMO is not purchasing from them. Because these brands do not suit to the overall store image and cannot contribute to improve the store image.

The final step after the evaluation is contacting those companies which are evaluated to bring benefits to BOGART.COSMO and initiate cooperation. The long history, big business scale and good reputation of BOGART.COSMO will help the company to establish relationships with the new suppliers. Many suppliers have also been proactive to initiate cooperation with BOGART.COSMO by calls or emails. Ms Klein Reinertsen (2016) told that she often get inquiries from other suppliers. The same criteria, as selecting suppliers, will be used to evaluate these suppliers.

When BOGART.COSMO first introduces a new brand in the store, they would like to purchase a considerable selection from the brand. Then the brand will become visible and draw attention from the consumers when they present the new brand in the store. Otherwise nobody would clearly notice a new brand is introduced.

5.7.6 Customer relationship

BOGART.COSMO values its customers as one of the most important sources for competitive advantage. Every customer could be the ambassador of BOGART.COSMO. They talk to their friends and family about their shopping experience in BOGART.COSMO and this build up the reputation of BOGART.COSMO among local consumers. When the sales staff is selling the products, they are often only deal with one or two individuals. There are less stakeholders involved in the decision making of the customers. As described in subchapter 5.4, the high quality of products sold by BOGART.COSMO is a source for customer satisfaction. Sales staffs are trained to pay attention to every single consumer in the store and talk to them with full respect.

BOGART.COSMO provides great after-sales services to its customers, which significantly reduce the purchasing risk for fashion consumers. The quality of the products is usually very good. But BOGART.COSMO still get complaint of quality issue about once a week. The warranty of the products varies from brand to brand. Some brands, for instance Mulberry, are very good at after sales services. They repair the products even after the warranty and charges the customer only a small amount of money. However we have some bands, or instance

Armani collection, which are hopeless at after sales service even they charge a high price or its products. As explained in the section of supplier base, many suppliers are international suppliers. Some of them are tend to defend themselves with international laws such that they have the right to not repair the defected products which is caused by their poor manufacturing quality. In the latter case, BOGART.COSMO has to take the responsibility for repairing, providing new product or money back to customer which will cause loss in profit.

BOGART.COSMO covers the cost of repairing if the defect is caused by the manufacturers. In the case of that the defect is caused by the customer himself/herself, BOGART.COSMO chooses to no for return of products sold. But BOGART.COSMO would like to help the customer to repair the products if it is doable. The customer has then to cover the cost of repairing. BOGART.COSMO outsources the tailoring to a local tailoring shop in Trondheim.

BOGART.COSMO wants to develop regular and loyal customers through its service.

However 100% loyal customer does not exist. Unlike a B2B (Business-To-Business) business, in the business of retailing the relationship with the customers is often shorter. This is a challenge to maintain and improve the relationship with the customers. One action that has been taken is the customer club. As a member of BOGART.COSMOs customer club, the customer will receive emails and SMSs about exclusive offers and newsletters. The way to join the customer club is so simple as to fill out your name, email address and phone number on BOGART.COSMOs website. The customer club extends the relationship further, so the customers would be reminded that they have actually a kind of retailer-consumer relationship with BOGART.COSMO. More membership benefits than newsletter and exclusive offers, for instance collecting of shopping points and use them on your next purchasing, will be carried out if they can contribute to business performance.

Except from abstract relationships, there are existing material flow and information flow within the sunny chain of BOGART.COSMO. After knowing how BOGART.COSMO is managing relationship with its customers and suppliers, I am going to present how products and information are flowed throughout the supply chain of BOGART.COSMO.

5.7.8 Material flow

Products are delivered to BOGART.COSMO by different shipping agents. The transportation costs are usually covered by the suppliers. Majority of the ordered products will be delivered together, but it follows with small batches. The reason could be for instance there was quality problem and it takes time for the supplier to correct it, delayed delivery from the manufacturer

to the suppliers (in particular Marc Jacobs outsources its manufacturing in Asia), issue of wrong quantity etc.

Figure 21 illustrates the material flow for BOGART.COSMO. When the batches arrive at the store, they will be moved to the corresponding sales department, in particular menswear to menswear department and womenswear to womenswear department. When the batches arrives too early, BOGART.COSMO will treat them the same way as they arrive on time, but the supplier will get feedback to prevent this to occur again. When the batches arrive too late, the problem becomes bigger. If BOGART.COSMO still think the products still could be popular, they will negotiate with the supplier to get lower prices and keep the batches. If the selling season is almost over or BOGART.COSMO thinks that the products are not going to generate any profits, the batches will be returned to the supplier.

The boxes will be opened up in order to check the products hat the box contains matches with the information on the packing slip in quantity and quality (design, fabric, color etc.). If the quantity of some product are not the ordered quantity or the products are not the ordered products, the responsible supplier will be contacted by emails or phone calls in order to get the right orders. When both quantity and quality are without any problem, the packing slip will then be moved from the sales department to Mr Klein who is responsible for Inventory and logistics. He will input the data into the data system of the total inventory.

BOGART.COSMO will then pay for the received products to the suppliers.

The prices of the arrived products will be determined out based on a formula that BOGART.COSMO has or follow the suggested retailing price provided by the suppliers. The price tags with radio frequency feature will be printed out and delivered to the sales department. The small price tags will be put on the original labels of the products.

Then parts of the products will be moved the store while other parts will be moved to the storage. When some products arrived too early before the selling seasons starts, all of them are going to be stored in storage room until the right selling season arrives. How the products are going to be treated varies with product category and where they are in the house.

- In the store: Shoes and bags will be placed on shelves and the dust bags and shoe boxes are kept in the storage. Shoes and bags often have bigger space or themselves in the store. Some clothes (jackets, dresses etc.) will be putted on hangers and placed in the shelves, while some other clothes (trousers, shirts etc.) are folded up and placed on the shelves.

- In inventory: Shoes will stay in their corresponding shoe boxes and the boxes will be superposed on the floor. Bags will be in their dust bags and placed on shelves in the storage room after their brands. Clothes, like jackets and dresses, will be putted on hangers and placed in the shelves in different storage rooms. Other types of clothe (trousers, shirts etc.) are folded up and placed on the shelves. The clothes kept in ‘‘inventory in boutique’’ are folded up and placed in drawers.

Every morning the sales staffs will go through sales data from yesterday and replace the sold products with the same products from the inventory. If some products seem to be not attractive for consumers, they will be identified as products that need promotion. They could be moved to a new place in the store where more consumers will pay attention to or presented in the show windows to face a bigger audience.

Stocktaking is done 4 times within a year in order to get an overview over the amount of each product in the inventory. The stocktaking used to take very long time, the time required has been considerably shorter after the adoption of price tags with radio frequency feature. The staff does not to take it one product by one product. He/she just need to hold a scanning machine near the products both in the store and in the inventory, then the scanning machine will register the amount and type of the products. The result will not be accurate if we take the total amount of products purchased minus the total amount of products sold (in the case of theft). Merchandise that remained from the previous selling season will be marked down.

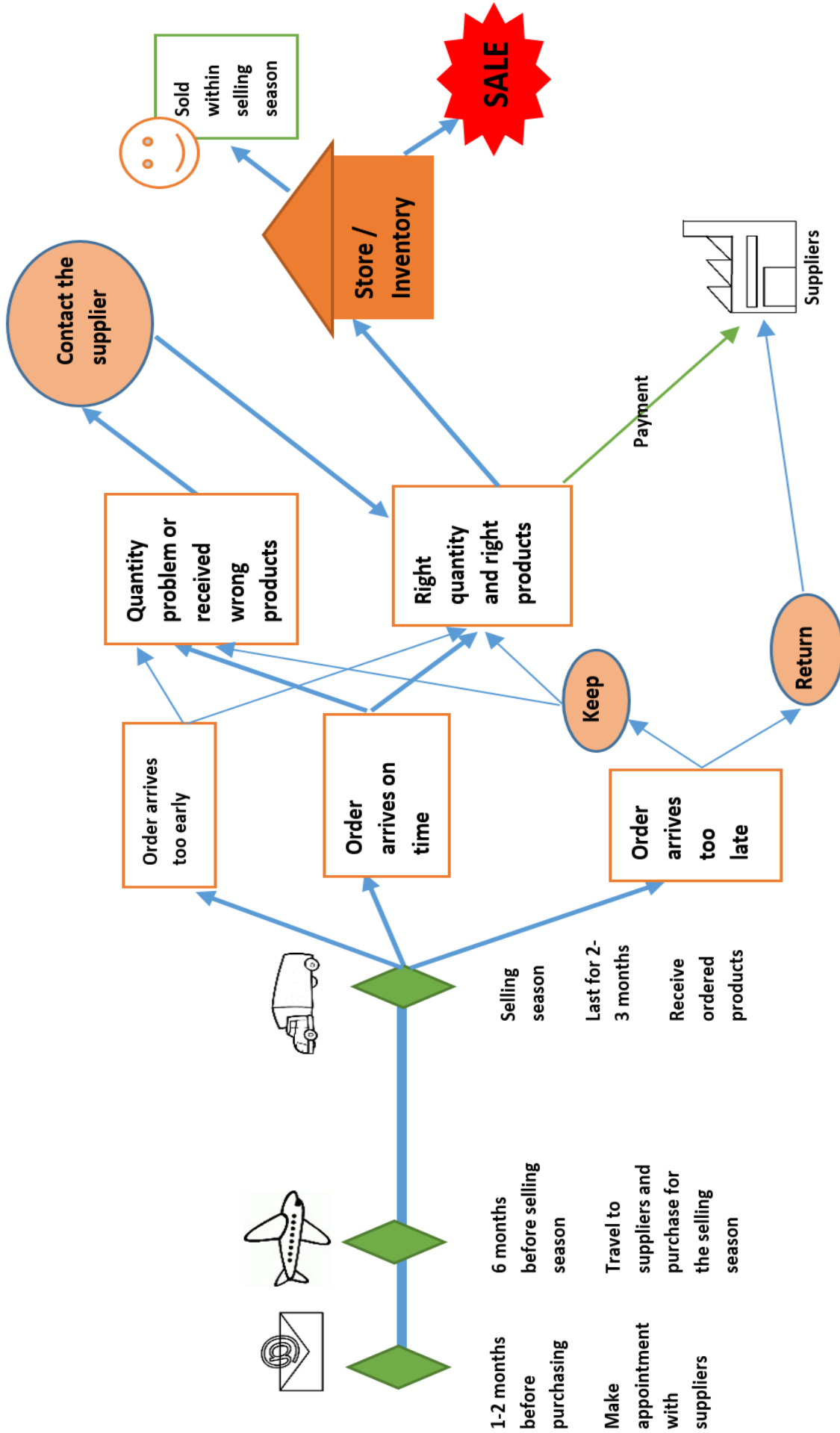


Figure 21:: Material flow of BOGART.COSMO

5.7.9 Information flow

Sales data is used by the purchasing team to predict the sales for the next same selling season. Meeting with supplier, negotiation and signing of contracts are done face to face when the purchasing team visits each of the suppliers as explained in the process of purchasing.

