CHALMERS

Analyzing the activities related to the handling of incoming goods to store in a fashion company

- A case study of Gina Tricot

Master of Science Thesis
in the Supply Chain Management Programme

Anna Joelsson
Sophia Waller Tuvert

Department of Technolgy Management and Economics
Division of Logistics and Transportation
CHALMERS UNIVERSITY OF TECHNOLOGY
Göteborg, Sweden, 2013
Report No. E 2013:058

MASTER'S THESIS E 2013:058

Analyzing the activities related to the handling of incoming goods to store in a fashion company

A case study of Gina Tricot

ANNA JOELSSON
SOPHIA WALLER TUVERT

Tutor, Chalmers: Ola Hultkrantz
Tutor, company: Pär Wiberg

Department of Technology Management and Economics
Division of Logistics and Transportation
CHALMERS UNIVERSITY OF TECHNOLOGY
Göteborg, Sweden 2013

Analyzing the activities related to the handling of incoming goods to store in a fashion company

Anna Joelsson & Sophia Waller Tuvert

Master's Thesis E 2013:058

Department of Technology Management and Economics
Division of Logistics and Transportation
Chalmers University of Technology
SE-412 96 Göteborg, Sweden
Telephone: + 46 (0)31-772 1000

Chalmers Reproservice
Göteborg, Sweden 2013

Foreword

This Master Thesis was written as a part of the master programme Supply Chain Management at Chalmers University of Technology. The purpose of the study was to investigate possible improvements regarding the handling of incoming deliveries to stores at the fashion company Gina Tricot.

We found it extra satisfying writing a thesis for a fashion company since we find this industry very interesting. Being able to combine this interest with knowledge and experience obtained from our education has made the work both interesting and exciting.

We would hereby like to take the opportunity to express our gratitude to the people who made this thesis possible and supported us through the work. First of all we want to thank all of the employees at Gina Tricot, both at the headquarter and also the store staff. During the study, we have had the opportunity to interview a number of employees at Gina Tricot and thus received valuable information that made this study possible to realize. An extra big thank you, we would like to give to Pär Wiberg who has been our primary contact at Gina Tricot, and who has made it possible for us to visit other companies involved in the Gina Tricot supply chain.

We would also like to thank our supervisor Ola Hultkrantz at the Division of Logistics and Transportation at Chalmers University of Technology, for his advice and comments during supervision sessions.

Gothenburg, June 2013

Anna Joelsson

Sophia Waller Tuvert

Analyzing the activities related to the handling of incoming goods to store in a fashion company
A case study of Gina Tricot

ANNA JOELSSON & SOPHIA WALLER TUVERT
Department of Technology Management and Economics
Chalmers University of Technology

ABSTRACT

In recent years, the rate of quick changes in the market has increased significantly (Mattson 2002). The products in the fashion industry have become short cycled where each design may become obsolete within a short time after release. The quick turnover rate of fashion has contributed to the concept “fast fashion”, which highlights the importance of having short lead times in order to ensure that products can be displayed quickly in stores (Edström 2012).

Gina Tricot is a Swedish family-owned fashion company that has grown rapidly since it was founded in 1997. Due to the rapid growth the company feels that it has fallen behind in terms of service in the stores and getting products displayed in store quickly. This study aims to investigate the possibilities of improving the handling of incoming goods in store in order to get more time for service.

To develop recommendations in accordance with this purpose it was necessary to understand the different activities connected to the handling of incoming goods to store. This understanding was gained by observations made in store together with interviews that were held with several employees both in store and at the headquarter. The purpose of this was to get further knowledge about how decisions are taken at the headquarter and how the way products are delivered to store affects the unpacking activities made in store.

From this description problems were identified regarding the handling of incoming goods to store. The problem identifications showed that the main problems affecting the activities connected to the handling of incoming goods to store were the routines for deliveries and replenishments of products, how products were packed, lack of labeling and the wrappings connected to the products. Additionally, underlying problems regarding lack of communication between the headquarter and the stores were identified.

In order to handle the problem they were analyzed and suggestions for changes were evolved. This suggestion includes improvements to solve both the underlying causes to the problems but also suggestions regarding how waste can be reduced in the unpacking process in order to facilitate for the store staff are presented.

Keywords: supply chain management, activities, waste, packaging design, wrapping, communication, material planning and control.

Index

1. Introduction

This study deals with the problems and opportunities for improvement of the handling of incoming goods to store and includes a case study on the fashion company Gina Tricot. This chapter aims to give the reader background information of the report's starting point and then the company Gina Tricot is presented and the initiatives they have to streamline the handling of incoming goods in store. Furthermore the purpose of the study and the questions connected to this purpose and the report structure are described.

1.1 Background

Quick changes in market have always been a challenge for companies to struggle with. In recent years, this challenge has become even tougher, since the rate of changes have increased significantly, due to increased market competition and increased customer demand of more frequent renewal of products (Mattsson 2002). This is affecting most industries, but in particular the fashion industry.

The turnover rate in the fashion industry has grown significantly and fashion products have become short cycled where each design may become obsolete within a short time after release (Edström 2012). In the past, most fashion companies only had a spring - and a fall collection, whereas today there are many fashion seasons each year.

The quick turnover rate of fashion has contributed to the concept "fast fashion". The big fashion chains develop trends and news by inspiration from the exclusive brandsand design their own collections that reach stores and customers quickly. The method is not new, but derives from the concept of QR (Quick Response), developed in the United States in the 1980s. The purpose of the quick response is to shorten the internal and external lead times. By shorter lead times quality can be improved, cost can be reduced and non-value-added waste can be eliminated within the organization. This increases the competitiveness by serving customers better and faster. Fast fashion was developed from the concept of QR in the early 2000s, based on the market and its needs.

Being able to live up to the concept "fast fashion" also requires the fashion industry companies to have control over the production chain and being able to create efficient logistics solutions.

Competing in the fast moving fashion market and for the customers' purchasing power requires the flexibility of being able to quickly update the range of clothes and offer the latest trends (Edström 2012). The products need to be in store at the exactly right time to avoid poor sales and sellout on leftover products (Mattsson 2002). Hence, the flow of goods plays an important role for being able to display the garments in store as quickly as possible. Decisions need to be taken quickly and deliveries need to be efficient with respect to both time and cost.

Gina Tricot

Gina Tricot is a Swedish family-owned fashion company from Borås that was founded in 1997 and currently has about 170 stores across Sweden. Since the start the company has grown strongly and also established in Norway, Finland, Denmark and Germany. Furthermore they have opened an e-

commerce for whole Europe. The turnover for Gina Tricot year 2012 was 2,5 billion SEK and they have about 1900 employees.

Initially the focus was on selling women clothes but nowadays the assortment also includes underwear, beachwear, sportswear and make-up. Gina Tricot describes themselves as the company that manufacture and sell clothes that "gives a lot of fashion for a small amount of money".

The clothing at Gina Tricot is of high fashion and they are indeed working with the earlier described "fast fashion" concept in an industry with high product turnover. Therefore short lead times and quick handling of the goods at every step along the supply chain is extremely important.

1.2 Problem discussion

Customers demand the right product to be available for purchasing, in store or on the online shop, at the right time, the right place and to the right price. Regarding clothes, it is common with production of products in one continent and selling and consuming of the product in another continent. This leads to a lot of transporting, storing and handling of the product before it finally reaches the end customer. Furthermore there is an intensive flow of information such as forecasts and orders between different parties involved in the activities related to the material flow. Hence, logistics has an important role when creating an efficient material- and information flow, in order to satisfy customer demands (Mattsson 2005).

The issue of providing the right product at the right time and place is an especially critical issue in the fashion industry. The fashion industry is extremely trend sensitive and high fashion garments tend to have a short product life cycles. Therefore, as earlier mentioned, lead times are of high importance in this industry and short lead times are enabled by efficient logistics and a well-organized supply chain.

Logistics can be defined as the science of efficient material flows and involves planning, organizing and controlling all activities involved in the material flow. That is, the aim of efficient logistics is to create an effective forward and reverse flow of goods and information between the point of origin and the point of consumption in a way that customers' and other stakeholders' needs and requirements are satisfied. That is, keeping a good service level, low costs and a low level of frozen capital.

An unstructured flow of goods can create confusion and mess and usually gives a decreased flexibility in the flow (Womack & Jones 2003). Therefore it is important to create a well structured flow where the products flow easily through the processes. Logistics and material flows can be analyzed and studied in an individual part of the supply chain (Rother & Shook 2003). Still, the definition of logistics and efficient material flows is of high relevance and even minor changes in the flow can have great impact, both positive and negative, of the flow.

In order to find possibilities and room for improvements of a flow it is necessary analyze the current flow. It is important to get a good understanding of how the products flow through the processes and the different activities involved in the flow. This enables identifying value adding- and

non- value- adding activities in order to investigate which activities are necessary and if some activities can be removed, moved or replaced.

An efficient and well planned supply chain will release time from the store to give a high level of customer service (Karlöf 2010). By moving everything not related to service and sales backwards in the supply chain, the store staff can focus on their most important task which is to sell and take care of customers. This means the handling time and the handling convenience of incoming goods in store, is affected by earlier steps in the supply chain.

The handling of incoming goods to store needs to be easy and not time consuming in order to not steel time from other important activities such as service. In order to streamline the handling process and reduce the lead time for this process, the different activities and the delivery packages involved in the process need to be analyzed and streamlined.

A number of actions are recommended to reduce lead times, where two of the actions are eliminate and simplify (Aronsson, Ekdahl & Oskarsson 2004). Eliminating is a question of eliminating activities that does not add any value for the company or the customer, such as double work and re-packing of goods. Simplifying activities is a question of making processes less complex and easier to understand.

The above discussion raises questions of how to reduce waste and simplify the handling process of incoming goods at Gina Tricot. The company has several motives to review the handling of the delivered goods in stores. New arrivals need to be handled smoothly so they can be quickly displayed in the store in order to be sold out before the products become out of fashion. The time for the product from being delivered to store until it is displayed in store is critical to the company's sales, which means that there are economic incentives to develop an optimal handling of the delivered goods. Furthermore it is important to streamline the handling process of incoming goods to store at Gina Tricot in order for the staff to have more time over for service. The questions this study aims to answer are the following:

- How can the activities in the handling process of incoming goods at Gina Tricot be simplified?
- Are all handling activities in the process necessary? If not, how can unnecessary activities be reduced?
- Can any process be moved upstream the supply chain in order to simplify the activities related to the incoming goods to store?

1.3 Purpose

The above problem discussion and formulations of questions lead to the purpose of this study:

The purpose of this study is to investigate the possibilities of streamlining the handling of incoming goods in store, in order to display products in store as quickly as possible and have more time for service.

The handling of incoming goods in store is in this study connected to the activities involved in the unpacking process of deliveries, the wrapping of the deliveries and the labeling of the deliveries.