Mr Klein, head of Inventory and Logistics, contacts the suppliers if there is a quality problem or quantity problem by sending them emails or calling them, depending on the attribute of the problem. Quality problem is for instance when there is a complaint regarding defects from customers and is caused by the manufacturing which the particular supplier is responsible for. A quantity problem happens when the actual received products does not match with the packing slip or the ordered products on the contracts or the ordered products arrived way too late at BOGART.COSMO. In the latter case, BOGART.COSMO could choose to return the products or get a discount on the order by negotiation with the supplier. When the suppliers deliver wrong designs, BOGART.COSMO will keep the products if they found the product could be attracting or will return the products otherwise.

When a product is really popular and sold out, BOGART.COSMO will most likely to reorder the same product if the supplier still has the product remained in inventory. Some suppliers, for instance Polo Ralph Lauren, has a B2B website where Mr. Klein could log in, check the availability and order if the product is available. For other suppliers, Mr. Klein will call them to check the availability. If the product is out of stock on the supplier's side as well, BOGART.COSMO will choose to order nothing than ordering some similar products. Because there will be a risk that the similar product is no going to be as popular as the original product.

The data of the received products will be putted inn the data system. If everything standing on the invoice is good, Mr Klein will confirm them. The confirmed invoices will be collected in a binder and the binder will be sent to or picked up by the accountant once a week. The accountant is from the accounting company that BOGART.COSMO outsource its accounting to. Then the suppliers will get the pay. The suppliers require the payment has to be done within 30 – 60 days after receiving.

The works within the BOGART.COSMO is coordinated by regular meetings, emails, phone calls and direct speaking to the employee if they meet in the house. Members of the management team is having one meeting every week and staff meeting is held every 6th week. The whole company is rarely at work at the same time, staff meeting provides the opportunity

for improving cohesion in the company and discussion of important issues. If there is a message to the whole company or some particular staffs, the message are likely to be delivered in the form of email. Phone call is a very convenient option as well, especially when someone want to pass a message quickly to someone else.

‘‘Employee conversation’’ is carried twice a year with every single employee. This is the way for the general manager to talk about issues that is not suitable to discuss in the regular meetings with every single employee. The goal is to improve employee satisfaction. Outside the ‘‘Employee conversation’’, every employee could contact Fredrik Tjernsbekk (head of Human Resource) if there is any issue they want to discuss.

To sum up, the basic information and the most important business activities of BOGART.COSMO have been described in this chapter. The subchapter 5.7 illustrates how the current supply chain of BOGART.COSMO looks like and how BOGART.COSMO manages their current supply chain. The data from this chapter will be analyzed in the light of the theoretical framework in the next chapter.

6 Analysis and results

BOGART.COSMO is identified to be a SME, mainly based on number of employees in the company. Number of employees is considered as the most important dimension to measure if a company is SME (Siropolis, 1997). An enterprise with less than 250 employees is a SME by most definitions of SME (Ayyagari et al., 2007). BOGART.COSMO with its 18 employees is definitely a SME. Simpler organization structure and greater transparency in relations and transactions are typically characteristics of SMEs. But these characteristics do not mean it is simpler to manage SMEs (Curran and Blackburn, 2000). In this chapter, an analysis of supply chain management within BOGART.COSMO will be conducted in the light of the suggested theoretical framework from chapter 3. First and foremost, a value stream map of current state is required as a basis for lean implementation.

6.1 Value stream mapping

A value stream of a product is showing all the different activities that are required for a company to produce and deliver a product or service to the customers from phase of raw material or components. Some of the activities are value adding while others are not adding any value to the product at all. According to Myerson (2012), value stream mapping of current state should be considered as the first step for any lean implementation. A current state map visualize the whole value stream and forms the base for improvements (Rother and Shook, 2003, Braglia et al., 2006).

In the case of fashion retailers, they are receiving finished products from their suppliers and therefore no more manufacturing is needed. However they still need to prepare the products before they can place them in the store or in the inventory. In particular the sales staff need to check if the received products are the products that they have ordered, check both quality and quantity (where emphasis is on quantity), put on price tags and put the products (if the products are clothes) on hangers.

I used value stream mapping tools provided by Rother and Shook (2003) in order to map the value stream of a typical product category for BOGART.COSMO. The first step in value stream mapping is to identify a product family, according to Rother and Shook (2003).

Because in a production setting, the production activities along the value stream varies a lot from product family to product family. The situation is totally different for fashion retailers.

According to the head of Inventory and Logistics, they are handling all the received products in the same way. Therefore there is no need to identify a specific product family to draw the value stream. Because the value stream will look very similar anyway. Another deviation that has been made in the value mapping process is that some quantitative measures (such as lead time, takt time, demand and cycle time etc.) are not included in this case. The reason is that BOGART.COSMO cannot control which packages will arrive at the store at what time. Additionally what every package contains is not 100% sure either, sometimes all the ordered products from one supplier arrive in a package and sometimes an order could arrive in several smaller packages. Thus those quantitative measures vary very much from package to package and made them impossible to be calculated and included in the Current State Map (CSM). The quantitative measures, such as cycle time and up time, have then been eliminated in this case.

In order to draw the CSM, I need the information about how (quantities, frequency, shipping methods, lead time etc.) the products are picked and delivered to BOGART.COSMO, how the inbound logistic and inventory in the BOGART.COSMO store work and how BOGART.COSMO deal with excess stock or stock out, how the products are delivered to the end consumers. As Rother and Shook (2003) suggested I took with med pencil and paper in order to draw by hand, so that I can draw a brief value stream map without delay. I was guided around by the head of Inventory and Logistics around the offices, stores and inventories. I wrote down the detailed information while we walked around. The value stream mapping started at the last joint, customer joint, and moved upstream to receiving of products. This way of drawing ensure that we care taking our standpoint from the customers' perspective, because the retailers should identify and maximize the value for consumers. Understanding the whole flow is vital for mapping accurately and one person should draw the whole map (Rother and Shook, 2013). Thus I took the whole responsibility for mapping the value stream. After the direct observation round, I get very detailed explanation from the head of Inventory and Logistics on some activities in the value stream that appears confusing for me.

I used software SmartDraw which provides the right icons for value stream mapping to draw the value stream. A Current State Map (CSM) is drawn as the basis for lean improvements. Figure 22 show how the CSM look like for BOGART.COSMO:

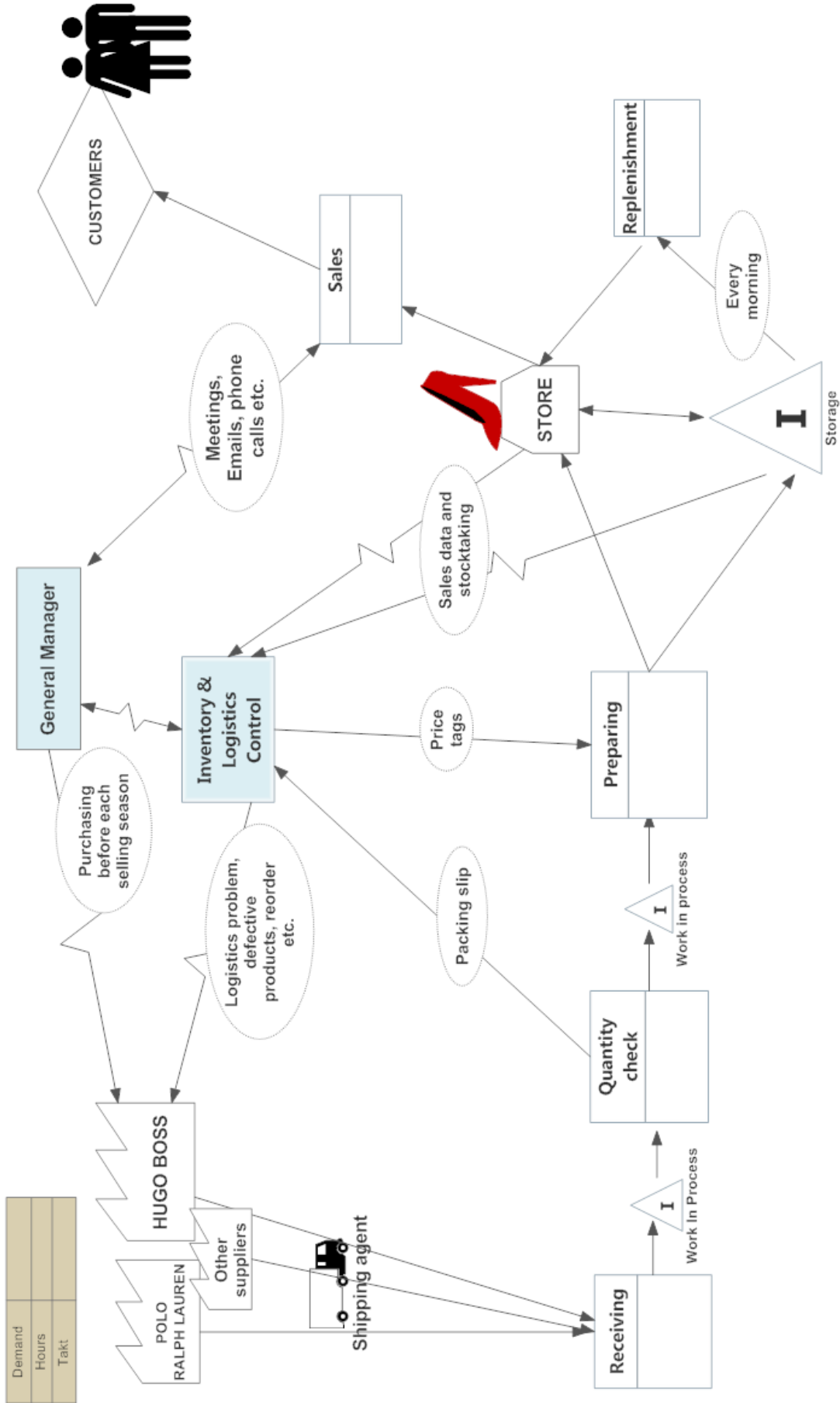


Figure 22: The Current State Map of BOGART.COSMO

This CSM somehow reflects the material and information flow which has been described in subchapter 5.7. The CSM and the detailed description of how BOGART.COSMO is managing its supply chain (in subchapter 5.7) form the current supply chain management ‘AS-IS’ for identifying areas for Kaizen (where lean opportunities are). The coming subchapter will present some interesting AS-IS situations, discuss how the areas for Kaizen are identified in the light of theoretical framework and which lean management methods should be applied in order to achieve lean management of fashion supply chain.