1.4 Delimitation

This study aims to result in suggestions for changes with focus on the handling of the incoming goods in order to display products faster in the stores and also for the store staff to get more time over for service. The economical aspects have not been taking into considerations when these suggestions have been developed. The master thesis do not include implementation of the final suggestions, hence Gina Tricot themselves need to evaluate the suggestions and weigh costs against benefits.

The study is based on observations and interviews made in Sweden, hence the recommendations elaborated in the study is limited to Gina Tricot's Swedish market. Since no visits or observations have been made at Gina Tricot stores in other countries, the researchers cannot guarantee that the recommendations are suitable for the Gina Tricot stores in other countries.

1.5 Report structure

In the first chapter Introduction and Methodology, the background of this project and a short presentation of the company Gina Tricot are presented. The problem discussion is also described followed by the purpose of the study. This is followed by a description of the current situation of the handling of incoming goods to store at Gina Tricot where problems are identified. Next chapter is the Frame of references, which will support the following analyze of the identified problems. The analyze is then followed by the chapter including the suggestions for changes developed. The report ends with conclusions and discussion where the work is evaluated and finally the report's appendix is placed in the end of the report, which works as a supportive part to the content of the report.

2. Methodology

This chapter presents the procedures and methods used in the study and why the methods used were appropriate. Further discussion of the data collection and analysis of data that have been made and the study's reliability are also presented.

2.1 Research strategy

In order to fulfill the purpose of the study and to give a reliable and valid solution to the problems, it is necessary to use different methods (Bryman 2002). Therefore this study is based on triangulation, that is, several data collection methods are used. This has resulted in a broad study with a wide attack of the problem.

The project started with practical experience at Gina Tricot in order to gain a basic knowledge of the company and to evolve a suitable purpose. In parallel with this, a literature study was conducted concerning the areas that the project covered. This resulted in a good base for the observations, the interviews and the case study at the company.

In a case study activities and processes in a real case is studied, but the researcher do not necessarily have to be involved in making changes in the processes (Wallén 2006). Although the research itself can result in suggestions for change and people starting to think about how the organizations is operated. Hence, the case study can trigger changes. The benefit of a case study is that real life scenarios are studied and detailed knowledge can be gained. The case study method was considered a suitable method to use in this research, since the researchers had possibilities to make observations and interviews in order to analyze processes at the company and the aim for the report was to result in suggestions for changes.

According to Ejvegård (2006) a descriptive method is good as a base for suggestions for changes. A descriptive method intends to result in an explanation of how something works, looks or have occurred. Therefore this method has been used when describing the current situation of the handling of incoming goods at Gina Tricot.

The study was performed with a qualitative approach. The qualitative approach means the focus have been in the essence of the collected data. The study is based in a high importance of analyzing the activities involved in the handling process of incoming goods to store and create an understanding for the current situation (Wallén 2006).

2.2 Data collection

The data collection carried out at the company formed the basis for the empirics and the suggestions for changes. It was therefore essential that the collection of data was made with the right methods for this study to achieve a result of high quality. There are essentially two different types of data, primary data and secondary data (Eriksson & Wiedersheim-Paul 2006). In this study, both data types are used to complement each other in order to get the most reliable results as possible.

Primary data is data gathered for the current study (Ejvegård 2006). In this study primary data has been collected in order to get knowledge about the activities connected to the handling of incoming goods in store. Primary data has been collected through observations and interviews and has been a central information source for this study. The interviews have been conducted with employees at Gina Tricot headquarter and the store staff.

Secondary data is already existing data developed for a purpose other than for the current study (Ejvegård 2006). It is therefore important that there is an awareness of the fact that secondary data can be angled. Secondary data that has been used is in this study is different types of literature that has formed the basis of the theoretical aspects in the report being used as a support to the analysis that has been made.

Observations

Observations make it possible to register different behaviors at a specific moment (Merriam 1994). The technique makes it possible to observe an activity or a situation directly without the attention from the participants. By making observations, an observer can notice things that have become routine for the participants themselves, which can lead to a greater understanding of the whole context.

There are two ways for the observer to take part of an observation, by passive observation or participated observation. In this study participated observations has been made. Participated observation is when the observer participates in the group to be observed. The benefit of making participated observations is that the observers get an direct insight and can utilize their own knowledge and experience to interpret things being observed, instead of solely relying on respondents based on memory images.

The purpose of the observations carried out was to get an understanding and knowledge of the activities connected to the handling of incoming goods to store at Gina Tricot. The observations were made by two observers, the researcher of the study, at seven Gina Tricot stores in Gothenburg, see appendix 1. The observers have participated in the daily work of handling of the incoming goods to store to understand the activities and difficulties connected to this process. During the observations the observers have taken notes and pictures connected to the performed activities which later have worked as supportive material during the research.

Interviews

For information about perceptions, knowledge and opinions of a group of people, oral interviews is often used (Ejvegård, 2006). In this study, interview were conducted in order to get an understanding for the activities connected to the handling of incoming goods to store and to get opinions of things that are working well and things that could be improved. This data was not available on beforehand and was therefore necessary to collect. The interviews have been an essential part in the data collection process.

The interviews conducted with the store staff have been shaped by each specific interview time, but an interview guideline supported the interviews, see Appendix 2. For the interviews conducted at the headquarter no guideline was followed, open questions related to each specific function and

department were asked to these employees. The length of the interviews has varied and numerous people have been interviewed more than once. It has been an iterative process in which the researchers of the study have returned to the respondents several times to clarify and to get complementary information.

The persons being interviewed were randomly selected with the only requirement that it should be employees from several departments with different positions within the company to make the result less subjective. The total number of persons being interviewed, both at the headquarter and in store, is 34.

Literature research

The literature research made in this study was divided into two steps. Initially a literature research was made with the purpose of gaining basic knowledge about the fashion industry and general information about logistics. This literature research formed the basis for the observations and interviews, as well as the problem-identification. Later a deeper literature study was made, which treated areas such as the Lean philosophy, packaging design, visualization and communication. Literature regarding case study methodology and report writing have also been used, in order to facilitate the understanding of how a case study should be conducted and how an academic report should be presented.

2.3 Reliability and validity

The credibility of the collected data in the study is important in order to get a high quality of the final result for the research (Bryman 2002). The credibility of the study decrease if the data collection is made in an incorrect way or if irrelevant data is used. The reliability and validity of this study is discussed below.

Reliability

The reliability of data is the level of credibility of the collected data used in the study (Wallén 2006). This means that the data collections should be able to be repeated at a number of independent occasions, and still give the same result. Bryman (2002) means that it is important that the researchers do not have a preconceived picture of the situation to observe or the areas the interview concern, since this could lead to that specific problems are looked for and other important problem areas are missed. Since the researchers in this study had no experience from working in the industry where the study was performed, they had no previous knowledge of the activities at the company that the study concerned. Hence, the level of preconceived ideas was low.

Furthermore, reliability measures how reliable the references used in the study are and what type of references that have been used. Since this study is based in triangulation, several different references have been used. A wide range of references means different approaches to solve the problem can be used (Eisenhardt 1989).

Validity

The validity of the study means to what extent the study investigates what it is supposed to investigate (Bryman 2002). In order to get a high validity of the study, it is important to make the

observations on relevant areas under normal conditions and during interviews asking relevant questions of importance for the purpose of the study.

During observations it is important to keep in mind that reactive effects can appear, that is that the observed persons have tendency to change their normal behavior in order to show a more positive side (Bryman 2002). This can lead to that the result of the research gives an incorrect picture of the reality. To reduce the risks for reactive effects in this study, both interviews and observations were initiated with a practical experience in the stores, to get to know the people that were supposed to be observed and interviewed later on. Furthermore, both interviews and observations were conducted several times under a period of four months, in order to get the observed and interviewed people to feel more comfortable. Additionally this also contributed to that the researchers got more experience and felt more comfortable in doing the observations and interviews.

Risks for reactive effects have also been reduced by not showing any interview questions for the respondents in advance. The purpose of this was to avoid that the respondents could prepare their answers. However, the interview areas were presented in advance in order to give the respondent a sense of comfortableness before the interview.

The results of the interviews can also depend on personality, both the personality of the interviewer and the respondent (Kvale 1997). If the persons involved in the interview are uncomfortable, this can lead to incomplete answers. In this study, this has been handled by thorough preparations of the interviews. Furthermore the interviews were conducted in the work place of the respondent, in order to make the respondent comfortable.

3. Introduction to Gina Tricot's products and activities included before reaching store

In this chapter background information regarding Gina Tricot is presented. Initially Gina Tricot's products and a description of the roles involved in product orders at the headquarter will be presented. This is followed by a general description of the central warehouse and the cooperation partner Post Nord. Furthermore three different product flows are presented and also a flow of the main activities made in store related to handling of incoming goods. Finally the store resources are described.

3.1 Gina Tricot's products

Gina Tricot's vision is to be a fashion company that manufactures products to be bought and used by all women. To be able to reach the target group of all women, both younger and older women, they continuously need to come up with new products.

Gina Tricot is an analysis based company using a push system for planning of upcoming products and orders. That is, all decisions regarding purchases and planning are based on analyzes of key performance indicators, statistics and forecasts based on these numbers.

The products at Gina Tricot are divided into different categories in accordance with a sales horizon. The sales horizon is four weeks, eight weeks or an unlimited period of time. The four weeks-products are so called trend products that are estimated to be available in store during four weeks. This is products with a high-fashion degree, which are mainly bought by the most trend sensitive customer segment. The eight-weeks-products are so called season products that are estimated to obtain a steady customer demand during a whole season. The remaining product group, lasting for an unlimited period of time, is so called basic products which do not go out of fashion. Examples of basic products are jeans and basic tops without prints. Every second week Gina Tricot has campaigns in store where several predetermined products are displayed together close to the store entrance to get extra attention and attract customers. All of the above explained product groups can be part of these campaigns.

All products included in the different product categories named above are not sent to all stores. Gina Tricot has divided their stores into different segments due to the location, size, assortment and the sales for the store. These segments are named A-, B-, C-, D-stores. Segment A includes the stores that with respect to size, sales and assortment are the biggest. Therefore these stores usually require more products and also all types of garments. Correspondingly, the segment D includes the stores of minor range.

The products sent to store can be delivered in two ways, packed in cardboard boxes or delivered hanging. There are three different types of cardboard boxes that can be delivered to stores; A-, B- ,C- ,D - boxes, X-pack and picking boxes. The A-, B-, C-, D- boxes are boxes that are packed in accordance with the segments described, which means that the A-boxes contain the highest amount of products and are sent to A- stores, and the D- boxes contain a smaller amount of products and are sent to stores classified as D-stores. X-pack is boxes that also only contain one product but not in accordance

to the store segments, each X-pack of a specific product contain the same amount of products and are used for replenishment. The A-, B-, C-, D-boxes and X-packs are boxes containing one specific product in the boxes and will in the report be named as product specific boxes. The picking boxes are boxes containing replenishment of products and the box contain several different products packed in the same box.

3.2 The roles at the headquarter involved in product orders

Forecasts for order and the role of the controller

The controllers working at Gina Tricot have an important role during the forecast- and planning phase, since these persons are the ones performing analyzes of the product sales. The controller is involved from the initial planning for a new season and the analyzes made by the controller will be of importance in decisions regarding what volume to produce and sell. The controller at Gina Tricot also has a role of gassing and breaking. That is, if analyzes have shown that a product have had deficient sales and there is a re-order of this product, the controller need to inform the purchasing department of this. Next the purchasing department needs to investigate the possibilities of stopping the order, and to take actions in doing so, if possible. The other way around, it is also important for the controller to react when products are selling well and inform the designer and purchaser of this in order to design similar styles in updated versions.

The role of the purchaser

As mentioned before, Gina Tricot are purchasing controlled which means the purchaser takes the active decision whether or not to design and produce a product. This means, the purchaser is highly involved in the design process. Volumes and available capital are given from the controller, with this as a base the designer and purchaser starts planning the design and collect order samples and price suggestions from potential suppliers.

When the final design, including fabric, pattern and colors, is decided, the manageress decides all the measurements of the garment. When a good deal regarding price and design is reached with the supplier, a joint decision with the purchaser is taken to finalize the order and to decide when the product needs to be in store.

The purchaser determines how much of the product that will be dedicated for the stores respectively the online shop. This decision is taken when the order is released, in order to inform the supplier about it since the products for the online shop are packed differently compared to the products for the stores. Regarding the products for the online shop, each product unit is wrapped with plastic, while for the products for the stores several units are packed together in one plastic bag. The purchaser decided the amount of products being dedicated for the online shop, but a common guideline used is about 10 % share to the online shop. This percentage can change depending on the size of the order.

The role of the allocators

The role of the product allocators at Gina Tricot is to determine how much goods to distribute to the various stores around Sweden, Germany, Finland and Norway, and also to the online shop. The distribution of goods is mainly based on statistic data but also on knowledge about how the different stores are composed. The compositions of the stores are different in size of the shop, assortment

and sales, and all these aspects are important to consider when deciding the distribution of goods. All data about the different shops is not registered in the system, hence it is of great advantage if the product allocator has own experiences of how the stores are designed. Since this knowledge is important the product allocators make visits in different shops once in a while.

Each day, the allocators analyze data from the previous day's sales. The IT system provides information about the shops and the countries that sold the most or the worst for each of the different garments. Some goods that do not sell good in Sweden may perform better in other countries, then it is the product allocators' responsibility to ensure that this garment is sent to the store and country where it has the best sales statistics.

In addition to analysis of statistics the product allocators look at historical sales data of similar garments, also called reference products. When analyzing the sales statistics of reference products it is sometimes possible to see a pattern of how these products have performed in different countries and stores, hence this data can be of guidance when distributing new products. The more similar to the reference product a garment is, the more reliable is the statistics and the product allocator can use it as a good base. When using reference products, it is important to consider what period the reference product was available and sold in store. Since the fashion industry is an industry where trends change quickly, it is not recommended to use too old products as references. Additionally, it is also important to look on up-to-date numbers about sales in different stores and countries. A store that was having good sales during one certain period of time may not perform equally today.

The responsibility of the incoming logistics department

At the headquarter of Gina Tricot there is one department assigned for handling of all activities related to incoming logistics. This department is daily involved in planning of transportations from the different suppliers to the central warehouse and also the handling of customs declaration.

Gina Tricot is currently using suppliers from Turkey, India, China and Bangladesh. Today the goods from Turkey are most commonly transported by truck to Sweden with a lead time of about 1 week. Deliveries from Asia are usually transported by boat with a lead time of approximately 30 days. From the suppliers in the north of Asia the goods, in some cases, are transported a short distance by train and the remaining distance by boat, in order to shorten the lead time. Gina Tricot tries to avoid using air transportation, because of the high cost and the environmental impact it generates. Although, in exceptional cases it can be used, for example if a delivery is delayed and it is necessary to speed up the transportation time.

3.3 The central warehouse

In the beginning of 2014, Gina Tricot will insource their inventory handling, but today Gina Tricot's central warehouse is managed on behalf of a third party logistics company, located in Viared just outside Borås. This company works with international transport and logistics solutions to various companies. Gina Tricot is today one of their largest customers, but in the same warehouses they also handle inventory management for other companies. Currently, both all Gina Tricot's goods going out to the stores and the goods that belong to the online shop is managed by the same third party logistics company.

The storage area at the central warehouse reserved for Gina Tricot's products are divided into three sections; distribution area, picking area and online shop area. All goods that can be sent to stores as unbroken boxes are placed in the distribution area. All boxes do not necessarily have to be stored in the central warehouse, some boxes are directly cross-docked to stores as they arrive. Cross-docking is a logistic concept with the primary purpose to enable a consolidation of many smaller shipments between multiple shippers and recipients. With a cross-docking terminal it is possible for incoming shipments to be sorted and moved across the terminal to be directly loaded onto outbound trucks and the storage of goods is thereby reduced (Stephen & Boysen 2011).

In the picking area all boxes that will be opened and picked piece by piece are stored. The goods stored in this section are small products such as make-up and underwear but also basic garments that Gina Tricot has in the range of products under a long period of time, such as jeans. These items are picked individually and placed together in a box with mixed products that will be sent to store. At the central warehouse Gina Tricot also have a small area for storing store equipment material such as hangers, alarms and plastic bags.

When the distribution of goods is completed by the allocators at the headquarter, a list of what goods to be sent to the different stores are sent to the central warehouse through the IT-system. The goods are then picked up by the Swedish postal service, Posten, that take care of the transportation to the stores in Sweden.

A specific area in the central warehouse is dedicated for the online store. At the storage for the online shop all products are unit packed to make it possible to pick together customized orders for the online shop customers. In some cases, Gina Tricot chooses to send goods from the online shop to the stores. This happens when the purchasing statistics of a product has shown that the product is selling better in store compared to the online shop.

3.4 Post Nord

Some of Gina Tricot's products are blown at the company Post Nord before further distribution to store. The decision whether or not to blow a product is taken by the purchasers and depends on the type of product and material. Currently only a small part, approximately 1%, of Gina Tricot's garments are sent to Post Nord to be blown.

All products delivered from supplier first arrive at the central warehouse, and are then further transported to Post Nord. The distribution decision normally takes place in the afternoon at the headquarter and in the morning the next day Post Nord starts working on the delivered order. Depending on the size of the order and the number of garments, the time for the blowing activity until the product is delivered back to the central warehouse can vary, but the goal is that the garments will be returned to the central warehouse after one and a half day.

When the garments have been blown they are packed hanging in cardboard boxes, besides from the garment sent to Norway which are delivered hanging wrapped in plastic. Depending on the type of product they are either packed in cardboard boxes unit per unit or several units packed in the same box, all products provided with a hanger. From Post Nord all cardboard boxes are delivered back to

the central warehouse before distributed to store. The garments to Norway are delivered directly from Post Nord to the stores in Norway, where Post Nord themselves handle the transportation.

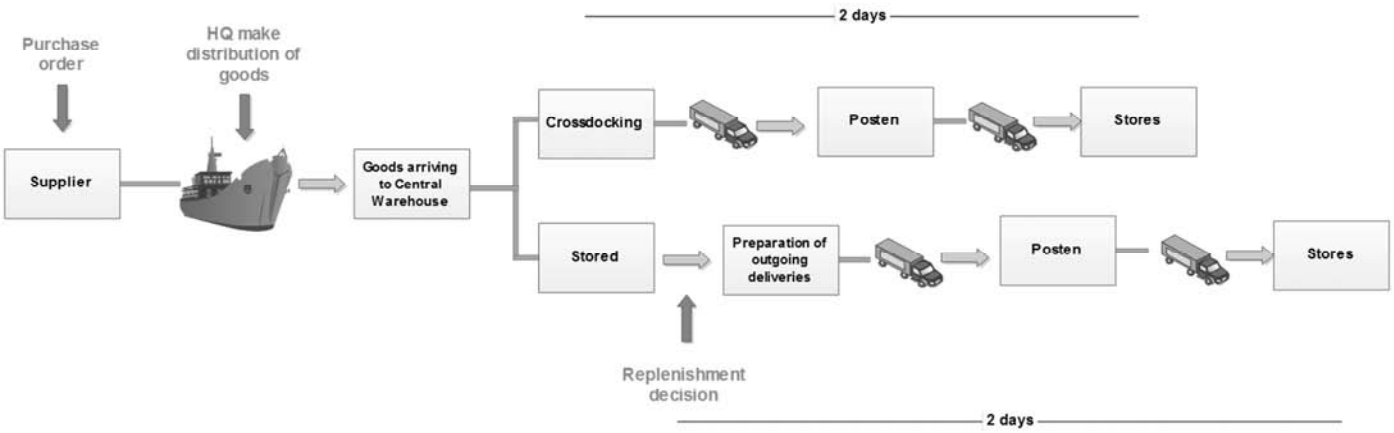
The reason for the boxes to be delivered back to the central warehouse instead of directly to the stores is that Gina Tricot has an agreement with the stores that delivery only should take place once a day. The second reason is that the lead times becomes more reliable when Gina Tricot control the distribution and deliveries by Posten.

3.5 The different product flows and lead times

The aim of this chapter is to give the reader an understanding of the different flows that occur depending on how products are packed before they arrive to stores. Three flows are described; one for products packed in product specific boxes, one for garments that are blown before transported to store and one for the picking boxes.

All flows shown below starts at the point where the purchaser release a purchase order to the suppliers. The lead time for the goods being sent from supplier to the central warehouse varies depending on the means of transportation and the location of the supplier. From suppliers in Asia the the lead is around 24-30 days but for the suppliers in Turkey the lead time is only one week. The other lead times depending on the flow and activities made in Sweden are stated in the pictures.