6.2 Lean opportunity assessment

Lean opportunity assessment is designed to reveal which particular functions or areas of the management in an organization should be targeted for lean transformation (Myerson, 2012). The reason is that those functions are identified to contain wastes. There are different types of lean opportunity assessment that have been developed. In this case study, I used the one developed by Myerson (2012) to identify the areas in the supply chain management of BOGART.COSMO. Because this opportunity assessment is especially developed for lean management of supply chain while many other lean opportunity assessment is developed only for some specific functions, for instance production function.

The assessment used Likert scale to measure different areas of the management in an organization should be targeted for lean transformation, for instance visual systems and workplace organization, mistake proofing, supply chain management etc. This assessment has been designed and is most suitable for assess the supply chain of manufacturers. Some elements of the assessment are not relevant for fashion retailers at all. However most elements of the assessment has been evaluated to fit supply chain of fashion retailers as well. One example is visual system which might help every kind of organization to become more efficient. You can find the selected part of the assessment in the appendix.

The lean opportunity assessment is answered by the general manager of BOGART.COSMO. Base on the answer. Some areas within the management have been identified and ranked. The result reveals that BOGART.COSMO should work with ‘Customer communication’, ‘Supply chain management’ and ‘Standardized work’. These three areas received the lowest average score which indicate that they should be prioritized first for lean transformation. Other lean opportunities, ‘Quality at source’, ‘Kaizen culture within the

company” and “Visual management”, received higher scores, but still have room for improvement.

6.3 Areas for Kaizen and identified lean management methods.

The heart of lean philosophy is to minimize total cost by eliminating wastes (Jaca et al., 2012, Womack and Jones, 1996, Myerson, 2012, LeanEnterpriseInstitute, 2016, Lukic, 2012).

Wastes could be existing anywhere along the fashion supply chain to BOGART.COSMO. We have to identify wastes before eliminating them. We are going to look at the three joints of fashion supply chain by following the theoretical framework.

6.3.1 Customer joint: Identifying customer values

This subchapter will focus on the customer joint in the supply chain Of BOGART.COSMO, including their customers and the relationship between BOGART.COSMO and customers.

AS-IS

Based on description of focused customers of the case company, how the case company predicts demand and the result of “lean assessment opportunity”, a lack of standardized procedure to identify customer values has been detected. The only data used for predicting the market demand in the future is the sales data. Another important source for predicting is the experiences of members in the purchasing team. Sales data could be a reliable source for predicting market demand. However no concrete approach has been designed within BOGART.COSMO in order to interpret the sales data. This decreases the reliability of the predicting results. Lean opportunity assessment reveals that there is not developed a standard procedure for collecting customer satisfaction information and data. Lean opportunity assessment also showed that BOGART.COSMO has very little collaborative planning activities with customers in forecasting and replenishment.

Analysis

Characteristics of fashion industry and luxury fashion consumption tells us the purchasing decision making of fashion products are high impulse and different consumers emphasizes on different values of fashion products. The different values are for instance, social value, perceived conspicuous value, quality value etc. These factors should be considered when

identify values for targeted customers. Brand is one of the central concept in fashion industry and BOGART.COSMO is retailing over 60 different brands. What do the customers think about those brands? Do they consider those brands in the same way as the members in the purchasing team? Brand equity could provide a basis for evaluating which aspects of brands the local fashion consumers emphasize.

An activity which has been identified as a non-value adding activity is not contributing to the value in the perspective of the end costumers, not in the perspective of the fashion retailers. The value even varies from customer to customer. Value adding activities for some customers are wastes for some other customers (Melton, 2005). Following lean principles, companies should take care of customer inputs and feedbacks. Because there is no meaning to increase productivity when the customers need only half of the amount that the companies provide. In the case of fashion retailer, there is no meaning to serve all the shoppers when the service quality drops for everyone you try to help. By clear identifying of customer values, it will provide the fashion retailers guidelines when considering new market opportunities.

Lean will not push products to market, but rather let the real market demand drive the production. An ideal situation within lean is to only produce what customer needs, otherwise the products will be a waste for the company. For instance the marked down merchandise increase the inventory cost and generate very little profit (sometimes no profit). Lean supply chain is pulled from customers. In the case of fashion retailing, this could be hard to execute in practice, due to one of the main characteristics of fashion industry, high impulse purchasing. Most customers want the products at once and the purchasing decision is made when they see the features of the real product. However, many luxury brands accept orders from consumers, in this case the piece will be extremely expensive. In the case of BOGART.COSMO, this approach cannot work as an overall strategy for every product, but might work for few items which have very high unit prices, for instance a bag from Mulberry which in average costs over ten thousand Norwegian kroner. Base on some of the values that affect luxury fashion consumption, the consumers might tolerate to not receive the goods with once. Luxury brands, like what Louis Vuitton and Burberry, are currently offering customized products by putting hot stamp (designed by the customers) on the products. This strategy could differentiate the same products that many purchases and owns, thus strengthen the unique value of the products.

Sales data provides what customers have bought from the store, but how about the reasons for why some consumers decided to not buy some particular products? Are there some particular

causes that occur often? By identifying these root causes and solving them, BOGART.COSMO will decrease amount of marked down merchandise. This kind of data could contribute to identify values for customers as well. This kind of data could be hard to collect. But somehow when the causes are obvious or the consumers tells why they choose to not purchase, sales staff could input the reasons/feedbacks in data system. This type of data could be collected and form another base for further analysis, additionally to sales data.

BOGART.COSMO is doing business with local customers and their consumption behaviors are affected by the local trends, climate etc. The retailers should ‘ask’ directly what the customer values. Conducting surveys is a good method here and should be carry out to directly get feedbacks from customers. The survey could contain questions to collect data for, for example, which style the customers like the most, which features in some specific products do the customer emphasize the most etc. The surveys provides a reliable source for predicting the trends and demand of different products. This kind of data could be used to create suitable management strategy, and development of new products and services (Lukic, 2012).

The detailed data worth nothing, if they cannot be interpreted in an accurate way. A systematic approach for interpreting the data should be designed in order to accurately identify values for the customers and then predict the future trends and market demand. In order to develop the best approaches to meet customers demand, experts from different functions should sit together and have open communication and discussion, rather than the general manger take the decision alone. Parts of the products that BOGART.COSMO provides are basic products and demands are quite stable. Other products are more seasonal products which have short life cycles and strong fashion characteristics. Both quantitative and qualitative methods should be integrated in the approach. Quantitative methods makes the conclusion more reliable, while qualitative method deal with fashion trends that changes constantly.

When it comes to the relationship between BOGART.COSMO and their customers, social media have been actively used. Customers in the customer club will receive newsletters and invitations for exclusive events regularly. The sales staff are also trained to treat the consumers with attention and respect. I would like to have some theory of how retailers develop and maintain relationship with consumer from chapter 3, in order to find more strategies for building deep relationship with consumers. But unfortunately this kind of theory

has not been reviewed. Therefore strategies for how BOGART.COSMO could better build and maintain the deep customer relationship have not been suggested. This issue will further discussed in chapter 7.

TO-BE

There is a lack of standardized procedure to identify customer values in management of customer joint in the supply chain of BOGART.COSMO. ‘Identifying customer values’ should be incorporated and will help fashion retailers to better predict market demand in the future. Customer values should be identified in the perspectives of end customers. What do the local fashion consumers emphasize? Social value, shopping experience, price, unique value etc. A concrete standardized procedure to collect relevant data should be developed. For instance conducting surveys. This also requires a combined analysis approach (quantitative and qualitative methods) in order to interpret the data accurately.

6.3.2 Fashion retailer joint

This joint is where the operation and management of supply chain are executed. How the works are designed and coordinated direct affects the overall efficiency of the company. Five areas for Kaizen have been identified based on interpreting of the interviews, direct observations and result of lean opportunity assessment: Quality at source, visual management and workplace organization, standardization, lean procurement and Kaizen culture. The results of lean opportunity assessment indicate that standardization is the one which should have the first priority of these four areas for lean transformation. The direct observations show visual management and workplace organization and quality at source were not well presented in the company. Lean procurement is a difficult Kaizen area in the case of BOGART.COSMO, due to the power distribution between BOGART.COSMO and their suppliers. This will be further explained in subchapter 6.3.2.4. Kaizen culture which is a more abstract lean management method than the other four. Pursuit of perfection is one fundamental principle in lean. Lack of Kaizen culture has also been revealed by lean opportunity assessment, not in so high degree as lack of standardization.

The five areas for Kaizen are presented and discussed below. I present the five areas for Kaizen in an order there area with a broader domain will be presented later. The first two areas for Kaizen will affect the working environment and how the retailing operation is conducted. Lean procurement will mainly affect the purchasing function and how

BOGART.COSMO manages their supplier relationship. The last two areas for Kaizen, standardization and Kaizen culture, will affect every joint in the supply chain of BOGART.COSMO.

6.3.2.1 Quality at source

Fashion Retailers are not like manufacturers, the term ‘‘quality’’ relies in the service that fashion retailers provide. From the theories of luxury fashion consumption and store loyalty, shopping experience and store atmosphere are important factors which affect purchasing decision making, the perceived store image and customers’ loyalty toward a particular store. Both these two factors are affected by how the fashion retailer designs and executes the works.

AS-IS

The store of BOGART.COSMO is clean, well-organized and attracting compared with many other stores. Most of the retailed merchandise in the store are high-end products, thus I take the standards of luxury fashion stores to evaluate the overall service quality in the store. Based on the direct observations and interviews some quality issues have been detected: (1) Some products on the shelves have been unorganized and remained the same for 2 hours (or even longer, since the observation only lasted for 2 hours). (2) Price tags, small paper pieces and a hanger has been observed in two fitting rooms at the first floor and this issue is not detected by sales staff and fixed within the whole observation period (2 hours). (3) BOGART.COSMO eliminated a reward system which has failed without addressing the root cause of this issue. When these quality issues happen, they will strongly affect consumers’ perception of BOGART.COSMO as a high-end fashion retailer (brand equity of BOGART.COSMO as a brand itself for local fashion consumers). As the customers’ expectations are not fulfilled when they see unorganized merchandise on the shelf and a not so satisfying environment in the fitting room, their overall shopping experience and loyalty will be affected.

Analysis

After evaluating all the practical lean management methods, Jidoka (quality at source) is identified to be a suitable lean method to deal with this kind of quality issue. Jidoka indicates that quality should be assured at the source. When a quality problem occurs, the root cause of the quality problem should be addressed immediately and do not wait days before the group come together and discuss the causes of the quality problem. Quality at source within lean

production has been originally described for situations where machine make a mistake. Here we use the principle of the concept and move beyond to apply this management method to any quality problem that occurs within the business. For instance, just like we discussed, the problem of that a reward system which usually works in other companies does not work in our company.