Product specific boxes:

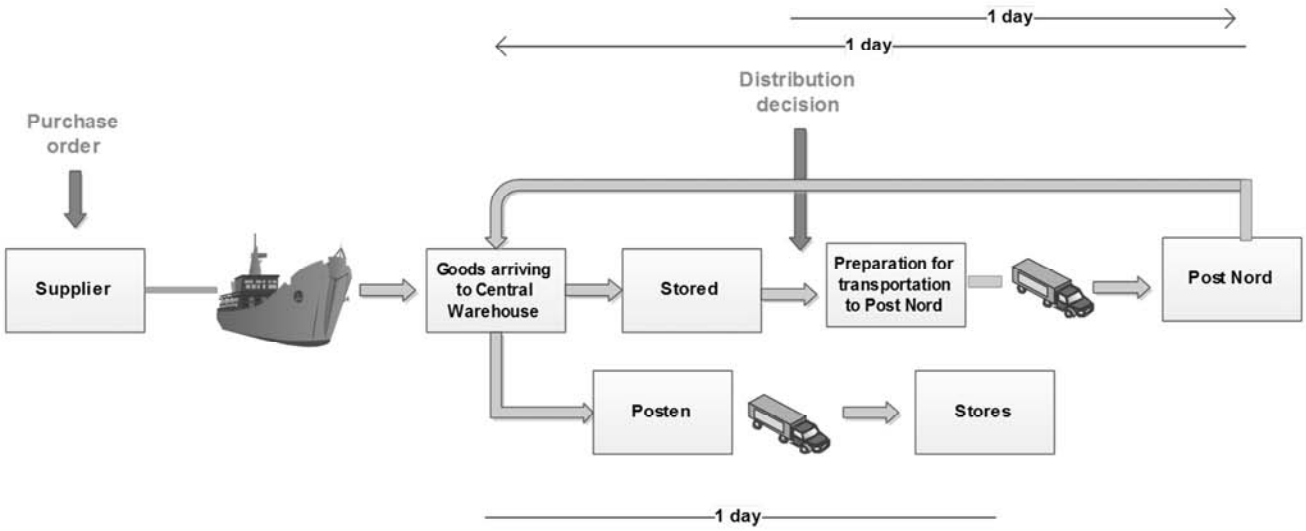


Flow1: The product flow for the product specific boxes.

When the products have been manufactured at the supplier, the products are packed in the different boxes A-, B- ,C- , D-boxes or X-pack. How many products to be packed in each box and how many boxes of the different types to be delivered is determined by the purchaser as the order is released. About five days before the goods is planned to arrive at the central warehouse, the allocators at the headquarters take decision of how many of the products that will be distributed directly to the stores. As the goods arrive to the central warehouse, the products that have been decided to be directly distributed to stores are cross-docked and picked up by Posten. Goods that arrive to the central warehouse earlier than planned may not be possible to cross-dock since it will affect the

determined schedule for products to be displayed in store. The lead time until the products reach the stores is one day from the time that the goods have been picked up by Posten at the central warehouse. The products that are not cross-docked are put in stock. As products are being sold in store there will be a need for replenishment of the products kept in stock, sometimes all of the remaining products are replenished and sometimes only a partial quantity. The allocators take the decision when the replenishment will take place and the decision is sent to the central warehouse directly through the IT-system. The products are then picked from the storage shelves and prepared for transportation. Posten picks up the goods and handle the goods at the Posten terminal before it is further transported to the stores.

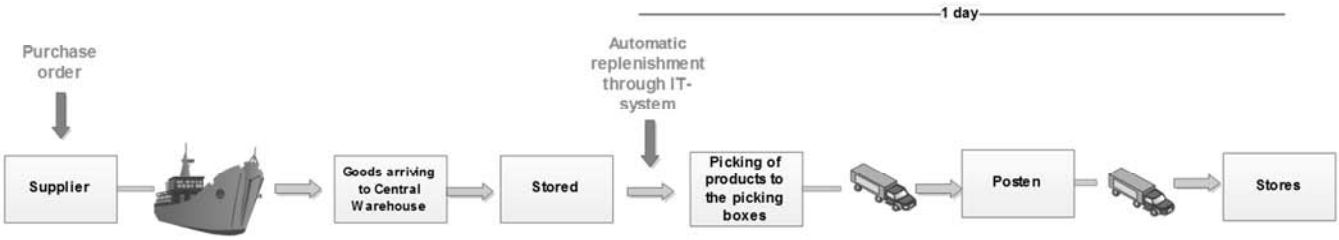
Garments that needs to be blown:



Flow 2: The product flow of the garments that needs to be blown before distributed to stores.

For products that are determined to be blown and delivered on a hanger to the stores, the flow looks slightly different compared to the flow of the product specific boxes and has a longer lead time due to that products are sent to a third party to be blown. All goods arriving to the central warehouse are placed in stock. When the decisions of distribution is made by the allocators, the boxes are picked from the inventory area and prepared to be picked up and transported to Post Nord to be blown. The products are blown at Post Nord during the day and sent back to the central warehouse in the evening. From the central warehouse, the blown goods are distributed together with the other goods that will be picked up by Posten the next day for further distribution to stores.

Picking boxes:

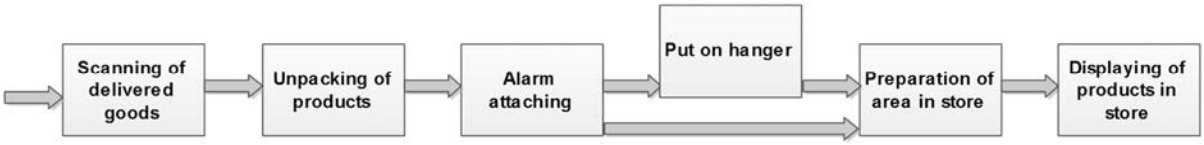


Flow 3: The product flow of the garments packed in a picking box

Products being packed in picking boxes are products that are sold for a longer time period and are called basic products. As these products arrive to the central warehouse they are, as earlier mentioned, stored in a separate area dedicated for these picking products. All the boxes stored in this area are boxes that are opened, which enables picking of separate units for different products. The daily sales of these basic products are registered in the IT-system. By the end of each day, the staff at the central warehouse prints a list of products needed to be replenished. The products on the list are picked and packed into a picking box. The next day these picking boxes are, together with the other goods, transported via Posten to the stores.

3.6 Handling activities for incoming products to store

The stores receive deliveries every day, except on weekends. When deliveries have arrived to store, the store staff starts to handle and unpack the incoming goods. The activities taken place in store before products can be displayed in store is shown in the flow below.



Flow 4: The activities made by the employees in store of incoming goods to store until products are displayed in store.

The first activity for the employees is to scan all the incoming goods. Both the boxes and the things being delivered hanging are scanned before unpacking.

Next activity is to unpack the products. This activity includes; opening the cardboard boxes, picking products to be displayed in store and removing wrappings around the product such as tissue paper and plastic. If new products are delivered, 2 pieces of each size and color are picked to be displayed in store. If the products delivered are product that already are present in store, only the missing sizes and colors are picked. All products are then supplied with an alarm and all products that will be displayed hanging in store are also supplied with a hanger.

Before the store staff move the garments from the store stock into the store they need to prepare the area where the products will be displayed, this could be an area on a table or a hanging area.

3.7 Store resources regarding staff and stock

Different stores have different possibilities regarding the way to structure and organize the unpacking of the incoming deliveries. This mainly depends on the staff resources in the store and of the layout of the store stock.

Regarding staff resources, in most stores, the staff has a joint responsibility of receiving and unpacking incoming deliveries. And in few stores, one of the stores in Gothenburg for example, they have staff only working in the store stock, taking care of all the receiving and unpacking of goods. This is one of the biggest shops in Sweden, receiving among the biggest deliveries of all Gina Tricot stores.

Regarding the layout of the store stock there are variations in how much room there is for storing the clothes, hence the possibilities of how much deliveries the stores can receive and handle vary, see picture 1 and 2 below. Furthermore, some stores have clothes rails making it convenient to receive the clothes hanging. Other stores stocks are not equipped with clothes rails and hence it is difficult for them to receive clothes hanging.

Picture 1: Store stock in the Gina Tricot store at Kungsgatan.

Picture 2: Store stock in the Gina Tricot store at Kompassen.

4. Current activities and problem identification regarding distribution of goods and handling of incoming goods to store

In this chapter the processes before the products are displayed in store are described.
The section aims to provide the reader information about material planning and replenishments of goods, the packaging design and the activities from receiving the goods in store until they are displayed and ready to be sold to customers. Each section is followed by a problem identification, which is made with consideration to find possible improvements areas with the aim to decrease the handling time of incoming goods to store.

4.1 Routines for material planning and replenishments

There are two different material planning methods used at Gina Tricot. For basic products lasting during an unlimited time period, a reorder point, ROP, is used. For trend- and season products lasting for four and eight weeks, a variant of a periodic review system is used.

Regarding the ROP used for basic products this means that when the amount of a product reaches a certain level, the ROP, a reorder quantity for this product is automatically generated. This method is not applied in the case of replenishing trend products and season products. Since these types of products only last for a short period of time, Gina Tricot has chosen not to use ROP for these products. This would require setting new reorder points and reorder quantity values for every new trend- and season product, and replenishment of these products are usually only made once or twice, hence, the reorder point and quantity values, would only be used few times. Instead, the replenishment of trend-and season products is decided by a variant of a periodic review system which means that the need for replenishments is reviewed after a certain time period and the replenishment quantity is decided manually by the product allocators.

The current routines for replenishment of trend- and season products are sending out 80 percent of the garments at the first shipment, and keeping 20 percent in the central warehouse for replenishment. The reason for keeping one part for replenishment is that Gina Tricot wants to distribute the rest of the goods when the sales have started and it is possible to judge where the biggest need for replenishment is. The benefit of this division is that it reduces the risk of sending out too large volumes to stores that will not be able to sell everything. That is, it increases the chances that products are sent where they are actually needed. On the other hand there is a risk of keeping the products in stock for too long since they might get out of fashion. There are no specific guidelines of the frequency or the amount of replenishments.

The store staffs claim that replenishment of trend garments is taking too long time. According to the store staff, the stores can be out of stock of a specific product for days up to weeks. In some cases, the stores do not think they will receive replenishment and they do not plan for doing so. Although, sometimes they do receive replenishment without knowing and the store manager need to reorganize the planning for the store. Since the replenishment sometimes is delayed like this, the garment might already be out of fashion when it is received in store. The customers may have gotten bored of the garment, or they have stopped looking for the garment because they have received the information that it is out of stock and will not be replenished.

One example of an extremely delayed replenishment was a leopard sports top that became very popular and sold out quickly. The first replenishment of this top was received in a few days, but when the top sold out again it took approximately a month before it was replenished again. According to the headquarters, the reason for this delay was that the products were reordered from the supplier who had to reproduce the product. But the stores did not know about this and a frustration was created among the store staff since they thought that this was a late replenishment from the current stock on hand in the central warehouse.

Sometimes, distribution of goods is not only done from the central warehouse to store, but also from the online shop to store. This type of distribution is done if products have reached a high popularity in stores and a low popularity on the online shop. That is, if a product is out of stock in the central warehouse for the stores but there are still several units of the product available on the online shop, these products can be sent to store. This type of distribution takes longer time for the stores to receive, since it is necessary to see the trend and the sales before actually giving up to keep selling the product online. Furthermore, distributing goods from the online store means that the store receives the garments unit packed.

The distribution from the online store is a common responsibility for the ordinary allocators and the online shop allocators. There is no communication between the ordinary allocators and the online shop allocators regarding the distribution from the online shop, instead communication regarding this is done via the online shop controller.