If quality at source has been a management method and these mentioned quality issues will probably never happen again. After the first occurrence, the root causes would be found and a solution will be decided. Unlike in production facilities, the behavior of consumers in the store cannot be controlled. Consumers will check the merchandise and merchandise will be unorganized. The problem is that the merchandise should not stay unorganized for 2 hours' time, as this picture will strongly affect other consumers' perception of the store. The next time these issues happen, the solutions will be followed, then the issues will be quickly fixed and will not last for more than 2 hours' time. Lean management will find the origin of each mistake and never allow same problem to happen again, otherwise this will be an enormous waste for the business.

The general manager of the store will not be at the store all the time to check quality. In order to achieve quality at source, the manager should push the responsibility down to every employee. As I observed those quality problems, two sales staffs on the same floor are not dealing with any customers. They (at least one of them) have namely the time to solve the problem. The shelves where the quality problem occurred is not easy to observe, one solution could be that the sales staffs should identify these "difficult" areas and walk around the same floor every 30 minutes (for example) in order to discover unorganized merchandise or other types of problem. When these employees have responsibility, they will be more proactive to discover and solve defects. Managers should encourage and empower them to address any non-value adding activities that they see and that nobody else has noticed. They are the ones who knows how to do the works best. They will probably come with better solutions and ideas. Employees will feel more empowered and responsible. Their capabilities will be utilized in higher degree by giving them authority and responsibility.

The interviews revealed that BOGART.COSMO once tried to have a reward system, called "Seller of the month". However this attempt failed (this system unfortunately did not encourage the sales staff to become more proactive) and therefore has been eliminated, according to the general manager. People will easily return to old working habits when no specific rewards will be received by change the work behaviors (Mento et al., 2002). Reward

system should encourage employees to pursue better work results. Reward system has been identified to play an important role for companies to achieve their business goals (Cherrington et al., 1971, Stonich, 1984). Why does reward system which works well for other companies does not work for BOGART.COSMO? Is it because of the way BOGART.COSMO designed the reward system? Or is it because of the employees? This was a problem in the organization if no one was encouraged to be the best seller. What is the root causes for that no one want to be the best seller of the month? Instead of finding the root causes, BOGART.COSMO choose to eliminate the reward system. "Quality at source" indicates that this problem should be discussed and the root-cause should be identified in order to solve the problem. By adapting the concept of quality at source, identifying the root cause of why sales staff in BOGART.COSMO are not encouraged by the reward system, this situation could likely be fixed rather than the reward system has been eliminated.

TO-BE

Quality at source should be incorporated in the management activities, especially the everyday retailing operation. This will prevent quality problems, which are huge wastes, to occur again. Quality at source could also be combined with visual management in the case of BOGART.COSMO. This will be discussed in the coming subchapter.

6.3.2.2 Visual management and workplace organization

The store and offices are the workplace for the employees, since fashion retailers do not production facilities. Workplace organization is still very relevant for fashion retailer. Here is where all the employees work at and sales staff are dealing with the customers in the store. The store functions as the workplace for sales stags and shopping area for consumers.

AS-IS

Both the direct observations and lean opportunity assessment reveals the lack of visual management at workplace of BOGART.COSMO. The only one equipment which has been observed to contribute to visual management at the common workplace is a small bulletin board. Very limited information, mainly just the scheduling table for work shift, could be found on the bulletin board. There is also a very outdated notice from Christmas season on the bulletin board. During one interview, head of Inventory and Logistics came to the general manager to confirm if he was told to do some particular works (which he has been told to). This an example of lost information and this is confirmed in the last interview that lost

information happens. In another interview, head of Inventory and Logistics pointed out it will make his everyday routine more smooth and comfortable by having bigger workspace for him. He was sharing a same office with the head of human resource, thus there are two desks at that office room. At the same time, the head of human resource is not working at the office very often (he usually works at the store) and there are just a pile of diverse unorganized documents. This office room could be utilized in a more efficient way.

Analysis

Visual management and workplace organization have not been especially mentioned in the theory of fashion retailing. One reason might be that workplace organization in different industries share the common characteristics. Lean management methods, 5S method and visual management, has been identified to analyze these issues.

The interviews indicate that there could be troubles in the information flow within the company and might affect the management of supply chain when information flows too slowly, to wrong employees or is misunderstood. A good flow of information is essential for organizational learning as well (Shtub and Karni, 2010). Information flow through emails is used currently to make sure information will be delivered to the right employees and totally understood by them. Visual management is proved to enhance information sharing and contribute to achieve "zero lost information" and could therefore be a complementary method. By adapting visual management we could ensure that the most important information will be delivered to the right employees. One example of how visual management could contribute to better information flow is using a white board to inform the employees: what has been done, what are we doing and what are we going to do. When an employee leaves from work with some undone tasks, she/he could write it down on the white board to inform the employees in the next shift. The white board also helps every employee to get an overview of the activities going on in the house. The values of the company (which also should be developed) should also appear visually somewhere in the house, to remind the sales staffs how they should treat every single consumer. Readers might think that the employees could talk to each other "face to face" to communicate the working tasks and the sales staff could remember the company values, why are we making it more complex? That is because we are humans and we forget things easily when we have several tasks going on. Thus the whiteboard will always remind us what we should do next.

Visual management could also help white board to prevent quality problems which were discussed in the previous subchapter. These shelves which are difficult to observe could be drawn on paper and each floor could have their own version. Sales staffs could look at the paper in order to find out which shelves they should observe more carefully.

Most common wastes in retail business today are product defects, unnecessary motions, redundant employees, waste of time and excess inventory (Lukic, 2012). The common area for employees (kitchen, meeting room and office) are located on the second floor. When sales staff on the basement floor want have a cup of coffee during working hours, there has not been designed any proper facility to place their coffee cups. This situation has been observed on the first observation tour guided by head of Inventory and Logistics. Employees on the basement floor have to place their coffee cups and personal accessories on some random furniture in the small storage room next to the checkout counter. This might lead to quality issues, for instance when the coffee is spilled at some products in the same cramped storage room. This is observed in during one single observation, other similar situations might exist at other places in the company. Lean method, 5S, should be used to organize the entire workplace to reduce the chance for quality problems appear. I assume that one important reason for that this situation has not been changed for long time is that: it is totally acceptable for the employees the way it works right now. Thus this situation might also be prevented if the BOGART.COSMO adapt Kaizen culture which will be discussed later on. The issue of the narrow workplace for head of Inventory and Logistics will also be solved, if the workplace is better organized. For instance, take away the table for head of human resource (he is not using it anyway) and redesign the layout of the office.

TO-BE

BOGART.COSMO could incorporate visual management in order to ensure information flow in the house. Visual management also reminds the employees their working tasks and how they should behave in front of customers. 5S method makes workplace, office and storage rooms, more clear and orderly. A clear and orderly workplace will again contribute to that quality problems become more visible and thus improve the overall quality.

6.3.2.3 Lean procurement

The purchasing department within BOGART.COSMO has most contacts with the suppliers. The purchasing team visits every suppliers at least twice a year, in some case 4 times a year. Purchasing, makes up a big percentage of the total cost. Fashion retailers like

BOGART.COSMO do not produce anything, what they buy are what they sell. How the purchasing is conducted will strongly affect the total cost and product quality.

AS-IS

Because of the lack of standardized procedure to identify customer values, the purchasing decisions are made based on historical data from last year and the experience of purchasing team. When it comes to “fashion product” (strong fashion characteristics and very short life cycles), the interviews revealed that purchasing decisions are mainly based on personal experiences or fashion tastes. Even though the purchasing team has long experience in the industry, this kind of decision making are of high risk without input from customer joint.

Analysis

According to the theory of lean procurement, lowest piece price cost is not necessarily the lowest cost for the value stream as a whole. The buyers should consider the whole value stream of one product family when they calculate the costs of purchasing. Total cost of purchasing composes of ongoing cost, risk cost and change cost (detailed explanation in subchapter 3.7). They should take account perspective of other departments, drawbacks or benefits. In the case of BOGART.COSMO, the leader of purchasing team is also the general manager of BOGART.COSMO. Thus she will likely automatically calculate the cost of purchasing from different perspectives. She somehow has the role of “value stream manager”, even though this is not her title.

In the perspective of lean procurement, values should be defined by the ultimate customers. However, because of the lack of standardized procedure to identify customer value, the purchasing team could not make sufficient decision. Thus a standardized purchasing procedure has been recommended earlier. A standardized procedure for identifying customer values could form provide a clear picture of what customers want, which will again help the purchasing team with decision making process. Purchasing team should be conscious of lean procurement methods and develop a standardized procedure for making purchasing decision. Personal experience in fashion is important, since fashion is not mathematic. Theory of luxury fashion consumption also tells us that “emotional value” is also one important value in the consumption behavior of fashion products. But purchasing decisions which are 100% based on personal fashion tastes should be avoided. Customer values should be considered in high extend.

Lean management methods favors long-term strategic partnership, as this kind of relationship is mutually beneficial and would like to reduce the total cost for both parties. However, original lean companies like TOYOTA and Honda are gigantic companies and are probably a big customer for their small suppliers. But BOGART.COSMO, and many other SMEs, is a small customer for their big suppliers. Is strategic partnership possible to achieve at all in this kind of relationship? Short lead time, smaller sizes and JIT delivery are some characteristics of lean supply chain. These should be agreed between both parties under in the procurement process. This seems hard to achieve without a deep relationship with suppliers. We will come back to this in subchapter 6.3.3, when we discuss management of supplier relationship. Unfortunately this type of theory, power distribution in inter-organizational relationship, is absent in our theoretical foundation. This absence makes lean procurement a difficult area to analyze.

TO-BE

The absence of some particular theory makes it difficult to analyze if JIT time delivery, short lead-time and smaller batch sizes are feasible to achieve. But a standardized procedure for purchasing decision making should absolutely be developed, where customer values should be the focus, together with historical sales data and personal experience.

6.3.2.4 Standardization

One very common characteristic for SMEs is that they seem to invest little time on planning the business, arranging the innovative ideas and optimizing the business functions. They tend to have the belief that they need no reform and could achieve the goals by themselves (Pappis , 1996). The way different works are executed have been formed over the time, when each function developed its own ways to deal with their working tasks. This tradition approach could lead to slow reaction to adapt the changes in the market or technologies(Shtub and Karni, 2010).

AS-IS

Interviews, direct observations and lean opportunity assessment indicates the level of standardized work within the case company is low. However this is in common with other SMEs, as been mentioned earlier. One concrete example is how the merchandise are placed at the basement floor (merchandise at the other two floors are more systematic organized). Bags are all place together at two shelves and the shoes as well. But clothes (which take most places) are placed in a way which is difficult to see a system. According to the sales staff, they place the merchandise where they think the particular merchandise fit inn best, so that

the merchandise and the other merchandise on the same shelf/place will form a type of harmony. However, the thing is that there are many sales staff who work at the basement floor (they have different shifts) and different people have likely different definition of harmony. Thus when new sales staff come to work at the next shift, she might move the merchandise to a new place where she think the merchandise belongs to. This increases unnecessary motions which has been defined as one type of waste.