Problem identification:

The fact that there are no specific guidelines on how many replenishment shipments to make is contributing to delayed response of replenishments.

When garments get out of stock in the stores and the replenishments are taking a long time this leads to that the store do not think they will receive replenishment of these garments. If replenishment finally is received it can be problems of selling the garments since it has gotten out of fashion. Delayed replenishments will lead to time consuming reorganizations in store to make room for the replenished garments.

The problems explained above can be linked to a lack of clear guidelines, lack of communication and lack of clear communication channels between the store and the headquarters. The lacking information of what to be delivered and what is delayed can create confusion and unnecessary work.

4.2 Delivery routines

The stores receive deliveries Monday to Friday each week. Each day the store receives a shipping list from the headquarter via their IT system, which states what products to be delivered the next day. Although, interviews and observations have shown, that the shipping list is not unusually, incorrect. The clothes stated to be delivered, are sometimes delayed, usually just one day but in unusual cases the boxes never show up. The reason for this vary, it can be that the delivered goods from supplier to the central warehouse is sometimes incorrect or delayed. This will result in that the distribution of

goods made by the allocators, will not be able to be followed. Therefore the store will receive less than what the shipping list tells, since this list i based on the distribution made by the allocators. The incorrect shipping lists can also depend on carelessness by the central warehouse staff. The central warehouse's inventory levels are sometimes incorrect which can depend on picking errors, boxes being wrongly placed in the central warehouse and inventory inspections being deficient. The inaccuracies in the inventory levels sometimes have the consequence that the correct amount of boxes cannot always be sent to stores. The inaccuracy in the shipping list can create irritation among the employees in store.

To make the traceability of the goods better Gina Tricot has recently introduced scanning of all goods that are delivered to store. On the product specific boxes a barcode is attached on the outside of the cardboard box. This barcode is scanned by the employees before they unpack the products. This barcode contain information about the type of product and the total number of products the box contains.

The picking boxes contain several different products. These boxes do not have any barcode attached on the outside of the cardboard boxes. Instead each product package inside the box is provided with an individual barcode. This means that the employees need to open the box and scan every product package in the box separately.

When the barcodes have been scanned they are removed from the cardboard box or the product packages and attached on a paper placed in a folder, see picture 3 below. These barcode papers are supposed to be saved for three months. The employees say that the introduction of the scanning system has made the unpacking process even more complicated and also more time consuming.

Picture 3: The picture shows how barcodes which have been scanned are attached and stored in a folder.

The store manager and the Visual Merchandiser, plan reorganizations and displays of products in store from one day to another. Some stores use the shipping list when planning, but since it is received short in advance before the actual deliveries and it is not unusually incorrect, this can lead to a lot of reorganizations and rework. New products arrive on the website two days before possibly arriving in stores, therefore some stores keep themselves updated on new arrivals at the website to get an estimation of what may arrive in store within the next few days. The store also have access to parts of the IT system the headquarter uses, which means that technically the store should be able to see upcoming deliveries when the product allocator have made the distribution of the goods. This can work as a good guideline of what will be delivered to store, and this information can be accessed through the IT system, although the store staff are relatively insecure in using the IT system and unaware of its functions.

Since the trends in the fashion industry change quickly, it is important to unpack and display products as quickly as possible. The method for doing this, in all Gina Tricot stores observed in this study, is opening and unpacking all boxes randomly. There is no prioritizing on which boxes to start with.

Problem identification:

The shipping list and the information of what to be delivered is received only one day in advance. This is due to the quick changes in the fashion industry and the short lead times Gina Tricot work with. The inaccuracies in the shipping list deriving from carelessness at the central warehouse create irritation among the store staff. The store staff sometimes uses the website to get a sense of what will be delivered to the store, but this is just estimations that is made by each store separately. There is a possibility to see deliveries in advance in the IT system, but there is a lack of knowledge in the stores that this information is available. The more information the stores have about deliveries, the easier they are to plan and the less time it takes to organize and reorganize.

The fact that the employees need to scan all the goods arriving to store has made the unpacking activity even more complex and time consuming. Scanning the product specific boxes is not very time consuming, since the barcode is attached on the outside of the box. For the picking boxes on the other hand, the box need to be opened and several product packages in each box need to be scanned. Also the administrative work connected to this steal time from the real activity.

As earlier mentioned there is no standardized way of unpacking the boxes. The boxes are opened randomly and there is no prioritization of the boxes such as unpacking the most important garments first. Not having a standardized way of unpacking the boxes can lead to inefficiencies and delayed displays of important products, such as campaign products.

With the reasoning above as a background, the main problems regarding the delivery routines in store is the lack of information regarding deliveries and the communication between the store and the headquarter regarding this. Furthermore there is a lack of routines and prioritizing when unpacking the garments. An additional problem identified is that the way the scanning is done today is extremely time consuming and creates frustration among the staff.

4.3 How products are packed when delivered to store

The products delivered to the stores can be delivered in three different ways; in products specific boxes, in picking boxes containing several different products or on a hanger. The number of boxes in each shipment varies between 10-50 depending on store size and day. Out of those boxes, 1-4 boxes are picking boxes. Products delivered on hangers is not delivered each day, this type of delivery is only approximately 1 % of the total amount of delivered goods.

Product specific boxes

As earlier mentioned, Gina Tricot stores are divided into four different segments; A-, B-, C- and D-stores and products that are sold for a duration of four or eight weeks are packed in accordance with these segments. These boxes are called A-, B-, C- and D-boxes, where the A-boxes contain the highest amount of products and are sent to A- stores, with decreasing amount to the D- boxes which contain the smallest amount of products and are sent to the D-stores. The A-, B-, C- and D-boxes, contain one product type in different sizes. When replenishment is needed for these products, the same type of boxes are sent delivered to the stores again or if one product sold extra well in a B-store, it might receive a A-box in order to be adapt to predicted forecasts.

For replenishment, there are also a special type of replenishment box, so called “X-pack”. When all A-, B-, C- and D-boxes are delivered to stores, they will receive X-packs as replenishment. All X-packs contain the same amount of products, hence the amount of X-packs sent to stores is adapted to the predicted sales in each stores, based on historical sales. That is, the stores which have sold the most of a products, receive the highest amount of X-packs, and the stores which have sold the least of a product, receive the lowest amount of X-packs. In some cases, if a product has not sold well, no replenishment is done. The proportion between the number of A-, B- ,C- ,D- and X-pack is determined by the purchaser when the supplier order is released. The supplier then pack the products in accordance to this decision.

The number of products packed in the same box vary since the volume and size of different products vary. A box with knitted cardigans can contain 15 pieces while a box containing tank tops can contain 40 units. The picture below illustrates a product specific box, picture 4.

Picture 4: The picture shows a product specific box and its content of one product variant.

Picking box

Basic products that are sold for an unlimited time period arrive packed in a similar way as for the A-, B-, C- and D-boxes the first time they arrive, that is, one type of garment arrive separately in one box. But when receiving replenishment of these products different type of products arrive in a so called picking box. In the picking boxes several different products are packed together and for the basic products it is possible to replenish with one specific size. The box does not only contain garments such as tops and trousers, but also makeup, accessories and underwear. The number of picking boxes delivered to the stores vary from 1-4 boxes each day.

Since the boxes are packed with different products, in different sizes, there is no actual structure in the box, all products are packed unsorted in a mess. There is no label on the box providing information of the content of the box. Because of this, the staff finds it troublesome to find out what the box contain and are unmotivated to unpack the boxes. The makeup products are small with respect to size, and are put in the box with no further thought and can be hidden in between the garments. This makes the structure in the box even worse. Furthermore, the makeup is not surrounded by extra wrapping as a protection and if some of the makeup will broke during transportation, the garments can thereby be damaged. The picture below illustrates a product specific box, picture 5.

Picture 5: The picture shows a picking box containing several different types of products.

Products delivered on hangers

Some garments are blown to reduce wrinkles before arriving to store. To keep these garments plane they are delivered on hangers. The products delivered on hangers could either be packed into a cardboard box or being wrapped into plastic. The hanging products packed in cardboard boxes could either be packed separately unit by unit or several products in one box.

The product is supplied with a black unlabeled hanger. When arriving in store the cardboard box or the protecting plastic wrappings are removed, and the hanger is replaced with a hanger marked with the Gina Tricot logo before being displayed in store.

The different stores have different sizes of their store inventory, which means that they have different possibilities to store products delivered hanging. The employees working in the stores with enough space to store products hanging, appreciate this way to get products delivered as long as it is wrapped by plastic and they do not have to unpack boxes.

Problem identification:

The fact that the goods are delivered to the stores in three different ways is not in itself a problem. The actual problem is the non-value adding handling required for the products being sent in a picking box or on hanger.

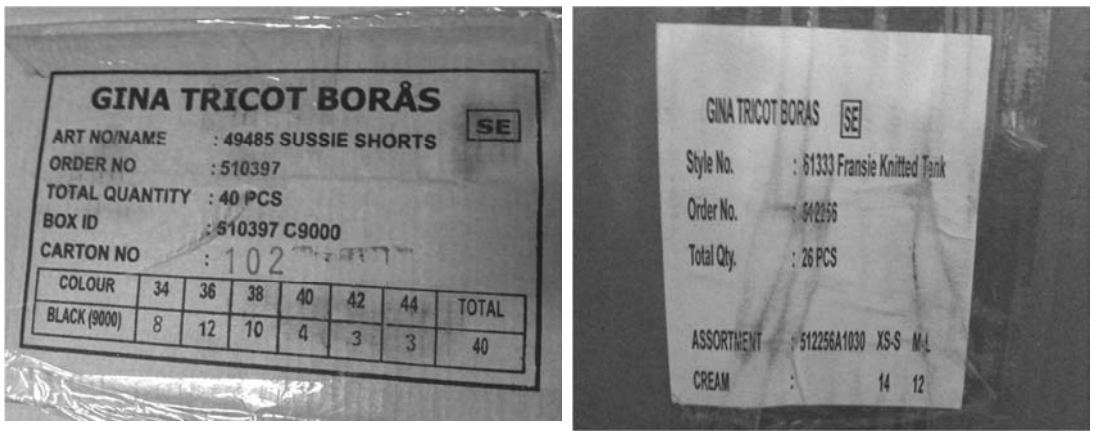
Receiving picking boxes containing replenishments should be appreciated by the store's employees, since these products may be out of stock in the store. But due to the fact that these boxes contain several different products, have no structure and are not labeled with what they contain, the staff is unmotivated to unpack these types of boxes. Furthermore, the makeup being delivered in the same box as garments contributes to even more mess in the box. The staffs consider the unpacking of the picking boxes as time consuming and do not give prioritizing to get them unpacked.

Products being delivered on hangers are delivered on hangers without Gina Tricot's logotype. Each product must be removed from the supplied hanger and be re-hung on a new Gina Tricot branded hanger, which is a time consuming activity and it.

With background of the reasoning above the main problems regarding how products are delivered to store is the fact that staff is not being motivated to handle and unpack the picking boxes and that the bad structure in the boxes makes the unpacking process time consuming. Furthermore the products supplied on a hanger require time consuming activities in terms of re-hanging them on Gina Tricot branded hangers.

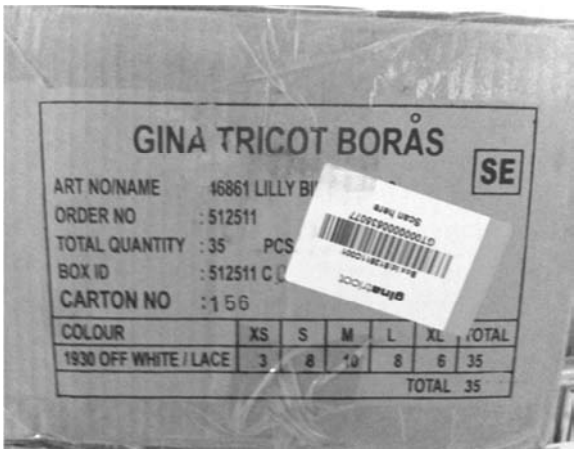
4.4 Labeling of boxes and products

All the product specific boxes are labeled outside the cardboard box with information about the product name and quantity of units per size. The information is in most of the cases printed on the cardboard box otherwise there is a white sticker attached on the box, see picture 6 and 7 below.



Picture 6 & 7: The two above picture show how product specific boxes are labeled containing information about product name, total number of pieces, size and color of the products packed in the box.

The information on the boxes is seldomly used by the employees but when prioritizing is necessary it is of great advantage. Since Gina Tricot started to scan all the goods delivered to store barcode sticker is also attached to the cardboard box. The distribution of the goods is as earlier mentioned managed by Posten. Also Posten attaches a sticker to the box that provides the box with different id-numbers connected to that specific box. Both of these last mentioned stickers are sometimes placed in a position covering the information about the content of the box. In those cases it can be hard to read the content information provided on the boxes, see picture 8 and 9.



Picture 8 & 9: The two above pictures illustrate how information on the boxes can be covered by stickers. The first picture shows how a barcode attach at the central warehouse can be placed. The second picture shows how a sticker by Posten can be placed.

If a garment is included in a campaign, it is predetermined which products that are supposed to be displayed together in the store. The campaigns are usually connected to the advertisement Gina Tricot has on advertising pillars in the city and on TV commercials. For this reason it is important that these garments are displayed in store at the determined date of the campaign. If these products are delivered short time in advance it can be necessary for the employees to prioritize unpacking of these product before other products. Today this is difficult, since the labeling of the boxes only contain information of name of the product, size, and amount of pieces.

Before a campaign, the stores are provided with information regarding which products to be included in the campaign and how the products will be displayed in store. However, this material does not tell how much products that will be delivered or when it will be delivered. If campaign products are necessary to prioritize during the unpacking process the employees needs to look in this campaign material to find out the name of the products that should be included in the campaign. The product name on the delivered boxes is then compared to find the right ones, which the employees can find time consuming. Another common way of making prioritization of campaign products is opening all boxes randomly to find the campaign products, since the employees know from the campaign material what the products included in the campaign look like.

Inside the cardboard boxes the products are sometimes packed in additional bags. The A-, B-, C- and D-boxes, earlier described, contain one product type in different sizes. In these boxes each size is packed separately in one plastic bag, labeled with a sticker providing information of the size of the products. That is, all garments in small are packed together in a sealed plastic bag, all medium are packed together in a sealed plastic bag and so on. With knitted cardigans all sizes are packed jointly

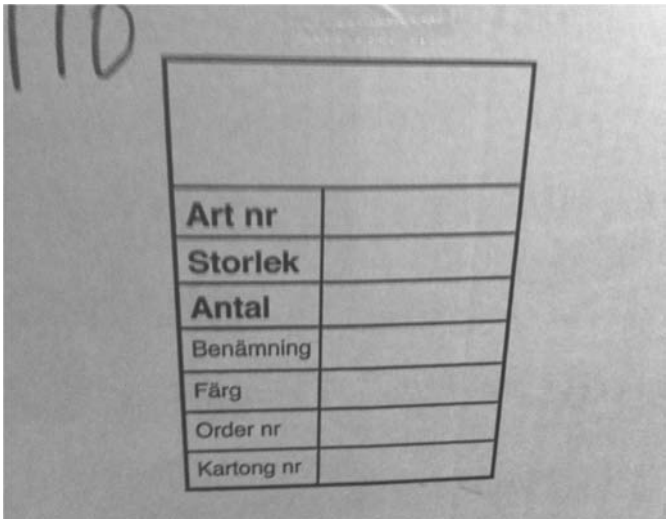
in one box, but sizes are separated by placing the garments of different sizes in opposite directions.

Gina Tricot has a collection of garments made of organic cotton. These garments are each tagged with two labels – one size label and one collection label promoting the organic cotton the top is made of. The label providing information about the size of the garment, is placed in the back of these two tags, see picture 10 below. During observations, the staff explained that they thought this was annoying since it makes it difficult to find the size of the garment when they are removed from their original package and kept in stock. The reason for this is that the first label covers the one containing information about the size. This is also the case for other products such as jeans and sportswear, but in this case there are three labels attached to the products, see picture 11.

Picture 10: The picture shows the two tags that are attached to garments made of organic cotton. The tag placed in the front contains information about the organic cotton collection. The second tag is the one containign information aboout size and price.

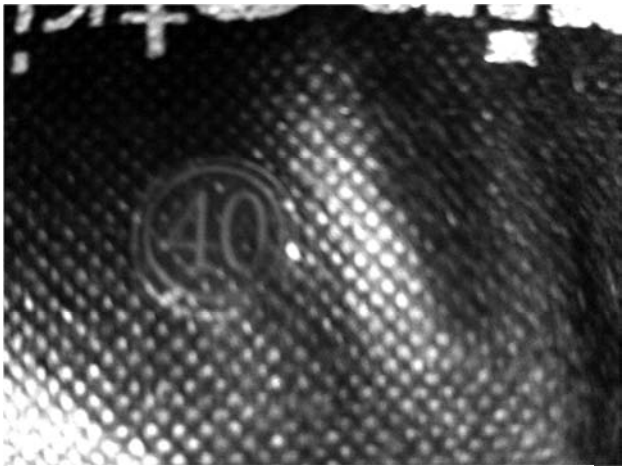
Picture 11: The picture shows the three tags that are attached to sportswear. The yellow and the transparent tag contain information about the sports wear collection. The other tag contains information about size and price.

The picking boxes earlier explained, contain replenishment of several different products. These boxes are lacking labeling of what they contain. Since they contain several different products, the staff needs to open the box and look through it properly to find out the content. Below a picture of how the cardboard boxes used for the picking boxes are presented, picture 12.



Picture 12: The picture shows that the picking box is not labeld with any information regarding the content in the box.

Shoes are delivered in a box containing either canvas bags with one pair of shoes in each canvas bag or in additional boxes with one pair of shoes in each box. Regarding the canvas bags, the bags are marked with a small, transparent sticker providing information of the size of the containing shoes, see picture 13 below. However, the sticker is badly attached to the bag and it usually falls off. In the cases where the sticker is still attached to the bag, it is difficult to find since it is transparent and the color of the text is dark and melts in with the color of the bag.



Picture 13: The picture shows the sticker that is attached to the canvas bags that shoes are packed into. The sticker is small, transparent and do not attach well to the canvas bag.

Problem identification:

Most of the product specific boxes delivered to the stores are labeled with what products they contain. But the barcode stickers and the ID-number stickers from Posten sometimes covers this information making it difficult or impossible to read the information.

The products supposed to be included in a campaign are sometimes necessary to prioritize during the unpacking process. For the employees to find out which products that are connected to the campaign they need to compare the product name on the delivered boxes with the product names stated in the campaign material. This method is time consuming and aggravates the prioritization of unpacking of campaign products.

The picking boxes containing several different types of products are never labeled with information about its content. This means that the staff has to open the boxes to see what they contain, which not would have been necessary if the box was labeled with information about its contents. The picking box contains products that has been sold out and is of importance to be displayed in store quickly. The mess in the box and the lack of labeling contributes to that the employees becomes unmotivated to open the box, and therefore the unpacking of these boxes are often postponed.

In addition to the lack of labeling on the cardboard boxes there are also problems regarding how the labeling is attached to the products. Some products have two tags, or even three, where the tag with information regarding size is hidden by the other tags. This means that it takes time for the staff to quickly see what size it is on the product. Another problem is the labeling of shoes. Today there is only one small sticker attached onto the canvas bags which the shoes are delivered in. This sticker is very small which makes it hard to find and it also easily falls off.

With background of the reasoning above the main problems are the lack of markup which hampers the daily handling of the delivered goods and the time it takes to sort and prioritize the boxes.

4. 5 Wrappings and packages connected to the product

During transports and when kept in the central warehouse, the garments obviously need to be packed in different types of wrappings, both for protection and also to facilitate transports. Below, the different packages and wrappings used for the garments at Gina Tricot are described. As mentioned earlier shoes are delivered either in a canvas bag or in a canvas bag inside a cardboard box. The shoes delivered in cardboard boxes to stores are shoes that have been distributed from the online shop to the stores, all other shoes delivered to store are packed in only a canvas bag, see picture 14 and 15 below.

Picture 14: The picture illustrates shoes packed in canvas bags. These canvas bags are delivered and packed together in a big cardboard box.

Picture 15: The picture illustrates shoes packed in canvas bags inside an additional box. These boxes are delivered and packed together in another big cardboard box.

The shoes are not displayed or sold in boxes or canvas bags, hence the staff needs to unpack the shoes from these wrappings in order to get them ready to be displayed and sold. When delivered in boxes this contributes to two activities, both unpacking the shoes from the boxes and from the canvas bags. Whereas only one unpacking activity is required for the shoes delivered only in the canvas bag. Hence, unpacking the shoes from these bags is preferred by the staff compared to unpacking shoes from both the boxes and the bags. Additionally, the boxes need to be dismantled after the unpacking activity.

For some products there is a lot of paper to handle and remove, which is considered time consuming from the staff point of view. Products such as tops, shirts and jeans are packed with tissue paper. The tissue paper can be placed between every single unit, between the sizes or placed inside the folding of a product. Sometimes similar products are packed differently regarding tissue paper, where one product is protected by tissue paper while the other one is not. One example of where similar products are differently packed regarding tissue paper, is the jeans models Silvia and Lisa. The jeans model Silvia is delivered with tissue paper inside the folding while the other similar model called Lisa is not packed with tissue paper. The tissue paper is not only used between garments, but also as protection around buttons, zippers and on handbags. The picture below illustrates a picture of how tissue paper can be placed in the folding and around buttons, see picture 16.