Analysis

Following the theory of standardized work, standardized work could reduce variability, occurrence of injuries and strain and makes training of new operators easier. These decided standardized work also forms a base for further improvement. When everyone is doing the same job differently, where should the standpoint be for improvement? Lean principles tells us the importance of team work, the employees who are doing the tasks everyday know how to do it best. We should combine the best practices and prepare standardized procedures.

Take the example we had in the beginning of 6.3.2.4. A clear method/procedure for how merchandise should be developed. The waste/non-value adding activity, unnecessary motions, could then be prevented by a standardized procedure. The sales staff could then use the time which she spent on unnecessary motions to some value adding activities.

However, on the contrary, Noda (2015) argued that standardized work does not fit to service industry. Because service industry is characterized by simultaneous production and consumption of services. The need of every customer varies and thus decentralized decision making is often required (Noda, 2015). Standardized procedures might not work well for some working tasks, for instance how the sales staff treat consumers in the store, because these working tasks are depending on the specific context.

With standardization, I do not mean BOGART.COSMO should standardize all their works. Works should be categorized in two groups, ‘‘should be standardized’’ and ‘‘should not be standardized’’. The work of dealing with cosumers should definitely not be standardized, the the sales staffs will act as robots. However, as we already discussed in the subchapter of ‘‘identifying customer values’’ and ‘‘lean procuement’’, those kind of work which requires advanced approach and will be repeated many times should be standardized to reduce the risk of making wrong assumptions and making wrong purchasing decisions.

TO-BE

BOGART.COSMO should incorporate ‘‘standardized work’’ for works which are suitable for standardization. However team work should be carried out in order to decide which works should be standardized and which should not. Because of the limited research resource and time, a concrete way to distinguish different types of works has not been identified.

6.3.2.5 Kaizen culture

Even though the fundamental values ‘‘respect, attention and quality’’ have been identified, it is hard to define the overall company culture. Lots of interviews and observations are required, maybe the researcher has to ‘‘work’’ at the company for a period, to get a deep insight in the working culture of BOGART.COSMO.

AS-IS

Lean opportunity assessment and direct observations provided some information for how Kaizen (continuous improvement) is integrated in BOGART.COSMO. According to the result of lean opportunity assessment, BOGART.COSMO is on lean progress in the area of Kaizen and there is room for improvement. The quality problems which has been discovered during direct observation, as been described in subchapter 6.3.2.1.and 6.3.2.2 , indicate that Kaizen should be incorporated in higher degree.

One concrete example is the empty shelves at the second floor and the basement floor. They gave me (personal) the feeling of recession, that the store is not running well and that the store do not provide big enough selection (this is actually one of the strategies of BOGART.COSMO). This is however just my personal feeling of these empty shelves, this need to be confirmed by asking other consumers. That is also why conducting customer surveys is important, because we do not know what other customers think about this situation that the top of many shelves at basement floor and 2.floor are empty. According to the sales staff there is a reason, which is that the top of those shelves are too high for having nay products. Here is the problem, we do not know what consumers think about this situation. This situation could be better fixed if Kaizen culture is deeply integrated in the company culture.

Analysis

Kaizen is not simply a method, but more like a philosophy that should be integrated in the company culture. In mass production philosophy it is enough to be ‘‘good enough’’, but

‘‘good enough’’ status indicates there are still lots of wastes in the business in the perspective of lean. Pursuit of perfection is the goal of lean, while perfection might not been achieved, the process of pursuit is worth it. The process will help the business to better utilize the assets and eliminate wastes.

BOGART.COSMO should clarify core values for the company, strategy, business goals etc. There is for differentiating BOGART.COSMO from other competitors in the market. What are the competitive strengths, when we are just like the rest? Leaders should, rather than giving only commands (traditional approach), lead the company with vision and encourage initiative from lowest level. Workers know more about the real deal with shoppers. Kaizen should be initiated by employees (Brun et al., 2015).

BOGART.COSMO should constantly evaluate their purposes, modify and refine their mechanism to achieve their goals. Kaizen meeting is a good way to achieve this. Kaizen meetings should involve every employee and let them share their best practice with each other. Employees are empowered to identify and implement improvements. Kaizen meeting functions not only as one lean management method, but works also as a good ‘‘team building’’ activity.

A system for employees to come with innovative ideas for continuous improvement should also be developed. According to general manager of BOGART.COSMO, employees could come to head of Human Resource if there is some issues they want to talk about. However I do not think this could be viewed as a ‘‘system’’. Because the employees don not know the consequences of giving constructive feedbacks. Sometimes good advices are negative ones and make it uncomfortable to listen to. Humans do not want to listen these kind of feedbacks or suggestions. Additionally employees do not have big power in the company, therefore employees could be afraid of giving such feedbacks or suggestions. The company would then lose some good advices which will improve the business activities. A system should solve this problem and make it easier for any employee to provide feedbacks or suggestions.

By gathering all the ideas from every employee, this mentioned problem in the beginning of this subchapter, empty shelves, would probably be solved in an efficient way. The explanation that the sales staff provides was that the top of the shelves are too high for customers to grab the merchandise and take a closer look or try it on, therefore it will create inconvenience if they place any merchandise on the top part of the shelves. However in the latter situation the consumer will ask the sales staff for help, so this situation provides an opportunity for the

sales staff to help the consumers in the store and might work as a conversation initiator between the sales staff and the consumer. There are arguments for placing merchandise at the top and not placing any merchandise at the top. How the final decision should be should depend on what the customers think about this topic and evaluation of the management team. And, the evaluation should be based on the identified customer value, not the intuitions of the management team. Both ‘‘identifying of customer values’’ and ‘‘Integration of Kaizen culture’’ should be there in order to solve this problem.

TO-BE

Kaizen culture should be strengthened as one important part of company culture. Everyone in the company should be involved, empowered and encouraged to come with better solutions. Activities (for instance Kaizen meeting) and systems for making suggestion an easier process for employees should be designed and executed. Then we could expect that business activities will move to the next level by wisdom and enthusiasm of every employee.

6.3.3 Suppliers joint: Supplier relationship management

Lean supply chain emphasize a lot on collaborative relationship rather than adversarial relationship. A successful collaborative relationship, both the suppliers and the buyer are committed, leads to sustainable improvement and will be beneficial for both parties.(Kannan and Choon Tan, 2006). This subchapter will focus on the analysis of the relationship between BOGART.COSMO and its suppliers.

AS-IS

Information of how BOGART.COSMO manage its supplier relationships has been mainly described in subchapter 5.7. Based on the interpreting of the interviews, some main characteristics of BOGART.COSMOs supply chain management have been identified: (1) BOGART.COSMO has no long-term contracts with the suppliers and there is no strategic alliance between BOGART.COSMO and its suppliers. (2) BOGART.COSMO is usually not involved in the development of new design and new products. (3) A pause in the cooperation with the suppliers is usually acceptable for both parties. (4) BOGART.COSMO cannot control exactly when the ordered products will arrive in the cases of most suppliers.

Analysis

Strategic partnership with supplier and JIT delivery are the central concepts within lean supply chain. Achieving long-term strategic partnership and JIT delivery from all suppliers will increase the responsiveness of BOGART.COSMO and help BOGART.COSMO to better manage orders and volatility of demand. JIT delivery will also lead to less inventory in the store. Less inventory makes it easier to address defects and thus improve quality and organize. Less inventory leads to reduced obsolescence, less time spending on finding the right one to move to the store and improved flexibility to react to changes (when something become very popular that we do not have in the store, we will have the capital and space to order them from supplier quickly). The risk relied in the capital invested in inventory will be reduced. Less inventory will also create more space for items of other styles. Collaborative development of products is another possibility. Image if BOGART.COSMO could provide exclusive products developed and only made for local fashion consumers in Trondheim? This will significantly differentiate BOGART.COSMO from other competitors in Trondheim. In the case of BOGART.COSMO, for the very most suppliers, neither strategic partnership nor JIT delivery are presented in the supply chain. However, according to the general manager of BOGART.COSMO, HUGO BOSS manages to deliver products JIT and the relationship between BOGART.COSMO and Uber seems to be beyond ordinary supplier-buyer relationship (but it is still difficult to call it strategic partnership, since this is not clarified between the two parties). But as we could perceive, compared with the entire supplier base, those two examples could almost be considered as exceptions. The question is, could other suppliers be encouraged and manage to do the same?

The relationship between BOGART.COSMO and its suppliers could be viewed as kind of ‘retailer-shopper’ relationship, where the suppliers are retailer and BOGART.COSMO is the shopper. Because there are only short-term contracts, very little extend of collaborative development of products and personal relationships. Take the example of HUGO BOSS, personal relationship existed before HUGO BOSS become a huge and listed company. We have theory of how a lean enterprise could develop long-term strategic relationship with their suppliers. But does it work for every kind of supplier relationship? Some of the suppliers for BOGART.COSMO are gigantic companies, for instance BURBERRY, POLO RALPH LAUREN and HUGO BOSS, they all have over 10 000 employees. The power distribution between these companies and BOGART.COSMO might be a reason for this AS-IS situation. Unfortunately, the theory of power distribution in a relationship has not been reviewed. It makes the analysis of supplier relationship problematic. Should BOGART.COSMO have the

same strategy to manage the relationship with any kind of company? Or should BOGART.COSMO categorize suppliers and develop different strategies for different supplier categories? This could be a huge topic itself.

Even though it is still a question for BOGART.COSMO if it is possible to develop long-term strategic partnership with suppliers, a standardized system to manage the complex supplier base is feasible to be developed. BOGART.COSMO has more than 60 suppliers, it will be very useful to have an overview in order to evaluate the performance of them. Historical sales data and data of received complaints from customers could be important sources for this data system. Each of the suppliers should have their own place in this data system. This data system will provide BOGART.COSMO a convenient way to find all relevant data for one particular supplier. For instance, before purchasing from one supplier, the data of this supplier could be easily picked up for analysis. The data could also be used to negotiate with the supplier, for instance for better prices or delivery services etc.

TO-BE

A long-term strategic partnership and JIT delivery have a central place in lean supply chain. Because of a lack of relevant theory, we do not know about if it is possible for a SME to develop long-term strategic partnership with gigantic suppliers. But one thing that BOGART.COSMO could do is to develop a data system to store supplier-specific data for every single suppliers, in order to have an overview over the complex relationship with their 61 suppliers.

Based on the discussion in the whole subchapter 6.3, we could see that many areas for Kaizen should be analyzed in the light of multiple lean management methods. Those lean management methods are therefore not totally independent from each other, in contrary they could function together to better solve improve operation processes and management of supply chain.

6.4 The lean supply chain “TO-BE”

The current supply chain of BOGART.COSMO is just like a regular fashion supply chain as described in the literature. Fashion companies are developing new designs on their own making samples for fashion retailers to come and order. A minimum amount of order is a common requirement from the fashion companies. Mass production of the designs will start when all the orders from fashion retailers are gathered. Due to the short life cycle, products cannot be sold within their selling season will be marked down and put on sale.

By incorporating the recommended lean management methods, a more efficient supply chain will be probably achieved. A Future State Map ‘TO-BE’ is shown in figure 23 below.

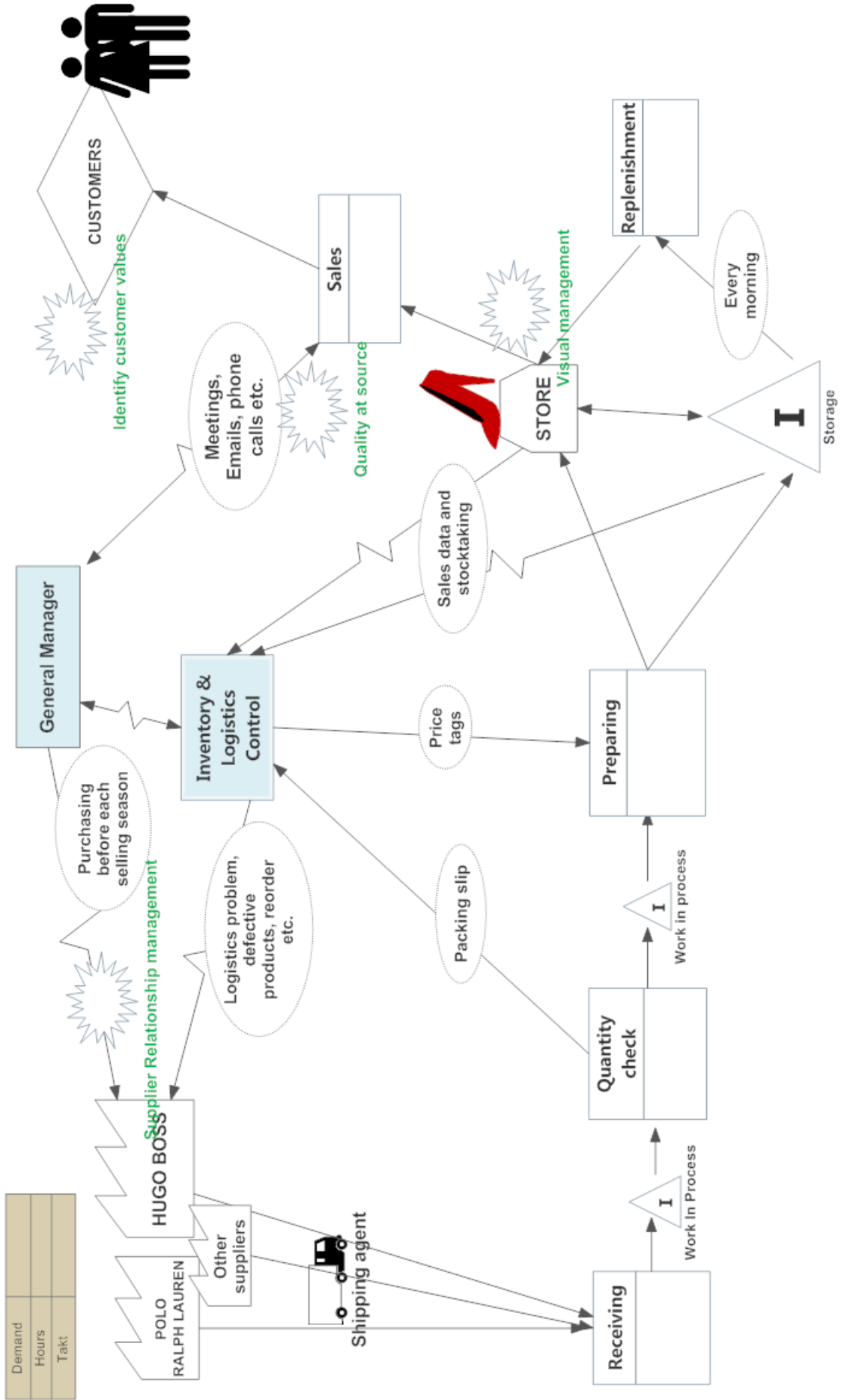


Figure 23: The Future State Map of value stream within BOGART.COSMO

Even though pull system along the supply chain is hard to achieve in the case of fashion retailers, customer values could be more accurately identified by developing a standardized procedure and market demand could then be more accurately forecasted based on the identified customer values. The 5 areas for Kaizen which have been identified in subchapter 6.3.2 will help BOGART.COSMO to eliminate non-value adding activities and better utilize their workforce. Lean supply seems to be difficult to achieve within short time, because of the current situation of supplier base and a lack of relevant theory. But supplier base could be managed in a more efficient way by developing a data system for storing supplier-specific data for every single suppliers.

An ideal management should direct, coordinate and monitor the organization's activities. Commitment from both management and employees is required to become truly lean (Brun et al., 2015). The management should gradually integrate Kaizen culture into the company culture. Involvement of employees in both decision-making process and problem-solving process is one fundamental element of lean management (Delbridge et al., 2000). In a more traditional approach, information flow through all the functions are too slow and workers in different function have different interests and backgrounds, it is hard for them to generate the highest value for end customers (Shtub and Karni, 2010). Management should push decision making down to the lowest levels, train and empower people to become lean. Lean experts are required to lead the transformation (Brun et al., 2015).

The incorporation of lean management will never be successful without training the employees to adapt the changes (Jaca et al., 2012). Chang management has been briefly described in subchapter 3.6.4 in theory foundation. Some concrete steps, for instance creating a vision and creating short-term milestone to encourage people, have been recommended there. One last notice to have in mind is that companies should have patience and tolerate mistakes, as lean is not a quick fix, company should dedicate in order to achieve a vibrant and sustained lean implementation.

7 Discussion

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I am going to modify the theoretical framework based on an evaluation of the overall analysis process and provide suggestions for future researches in this chapter. The analysis process in previous chapter followed the theoretical framework. I am going to evaluate how the theoretical framework worked as an analysis technique in order to transform current fashion supply chain into lean fashion supply chain.

7.1 The modified framework

The theoretical framework has been reviewed and modified. Based on the process of analysis and results, four areas in the theoretical framework have been identified for changing. Figure 24 below shows the modified framework for how lean management methods could be incorporated in the supply chain of fashion retailers. The four modified areas in the framework are:

- I. The process of evaluating and combining theory of fashion retailing and theory of lean management should be like a circle, not an arrow. This is because these two knowledge areas are so different and each of them contains lots of concepts. During the analysis process, I have to constantly go back and review theory of “fashion retailing” in order to get new inspirations. As figure 24 shows, the process of combining the two knowledge areas goes in a circle. The circle ends at the point when no new inspiration could be gained by repeating the circle.
- II. “Lean principles” functioned as overall strategy/guidelines, while “lean methods” are concrete methods which tell companies exactly what to do. They worked perfectly together. Therefore I put them together to indicate that they supplement each other. Lean principles and lean methods are fundamentals for lean transformation. Together they will inspire researchers and practitioners to find innovative lean solutions for fashion supply chain. For instance, I combined “visual management” and “quality in source” in order to solve some quality problems occurred in the case company. I put a red star on lean principles and lean methods to present the importance of them during the entire process of analysis.
- III. Change management should be considered separately in the end. Because change management does stand separately from rest of the theories. It will be confusing to analyze change management at the same time when we analyze where in fashion

supply chain which lean management methods could be applied. It will be more logical to decide all the lean changes first, then adapt change management when fashion retailers execute lean implementation plan which is designed to make the identified lean changes happen.

- IV. The theory of “consumer-retailer relationship” and “power distribution in inter-organizational relationship” should be reviewed. When I analyzed the customer joint, I was wishing I had some knowledge of “consumer-retailer relationship” in order to better analyze the relationship between fashion retailer and their customers. “luxury fashion consumption” was used to find strategies to make fashion retailers more attractive for consumers. “Consumer-retailer relationship” would help us to develop some more concrete strategies to establish and maintain deeper relationship with our customers. I did provide suggestion for how fashion retailers could better identify customer values. I could somehow provide suggestions for fashion retailers to build a deeper relationship with their customers, if the theory of “consumer-retailer relationship” has been reviewed. The difference of power in the dyadic relationship between small- and medium-sized fashion retailers and their suppliers is huge. The lack of theory of “power distribution in inter-organizational relationship” made it difficult to analyze if it was possible for small- and medium-sized fashion retailers to build long-term strategic partnership with gigantic suppliers.