Picture 16: The picture shows one pair of Silvia jeans. This jeans model is, as the picture shows, packed with tissue paper in the folding.

Regarding wrapping around garments, this differs between different types of garments and if it is replenishment or not. When the first delivery is received most garments are packed together in a box containing plastic bags with each size separated into one plastic bag. When replenishment is received it is delivered in the same type of box as the first time (A-, B-, C-, or D-box) or an X-pack box. The replenishment of basic products is delivered in a picking box with mixed products where the

garments are packed similarly as the first time, with all units of one size packed together in one plastic bag. Although, in the picking box some clothes can also be unit packed, that is one single unit is surrounded by one plastic bag.

All deliveries from the online shop are unit packed. If a garment sells to slow on the online shop parts of these garments can be sent to stores. Furthermore if a product gets extra popular in store and the product gets out of stock at the central warehouse, it is possible to get replenishment in store by taking products from the online shop, if the products is still in stock there.

When underpants are delivered for the first time they are delivered on hangers and a certain number of units in the same size are packed together in one plastic bag labeled with the size of the products. These plastic bags are commonly packed in a cardboard box, which can contain several colors of underpants. Another variant of first delivery of underpants is that each unit of underpants is surrounded by a plastic bag, and each underpants collection is surrounded by another plastic bag. That is, if one type of underpants is delivered in five units, each unit is surrounded by a plastic bag and all five units are surrounded by another plastic bag. One example of this is the underpants rose string, see picture 17 and 18 below. Hence, there is much plastic to remove to get the garment ready to be displayed in store.

Picture 17 & 18: The picture shows how the underpants named Rose String are packed. Each underpants are unit packed and then all these unit packs are commonly packed in an additional plastic bag.

According to the headquarter the underpants are not supposed to be unit packed and they did not know they were. They claim that the underpants are supposed to be packed with all units of one size together in one bag.

Replenishment of underpants is also delivered on hangers. There are two ways of how replenishment of underpants is delivered. Either all underpants of one size are packed commonly in one plastic bag, or all underpants are separately wrapped with plastic, unit packed. These replenishments arrive in the picking box packed together with other products. The latter way described for how

replenishments of underpants arrive is very common and contribute to a lot of handling of wrapping for the staff when unpacking the products. Interviews with the store staff and observations in stores have shown that this is the most common way to receive replenishment of underpants. According to the headquarter unit packed underpants delivered to store are sent from the online shop.

Other garments that are delivered unit packed are scarves and belts. The plastic the scarves are packed in is very stiff and difficult to remove. These plastic bags have, as all the other plastic bags, an opening that is possible to use if the plastic is too stiff to tear up by hands. However, the employees say that they normally do not use the opening since it takes time to find it. Regardless of the stiffness of the plastic they tear it up by hand, and when handling the most stiff plastic the fingers will hurt and it takes extra time to remove the wrapping. This type of plastic is also used for some other garments, such as some shirts, blouses and party dresses.

Problem identification:

According to the description above, there is a lot of package and wrapping to handle for the staff when unpacking the incoming deliveries of garments. The shoe boxes and the unit packed products, such as underpants and scarves, contribute to time consuming unpacking. Also the tissue paper that is packed inside and between the garments contribute to unnecessary handling.

Another problem is that the wrapping is not user friendly, some of the plastic used for wrapping of the garment is stiff and difficult to open. When unpacking these products the employees fingers hurt and it takes unnecessarily long time.

Additionally a lack of communication can be identified since the store and the headquarter have different views and knowledge on how the garments are packed. If the store staff do not inform the headquarter of the problems they experience with the packages and the wrappings, the problems will never be solved.

With the reasoning above as a background, the main problems with the packages and wrapping is that there is a lot of wrapping to handle, the wrapping is not always user friendly and there is a lack of communication between the store staff and the headquarter if the store staff experiences problems.

5. Frame of references

The main problems identified in the problem identifications above are problems regarding the functionality of the packaging's design and a lot of unnecessary activities contributing to time consuming handling of the unpacking. Furthermore problems regarding unclear guidelines, and lack of communication have been identified.

For analyzing the unnecessary activities, theory from Lean Philosophy will be used, since this philosophy focuses on reducing waste. In order to further analyze functionality problems theory regarding the packaging design is required. The functionality of the packaging also concern problems of lacking labeling, therefore theory regarding visualization is presented. Additionally theory regarding material planning and communication is required in order to get a deeper understanding regarding the unclear guidelines and the lack of communication.

5.1 Lean philosophy

The Lean philosophy has been developed from the Japanese automotive industry and the Toyota production. The idea with lean is to maximize customer value while minimizing waste with the goal to achieve more value for the customer with fewer resources. Waste, or muda in Japanese, is defined as all activities that do not add value to the product or service. The Lean-philosophy provides methods to eliminate waste by specifying value, distinguish value-adding activities from non-value adding activities and finally to complete the tasks more and more efficiently (Womack & Jones 2003). Below a selection of parts in the lean philosophy considered most important for this study will be presented.

Involvement

One part of the Lean philosophy aims to provide guidance to all staff within all processes in an organization (Slack, Chambers & Johnston, 2010). Involving the entire staff is central and the intention is that everyone should feel responsibility and commitment. To reach genuine participation total openness is required. It is important to remember that the employees are the collaboration partner where it is essential to build up trust (Bicheno 2007).

Waste

One important goal within the lean-philosophy is to eliminate all kind of waste. To understand what waste is it is important to first define value. Value is defined by having focus on the customer and distinguishes between value adding activities and non-value adding activities (Liker 2009). Within the lean- philosophy 7 types of waste can be identified:

- Transport: moving products that are not actually required to perform the processing)
- Inventory: all components, work in process and finished product that are not being processed
- Motion: people or equipment moving or walking more than is required to perform the processing
- Waiting: waiting for the next production step/activity
- Overproduction: production ahead of demand
- Over Processing: resulting from poor tool or product design creating activity

- Defects: the effort involved in inspecting for and fixing defects

Sometimes, an eighth type of waste is also mentioned, underutilizing capabilities. That is not using people and their skills and knowledge to the best.

Eliminating waste along entire value streams, instead of at isolated points, creates processes that need less human effort, less space, less capital, and less time to make products.

Continuous improvement

As mentioned earlier, continuous improvement, or kaizen in Japanese, an important pillar of the lean philosophy (Slack, Chambers & Johnston 2010). Continuous improvement involves many incremental improvements over time and what is important is not the extent of the improvements, the most important thing is that improvements always take place. A method to determine the causes and find the foundations of a problem is to start with five "why"- questions and then address the real causes of a problem and to achieve an improvement (Liker 2009).

All companies need to continuously work to improve the share of value-adding activities in relation to non-value adding activities (Bicheno 2007).

Standardization

For processes to be improved, they must be standardized as otherwise constant changes will create new process variants only used occasionally (Liker 2009). A standardization and stability must be achieved before improvements can be made. There is also a need of standardized operation methods with consistent processes so quality can be guaranteed.

Simplicity

A part of the goal with lean is to achieve simplicity through the organization, in the system ant the techniques. Simplicity is best achieved by avoiding complexity and with good cooperation between concerned parts. Simplicity in product's could be achieved easily by reducing the number of parts and also have common parts in several products (Bicheno 2007).

Just in time

Just in time is key element within the lean philosophy. The principle is based on that products should be 'pulled through' rather than 'pushed through' the supply chain. This means that products should not be produced before there is a demand from customer and that stock should be delivered when there is a need. Consequently this can require much more frequent delivery of stocks. In order to developing a just-in-time approach it will require a lot of planning and good relation with the other parts in the supply chain (Bicheno 2007).

5.2 Packaging design

The original view of the function of a packaging solution is to protect the product. In recent years this view has changed and the packaging solution can also be viewed as an important part of the supply chain as a whole. (Lumsden 2006)

Klimchuk and Krasovec (2006) defines packaging design in the following way: "Packaging design serves to contain, protect, transport, dispense, store, identify, and distinguish a product in the marketplace".

A packaging system usually consists of primary sales packaging, secondary group packaging and tertiary transport packaging. The primary packaging has directs contact with the products and is the package the product is displayed and sold into the customer. The secondary packaging contain several primary packaging and the tertiary packaging is packed with several secondary packages (Dominic. et al 2000).

When creating packaging solutions or reviewing existing ones it is important to have a holistic view and make a consumer-centered solution but at the same time fulfilling all requirements of a packaging (Dominic. et al 2000).

Furthermore it is important to keep in mind that the view of an optimum packaging solution can be different depending on where in the supply chain they are analyzed (Dominic. et al 2000).
The packaging solution affects the efficiency of the whole supply chain. The efficiency can be affected of how the packaging interacts with different activities in the supply chain (Hellström & Saghir 2007).

If the packaging is adapted to the customer needs and to the processes, a more efficient supply chain can be created. The customer in this case, is defined as any actor involved with the packaging throughout the whole supply chain. (Dominic. et al 2000)

When packaging interacts with activities in the supply chain costs will be generated, these costs arise when handling, storing and transporting the products. Furthermore cost arises if products are damaged. These cost related activities is affected by the package solution. (Dominic. et al 2000)

Adding value by well-designed packaging solutions

If the view of packaging is extended from just being protection to e.g being a part of creating increased handle ability and providing the user with necessary information of the content, the packaging can add value to the whole supply chain (Johnsson 1998). Great financial savings can be made by designing a packaging solution that is adapted to the different activities in the supply chain.

Examples of how to adapt the packaging's in order for the company to save money are creating lighter packing's which may save decrease transportation costs, increased environmentally friendly packaging may decrease disposal costs and improve the company´s image, clear information on packing's may decrease handling costs etc.

Packaging Requirements

Consequently by the information above, there are many requirements that a packaging solution need to meet. For this case the important requirements to meet are mainly related to flow functions, but also to environmental functions (Hellström & Saghir 2007).

The flow functions refer to the supply chain flow and its activities such as transport, handling and storing. During these activities the efficiency of the supply chain is increased by (Dominic. et al 2000):

Products protection:	The products should be protected in order to decrease damaged products.
Handle ability:	The packaging solutions should be easy to handle referring to moving them smoothly through the supply chain and opening and closing the packages.
Information:	The packages should provide necessary information for the user, that is information of the containing products and the destination of the packages.
Volume efficiency:	Volume efficiency refers to utilized volume through the supply chain related to available volume, it can be quantified by filling rate.
Weight efficiency:	Weight efficiency refers to utilized weight related to available weight capacity of load carriers, and also need to be in balance with ergonomically aspects.
Right size:	The packages should provide the right amount of products and right size of packages in order to meet the requirements at different activities in the supply chain as well as the demand at the destination.