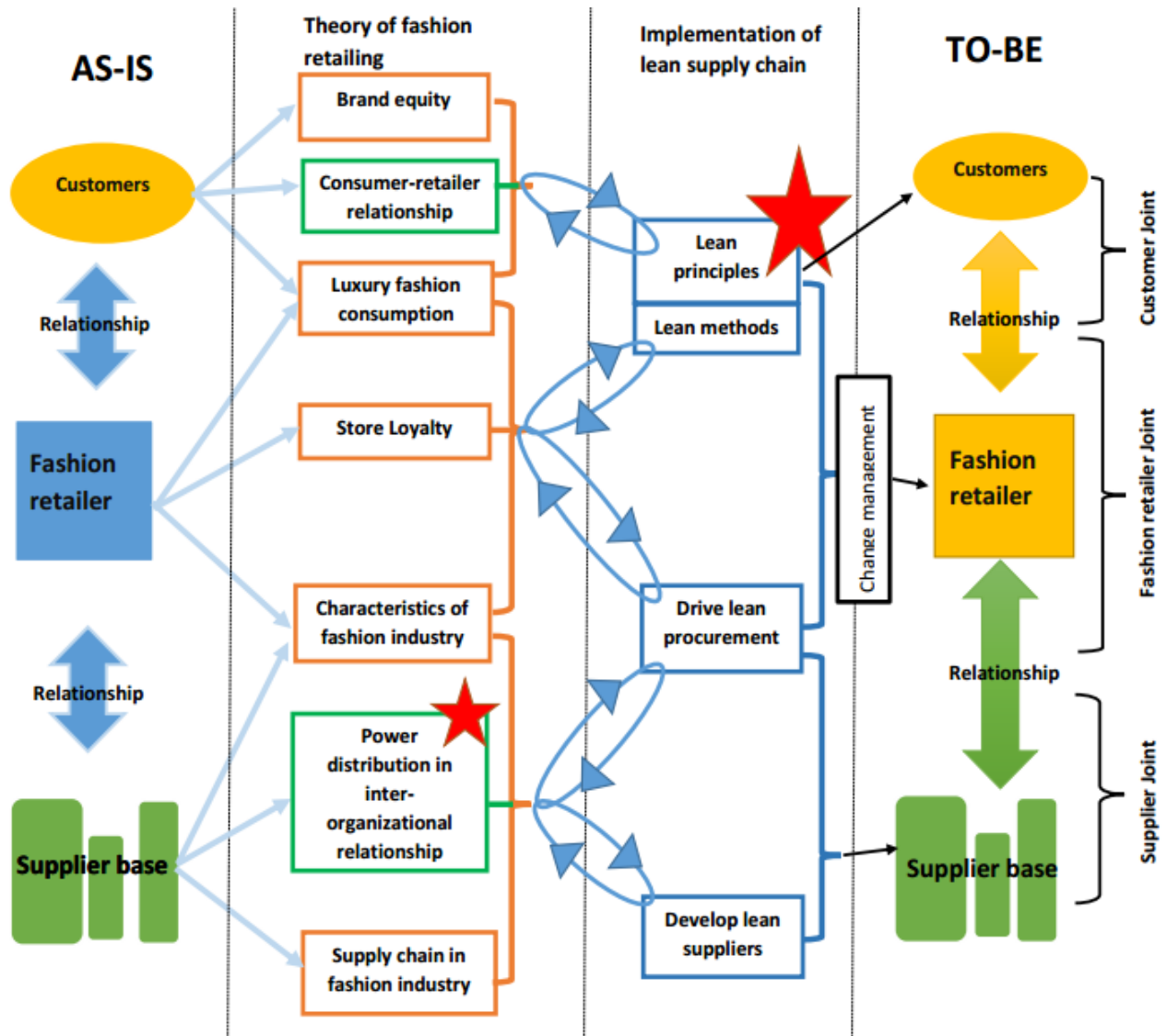


Figure 24: The modified framework for how lean management methods could be incorporated in the supply chain of a fashion retailer.

7.2 Suggestions for future researches

The limitations of the research has already been discussed in subchapter 2.3. Based on those limitations and the modified framework. Three topics have appeared in my mind which could be interesting for future researches.

- I. Test the framework and analyze the results. This research was designed as an exploratory research. I intended to ‘‘explore’’ the idea of how fashion retailers could take advantage of lean management methods. It will be interesting to see how these recommended lean improvements works for fashion retailer. The framework will be very valuable, if it has been tested to work well in real-life business. If the opposite

happens, the root causes for why this framework failed could also be valuable for future researches as well. As lean told us, addressing and solving the root causes will prevent the problem to ever occur again.

- II. Further development of this framework. The scope of this research is very broad. Because of limited research resource and time, researcher could not go deeply into every single areas in the fashion supply chain. As have been discussed most of the work tasks in the case company are not standardized, makes my case company difficult to analyze. More efforts from both parties should be allocated in the data collection, the collected data was unfortunately not sufficient in order to carry out very detailed analysis. A more in-depth study could be very helpful to further develop the framework. The current framework is somehow a little bit abstract. For instance, researcher pointed out visual management could be a useful lean management method for fashion retailers, but not very many concrete solutions have been provided. There was because of the lack of very detailed data. The further developed framework would like to be more concrete and thus make it easier to be applied for practitioners. Further development of this framework should also consider those two knowledge areas that have been suggested in subchapter 7.1, in order to find out if it is possible to achieve a truly lean supply chain in fashion retailing.
- III. Modify and expand this framework by conducting case studies of companies from other industries. A case study of a fashion retailer has been conducted in order to modify the theoretical framework. The modified framework is very much based on the analysis process of a fashion supply chain. This framework was meant to inspire researchers and business practitioners to incorporate management methods which seems irrelevant for their own industries. This might contribute to huge competitive strength, since you are likely the only one company in your industry who is doing this. Thus it will be useful to look at if similar framework could be found in the cases of other industries.

8 Conclusion

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The research question in this thesis was defined as ‘‘How could lean management methods be incorporated in the supply chain management of a small and medium-sized fashion retailer in order to reduce total cost as well as to improve the service quality?’’. 5 sub-questions have been developed to make the research process more smooth and help the researcher to answer the research question more properly. Sub-question 1 and 2 have been answered by chapter 3, theoretical foundation, where different types of knowledge regarding fashion retailing and lean management methods in supply chain management have been reviewed and presented. The theories of lean management explained how lean management could help companies to reduce total cost and improve the overall quality and how lean supply chain works. The theories of fashion retailing told us the fundamental characteristics of fashion industry and touched some important values for fashion consumers. Sub-question 3 has been answered by chapter 5, where the researcher presented in detail how a small and medium-sized fashion retailer is conducting their business and managing their current supply chain today.

Sub-question 4 has somehow not been properly answered in this thesis. An analysis of the current fashion supply chain has been done and some lean management methods have been suggested in order to achieve a more efficient supply chain for fashion retailers in chapter 6. However the results in chapter 6 showed that more knowledge areas need to be reviewed in order to find out if it is possible to achieve lean fashion supply chain or not. Even though it requires more researches to be done to answer this sub-question, the result that presented in chapter 6 will probably make the current supply chain management of fashion retailers more efficient. The question was just if this ‘‘TO-BE’’ fashion supply chain could be defined as lean fashion supply chain or not.

Sub-question 5 has been answered in chapter 7, where a framework has been developed. Even though this framework could be further developed, as discussed in subchapter 7.2, this framework has its value. I have mainly two purposes of this research: (1) Provide some practical strategies for fashion retailers. That the results could help practitioners in the retailing sector to successfully adapt suitable lean management methods in fashion industry with its specific characteristics. (2) Explore this interesting topic to integrate lean management in fashion retailing. That the results could also function as one example of how companies in other sectors in the fashion industry as well as companies from other industries

may incorporate lean management in their supply chain fitted to their own characteristics and their industries' characteristics. The results that researcher has achieved is the results of the analysis (chapter 6) and the modified framework (chapter 7). The results of the analysis could be directly applied in business activities for practitioners (fashion retailers). If some practitioners have time and effort, they could also use the modified framework in order to find most suitable methods for themselves by themselves. With more suitable methods, I mean lean management methods that fit their own characteristic (company culture, type of products and services, etc.) and the broader business environment that they are parts of. Therefore both results could be useful for practitioners. For researchers, the latter result, modified framework, would be more interesting. This framework which combined two separated knowledge areas could be an example of how similar researches could be conducted in the future.

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Appendix

Notice: The interviews have been conducted in Norwegian. If there is any question regarding the interview questions, please contact the author.

Interview 01

(Background of the company, company structure, identifying of main supplier and customers, relationships with suppliers and customers)

Om BOGART.COSSMO:

- 1- Oppstart og historie
- 2- Antall ansatte
- 3- Visjon
- 4- Verdier
- 5- Strategi
- 6- Competitive advantages
- 7- Produkter og service
- 8- Hvilken mote stil
- 9- Fremtidens planer

Om drift:

- 1- Hvor mange avdelinger har BOGART.COSMO?
- 2- Beskriv hva disse avdelinger jobber med?
- 3- Hvor mange jobber og hvem er leder i hver av disse avdelinger?
- 4- Hvordan er informasjonsflyt inni bedriften?

Om lokal marked:

- 1- Hoved Konkurrenter?
- 2- Hvem er fokuserte kunde grupper for BOGART.COSMO?

Om leverandører:

- 1- Hvem er de alle viktigste leverandører til BOGART.COSMO?
- 2- Hvordan er forholdet mellom og hver av dem?
- 3- Reiser dere til moteshowet til disse leverandører?

4- Hvor mange ganger kjøper dere fra hver av dem?

5- Hvordan ble varer levert til BOGART.COSMO?

Observation 01:

(Working behaviors of employees, environmental conditions in the main operation within the company in less hectic period.)

Fokus på:

- 1- Hvordan arbeidere oppfører seg på jobb?
- 2- Hvordan snakker de med kunder og hjelper kunder?
- 3- Miljø på butikken.

Observation 02 +Interview 02:

(Inbound logistics, inventory management, and activities in the office. Working environment in office and all storage rooms.)

Observation:

- Guided by head of Inventory and logistics.
- Inventory solutions.
- Working environment in office and all storage rooms.

Interview--Inbound logistics and inventory management:

1. Hvordan mottar dere varer?
2. Hva gjør dere etter å ha mottatt varer?
3. Hva gjør dere når levert varer er ikke de samme som dere har bestilt?
4. Hva med at antall var feil?
5. Hva gjør dere når varer blir levert for tidlig eller for seint?
6. Hvordan bestemme priser på forskjellige varer?

7. Beholder dere varer i lager først før plassere dem ut i butikken?
8. Hvordan får dere oversikt over inventar?
9. Hvem har ansvar for disse forskjellige aktiviteter?

Interview--Activities at office:

1. Hvordan bestiller dere nye varer når dere ikke er på innkjøpsreise?
2. Er det noe leverandører som er vanskeligere å snakke med enn andre?
3. Hvordan betaler dere til leverandører?
4. Må dere lager prislapper selv?
5. Noe aktiviteter som du synes kan være interessant å få med?

Observation 03:

(Working behaviors of employees, environmental conditions in the main operation within the company in hectic period.)

Fokus på:

- 1- Hvordan arbeidere oppfører seg på jobb?
- 2- Hvordan snakker de med kunder og hjelper kunder?
- 3- Miljø på butikken.

Interview 03:

(Purchasing process, supply chain management, material flow and information flow within and outside (with suppliers and customers) the company.)

Information flow in supply chain:

- 1- Hvem har ansvar for innkjøp?
- 2- Hvordan beslutte hvor mye og hva skal kjøpes inn? Hvordan ofte tar dere slike beslutninger?

- 3- Hva slags kanneler bruker dere for å utveksle informasjonen med leverandører og kunder? Hvordan ofte utveksler dere informasjon?
- 4- Mottar dere individuell bestilling fra enkelte kunder?
- 5- Hvordan forutse dere hva kunder liker i neste "selling season"? Hvordan ofte identifisere dere hva kunder vi ha?
- 6- Hvordan får dere tilbakemeldinger fra kunder? Hvordan ofte?

Material flow in supply chain:

- 1- Hvordan leverer leverandører varer til dere? Gjennom internasjonalt logistikk selskap?
- 2- Hvor ofte leverer leverandører?
- 3- Hvem har ansvar for mottak eller inngående logistikk og lager?
- 4- Hvordan leverer dere varer til kunder? Kun skje i butikken?

Purchasing process and supply chain management:

1. Hvor mange "selling season" har BC?
2. Kjøper dere før hver "selling season"?
3. Besøk dere alle Leverandører?
4. Hvor mange kjøper jobber på innkjøp avdeling?
5. Hvem har ansvar for hva?
6. Hvor tidlig kjøper dere?
7. Hvordan forutser dere de nyeste trendene?
8. Motta alle produktene før sesongen? Gjennom sesongen?
9. Plasseres varer i butikken med en gang etter ankom? Eller presentere dem gjennom havet for å holde et friskt utseende?
10. Hvis enkelte varer blir svært populære, hva skal dere gjøre? Og motsatt?
11. Hvordan bruker dere utstillings vindu?
12. Hvor ofte oppdateres utstillings vindu?
13. Har BC erfart at BC ikke kan bestille noe av den svært populære produkter? Som leverandør kan prioritere sine egne monobrand store framfor andre multibrand store?
14. Hvordan jobber dere med mindre leverandører?

15. Hva med å utvikle "strategic partnership" med noe av leverandører?
16. noe merker som har ofte reklamasjoner?
17. Hva er typiske saker som dere tar opp på personal møte?
18. Hvordan er opplæring til ny ansatte?
19. Hvordan får dere feedback eller forslag fra arbeidere?
20. Hvordan involverer du arbeidere for at hele bedriften skal jobbe som et team? En mekanisme som gjøre det lettere for ansatte å gi forslag?
21. Varer returnert med defekt fra kunder? Hvordan handle?
22. Kriterier for valg av leverandør?
23. Kriterier for å terminere kontrakt med en leverandør?
24. Prosedyre for hvor mye og hva man skal kjøpe?
25. Hvordan forholdet med HUGO BOSS har utviklet seg, noe spesielle periodes eller hendelse som du kan huske?
26. Hvordan sikre BC å være den eneste butikk i Trondheim for salg av enkelte merker?
F.eks Polo.
27. Noe andre saker med leverandører som kan være interessant å ta opp?
28. Hvilke informasjon kan ikke vises i masteroppgaven? konfidensiell avtale.

Interview 04 (Email):

(Complementary questions and confirmation of researcher's interpreting of data, lean opportunity assessment.)

1. På det første intervjuet mente du at noe leverandører får til "Just-In-Time delivery" (leverer varer akkurat når BOGART.COSMO vil ha dem). Kan du nevne en eller to slike leverandører?
2. Finnes det noen standard prosedyres for hvordan forskjellige jobbene skal gjøres i BC? F.eks hvordan skal en selger ta imot kunder? Hvor skal man sjekke for å holde varer i orden ved å definere noe enkelte plass i butikken som er vanskelige å overvåke enn andre steder.
3. Har du opplevd at noe informasjon bli ikke riktig forstått eller formidlet fram til riktig ansatte? Hvis ja, hvor ofte skjer det.
4. Har bedriften deres en formel "Reward system"? F.eks forskjellige titler på forskjellige selgere for å promotere/belønne selgere med "best performance".
5. Hvis bestillinger fra en spesifikk leverandør som ikke blir levert i det hele tatt eller en spesifikk leverandør leverer har problem med å levere i tide, hvordan vil det påvirke forholdet mellom BOGART.COSMO og den leverandøren?
6. Føler du at det er noe leverandører som virker dominerende under innkjøps prosess? Spesielt de store som HUGO BOSS og BURBEERY.
7. Hva tenker du om å utvikle "strategic partnership" med noe av leverandører? F.eks UBER? For å få til, f.eks, bedre produkt utviklings prosess (at f.eks UBER kan få innspill fra BOGART.COSMO før de utvikler sine produkter)
8. Påvirker geografisk lokasjoner av leverandører deres forhold?
9. Har dere en tydelig budsjett for innkjøp for hver sesong?
10. Som jeg husker, ta ikke Marc Jacobs imot reklamasjon utenom garantitid, Men tar Marc Jacobs imot reklamasjon innen garantitid? Gjelder garanti 1 år for MJ? Internasjonal lover: Ett års garantitid

Lean opportunity assessment :

Nede finner du en undersøkelse hvor du kan lese påstand og gi hver påstand et score, der 1 indikerer at du synes påstanden stemmer i veldig liten grad og 5 betyr at påstand stemmer 100% for bedriften din. Du kan svare ved å klikke bak bindestrek i den boksen.

NB:

Denne "lean opportunity assessment" er utarbeidet for bedrifter som produsere varer, derfor passer noe spørsmål ikke for deres bransje. Men f.eks du kan tenke at "operator" (som bli nevnt flere ganger nede) er selgere deres og relatere påstanden til forretningen deres. Hvis det passer likevel dårlig, kan la være å score på den spesifikke påstanden.

I en påstand, finnes det fremmed ord, Kaizen. Kaizen er en japansk konsept som betyr "kontinuerlig forbedring".

"Mistake proofing" som en metode ofte brukt i lean selskap kan også virke litt forvirrende, det betyr lett og slett at: hvis det er en "mistake" som oppstår i forretning, skal alle involverte ansatte jobber sammen for å finne ultimater årsaker for å hindre at slike mistake skjer igjen. Og hver ansatte har tydelig ansvar, slik at du kan lett spore tilbake og finne ut hvem hadde hoved ansvar for at en spesifikk situasjon oppstår.

Lean Opportunity Assessment

Internal Communication	Score (1-5)
1. Management communicates with all levels of the organization on topics regarding organization goals and objectives at least twice per year.	
2. Employees are able to accurately describe the organization's goals and how their job contributes to the achievement of those goals.	
3. Employees receive feedback through a formal process concerning problems found in downstream processes or from the customer.	
4. Management encourages Supply Chain & Logistics employees to work in groups to address performance, quality, or safety issues.	
5. Employees at the operations level understand and use common performance metrics to monitor and improve the production processes.	
6. Problems in the Supply Chain & Logistics process are detected and investigated within 10 minutes of the first occurrence.	
7. The concept of Value Stream Mapping is understood and all product families have been mapped and are physically segregated into the like process streams.	
Internal Communication Category Score =	0%

Visual Systems and Workplace Organization	Score (1-5)
1. The Distribution Center and Office areas are generally clear of unnecessary materials, items or scrap. Isles are clear of obstructions.	
2. The Distribution Center floor has lines that distinguish work areas, paths and material handling isles.	
3. All employees are aware of good housekeeping practices and operators consider daily cleanup and put away activities as part of their job.	
4. There is a place for everything and is everything in its place. Every needed item, tool, material container, or part rack is labeled and easy to find.	
5. Display boards containing job training, safety, operation measurables, production data, quality problems and countermeasure information are readily visible at each production line or process and are updated continuously.	
6. Check sheets describing and tracking the top quality defects are posted and are up to date at each work station.	
Visual Systems Category Score =	0%

	Continuous Improvement	Score (1-5)
1.	There is a designated champion and a clearly communicated strategy for continuous improvement in the facility with the necessary resources, organization and infrastructure in place to support the process.	
2.	There is a formal suggestion process in place to solicit ideas for improvements from all employees and to recognize their participation.	
3.	Employees have been trained in continuous improvement methods and have been affected by or participated in continuous improvement events.	
4.	Employees know the eight wastes, are actively involved in identifying wastes in their processes/areas, and are empowered to work to reduce and eliminate the waste.	
5.	Continuous improvement, <i>kaizen</i> projects/events are structured, planned and implemented. Successes are recognized and expanded throughout the facility.	
6.	Most improvements made throughout the Distribution Center and offices are made daily and involve little or no expense to implement.	
7.	Product/Process Value streams undergo examination for continuous improvement on a regularly scheduled basis.	
Continuous Improvement Category Score =		0%

Mistake Proofing		Score (1-5)
1.	Employees have been trained in the basis of mistake proofing and there is a team responsible for analyzing production defects and identifying mistake proofing opportunities.	
2.	Mistake proofing devices and methods have been implemented or are being developed to eliminate the top production defects for each work area in the plant.	
3.	Parts, products and components have been analyzed to identify design opportunities to eliminate waste and improve productivity.	
4.	Operators are empowered to stop an activity when an error or defect is found or when they cannot complete their process according to the SOP.	
5.	Manual processes or tasks have been equipped with mechanical checks to aid human judgement whenever possible.	
6.	Equipment and processes are equipped with call (andon) lights or signals that bring attention to situations requiring assistance with a problem or the replenishment of supplies.	
Mistake Proofing Category Score =		0%

Quality - Inbound, Outbound, and Administrative		Score (1-5)
1.	Zero defects from suppliers is a policy.	
2.	The company quality system is effectively implemented and compliant with a national standard such as ISO-9000.	
3.	FMEA (Failure Modes and Effects Analysis) is in place (Feedback, rootcause, etc.).	
4.	Material Review Board/Discrepant material disposition is in place.	
5.	Supplier quality systems are in place.	
6.	Internal scrap loss is less than 1% of cost of goods sold.	
7.	Returned material to vendors is less than 0.1% of sales.	
Quality I/B, O/B and Administrative Category Score =		0%

Supply Chain	Score (1-5)
1. Suppliers are involved in continuous improvement efforts with the company.	
2. Performance to delivery policy (on-time) is better than 98%.	
3. Quality performance of the suppliers exceeds 98%.	
4. Electronic communications with suppliers is used to trigger release of supplies under a <i>kanban</i> or VMI system.	
5. The company has regular input to the suppliers to improve design and performance characteristics of the supplied parts.	
6. Cost reduction goals with suppliers are documented and tracked.	
7. Service complaints with suppliers are resolved within 24 hours.	
Supply Chain Category Score = 0%	

Standardized Work	Score (1-5)
1. Standard operating procedures have been developed for each process or cell and are used to train operators.	
2. Every Distribution Center and office process has its SOP posted within view of the worker performing the process.	
3. The takt time (i.e., Demand Rate) for each product and/or service was used as the basis for the processing time for each operation and the process manning requirements.	
4. The process of job design and standardization involves operators as well as support personnel.	
5. Frequently repeated, non-value-adding operations in the facility such as setups, startups, quality checks, preventative maintenance, cleanup, etc. are visually standardized and updated.	
6. Operators individually perform their processes according to the process sheets or SOPs and make few method or technique errors. Any errors are recorded and tracked.	
Standardized Work Category Score = 0%	

Performance Measurement	Score (1-5)
1. Numerous and detailed financial reports have been replaced by a few key measures of enterprise performance.	
2. Traditional cost accounting measures and individual/department efficiency measures have been replaced by value stream performance measures.	
3. Performance results are communicated openly to all employees and are visually posted to show status and progress.	
4. Employees understand how their individual efforts contribute to the overall results of the enterprise.	
5. Individuals are rewarded for team-based performance rather than individual performance.	
Performance Measurement Category Score = 0%	

Customer Communication	Score (1-5)
1. There is a standard system in place for collecting customer satisfaction information and data.	
2. Customer requirements (including forecasts) are identified and communicated throughout the demand and supply chain.	
3. Customer complaints are handled the same day they are received in under 2 hours and there is collaboration with customers to identify ways to reduce waste in the demand chain.	
4. Customers have regular and systematic input into the design and functionality of the products they buy and there is an active Collaborative Planning Forecasting and Replenishment (CPFR) type function established for key customers.	
Customer Communication Category Score = 0%	