5.3 Visualization and labeling

One tool in the lean-philosophy is 5S which stands for sorting, structuralize, shine, standardizing and discipline (Slack, Chambers & Johnston 2010). By making everything clear the disorder and confusion will be reduced and thereby also the time for the activity. This means that the objects always are placed at the same place and for that reason easier for the employees to find. By working in a standardized way and spread it through the whole organization the time for different people to make the same activity will be more even.

To be able sort it requires that the there is something visual on the object that describes what type it is. A process for sorting items used in the 5S process is the red tag system. The red tag system is a system where red tags are used for visual management of a workspace, clearly marking items that need to be moved creating workplace organization. Normally the red tags are attached to all items that aren't needed directly and thereby not prioritized. The information to put on the red tag could be category, item name, quantity etc. (Hirano 1995).

The red tag is as the name can tell usually red colored. It can also exist other types of tags whit a different colors, depending on what the tag information the tag should send (Hirano 1995). The human eye sees color before the brain recognize imagery in the form of shapes, symbols or words, for that reason a color is to prefer to make a first impression. Imagery is dependent upon its directness and appropriateness in communicating the brand personality and specific product attributes. Using visual imagery in an appropriate way is the key to the successful communication of a product (Klimchuk & Krasovec 2006).

5.4 Material planning and control

Material planning and control aims to create efficient flows of materials in order to satisfy current requirements (Jonsson 2008). The aim is to determine sufficient quantities and time points for manufacturing, purchasing and replenishment orders. The goal is to create as efficient material flows as possible with respect to tied up capital, delivery service and utilization of resources.

Chopra and Meindl (2007) mention two main replenishment policies; continuous review and periodic review.

If continuous review is used, a reorder point, ROP, is set (Segerstedt 2009). When the physical inventory level of the product reaches or falls below the reorder point a signal for replenishments is generated. A predetermined reorder pint quantity is then automatically replenished for the product. The ROP is calculated by summarizing expected demand during lead time and security stock. The safety stock is supposed to cover for variation in demand during lead time.

If periodic review is used, the inventory levels are reviewed and replenished with regular intervals (Chopra and Meindl 2007). The replenishment quantity can vary but should raise the inventory level to a specific threshold. The challenge when using a periodic review system is that, in real life, it is usually difficult and inconvenient to follow the intervals to get a continuous inspection.

5.5 Communication

Existing and continuous communication is a precondition for a company to work well and continuously improve (Forslund 2009). Without communication coordination, controlling and management would not work properly. In processes of change communication is extra important. Communication is supposed to be a tool to discover room for improvements and changes as well as being a supportive tool towards a successful change.

Communication is often perceived as deficient within many organizations, and there are usually complaints of the communication (Heide, Johansson & Simonsson 2005). The complaints often concerns lack of communications, the management not listening to their employees and their opinions and that changes are not communicated. The management, on their hand, mean that information does not reach the employees and directives are not followed.

A basic communication model consists of a sender, a transfer medium and a receiver (Forslund 2009). The sender wants to transfer a message, the so called intentional message. The message is

translated to an oral, written or visual code which is transferred through a medium such as a meeting, an e-mail etc. The receiver translates the message, with his or her interpretation, as a perceived message. At this point, the receiver has made his or her own interpretation of the sender's intentional message. Sometimes the receiver sends some kind of feedback in a new message back to the sender, and this message undergoes the same transfer process as described above. The optimum is that the sender receives a message with a confirmation that the receiver has understood the intentional message. Although, in all steps there are some kind of disturbances that can affect how the message is sent and received. Disturbances can be physical such as noise (Önnevik 2010). They can also be more difficult to identify, such as motivation, stress or mood. To reduce the disturbances effects of the message it is important with clear communication and clear communication channels.

It is important that the management create conditions for creating a dialogue, which is important to create an understanding for and discussion around messages and information (Heide, Johansson & Simonsson 2005). That is, the management shall not create a one way communication channel, but they should interact with the employees by inviting them to a dialogue to create two ways communication channels.

6. Analysis of the identified problem areas

In the description of the current situation of the handling processes of the incoming goods to Gina Tricot's stores, several problem areas were identified. In this chapter these problem areas will be analyzed based on the theory presented in the Frame of references chapter. The analysis will be made both from a functional and an organizational perspective. The analysis will provide an understanding to why the identified problems have arisen.

In the problem identifications the main problems identified regarding the functionality of the packages clothes are delivered in to Gina Tricot's stores were lack of labeling, unnecessary wrappings and unnecessary activities. These problems aggravates the handling process for the store staff and makes the handling process time consuming, meaning the store staff have less time over for service.

Furthermore problems regarding a lack of responsibility in communicating experienced problems in store were identified. This is linked to the lack of information and communication between the headquarter and the store. Additionally problems regarding lack of guidelines for replenishment were identified, which contribute to delayed and several replenishments, meaning extra work for the stores.

In order to understand the reason for the handling process being time consuming, the functionality of the packages will first be analyzed. This analyze will be followed by an analyze of the core problems responsibility, communication and guidelines which have led to the problems regarding functionality of the packagings not being solved.

6.1 Functional aspects

The Lean philosophy classifies all unnecessary activities as waste and by analyzing the problem areas identified earlier, different types of waste can be detected. For example there is no standardized way of how to make prioritizations, if necessary, in the unpacking process. Prioritizing of products that are included in a campaign is made by comparing the campaign material with the labeling on the delivered boxes or by opening all the boxes randomly to see the content. This creates a non-standardized working process which can contribute to that new ways of handling the unpacking process are created each time. The lack of standardization can mean that the same activity is made with different amount of resources and that tasks are made differently from person to person. With a standardized way of performing a task, waste can be reduced. Furthermore the two mentioned ways of making prioritization contributes to unnecessary activities in form of comparisons between the campaign material and the labeling of boxes or opening all the boxes randomly.

Recently a new activity connected to the delivering of goods to store was introduced, barcode scanning. The addition of this activity has created a lot of more work for the employees and has made the unpacking process even more complex. Not only the scanning is taking time, also administrative work involved in saving the barcodes in a folder for three months. Since the activity does not contribute to the unpacking of the goods, it is in this case a non-value-adding activity. Non-value-adding-activities are classified as waste and should therefore be studied in order to find possibilities of removing them.

The product specific boxes are labeled with information about the content on the outside of the cardboard boxes. This information is necessary to be available for the employees if prioritization during the unpacking process is needed. In some cases this information is covered with other stickers such as the Posten sticker or the barcode sticker. This makes it troublesome to quickly and easily get access to the information which affects prioritization of unpacking. In order to get information of the content in the boxes, it will be necessary to first open these boxes which will take longer time compared to if the information was available on the box.

The picking boxes are not marked with what they contain and are packed in an unstructured way which means it takes time to find out what the box contains and it is also time consuming to find the right products to pick. The box can contain both garment and makeup which contributes to the mess even more. The complexity in the unpacking process of the picking box is due to the unstructured way the box is packed and the lack of labeling of the box which contribute to over processing, which according to lean is classified as waste.

Furthermore, waste can be identified concerning the hang tags on some of the products. Some of Gina Tricot's products are labeled with two or three tags. Each one of the tags contain different information and tag containing necessary information about size of the product is hidden by the other tags. The fact that the employees cannot easily get access to the relevant information can be seen as over processing and unnecessary activity.

The fact that products delivered on a hanger needs to be re-hung on a new Gina Tricot hanger is also a source of waste. It contributes to over processing since the same garment during the supply chain is put on hanger twice. An unnecessary activity is created for the employees since they need to remove the hanger the product was delivered on, find a new hanger that fits that specific product and finally re-hang the product, instead of being able to display the product in store as it is delivered. The store staff appreciate when garments are delivered on hangers as long as they have enough room and equipment in the store stock to keep the garment hanging. However, re-hanging and bad possibilities to store garments hanging in the stock, create unnecessary activities and unnecessary movements of garments.

The products delivered in cardboard boxes are surrounded by wrapping that has to be opened and removed, which in some cases is troublesome for the store staff. Examples of products where the wrapping is difficult to remove are scarfs, belts, shirts, blouses and for some party dresses. This plastic wrapping is time consuming to open.

Furthermore the wrappings around the underpants are time consuming to handle. In many cases each unit of underpants is wrapped with plastic and additionally all units in the same size are wrapped with another plastic bag. The majority of underpants replenishments are unit packed. This is also the case for scarves being delivered, every scarf is surrounded by plastic wrapping. It is necessary to remove the plastic wrappings before the products are displayed in store and the fact that there is a lot of wrapping to handle around each single unit makes the unpacking process time consuming. Unit packs of products is necessary for products dedicated for the online shop since the customers usually order single units of the products, and the wrapping is supposed to protect the

product during transport and delivery to customers. But when products are delivered to stores, the unit packs only contribute to more work and unnecessary activities.

Another example regarding unit packs are the shoes delivered to store from the online shop. Shoes being distributed from the online shop to stores are, as mentioned earlier, packed in cardboard boxes with one pair of shoes in each box wrapped in an additional canvas bag. The shoes being delivered from the central warehouse are only packed in the canvas bag. The fact that these shoes are delivered in cardboard boxes contribute to more wrappings to open and handle, compared to when delivering all shoes in only the canvas bags.

Another problem connected to the shoes is that the size labels that are attached to the canvas bag easily falls off and the design of the label makes it hard to find and read. If the label has fallen off the bag, the employees need to open the canvas bag to figure out the size of the shoes. Additionally, the label is very small and transparent, which means that even if the label is still attached to the bag, it is difficult to read. Both of those mentioned problems make the activity of picking the right pair of shoes to be displayed in store unnecessarily complicated.

The problem identification has also shown that a lot of reorganizing of products takes place in the stores. The number of movements of products is in correlation with the number of deliveries arriving to store. The reorganizing of products occurs when the number of units available for a specific product decreases or increases. Then the area where the product is displayed is no longer adapted to the actual number of units of that product and therefore need to be moved to another area in the store. This process cannot be totally eliminated but the number of reorganizations can be reduced if products arrive more accurately to the information that is sent to stores and if replenishments are done quickly. This is another source of waste and should therefore be eliminated in that extent it is possible.

6.2 Underlying problems and lack of communication

By solving the problems mentioned and analyzed above, the problems regarding the functionality and user-friendliness of the packages will be solved. Although this will only lead to short-term improvements, but it would not solve the main problems on an organizational level which is the basis for the functional problems. Hence, it is important to find deeper reasons for the problems. Furthermore, it is important to investigate and find the reason to why the problems have not been solved earlier despite that there have been knowledge about the problems among the employees within the organization.

Some of the problems regarding the packagings can be linked to that information is unclear and lacking. As earlier mentioned, there is a lack of labeling, which is a type of information. But also, there is a lack of communication between the headquarter and the store regarding deliveries. The less communication and information the store receives about the deliveries, the more difficult it is for them to make plans for how to handle the deliveries and in the end of the day a lot of rework and reorganizing need to be done in the stores.

On the other hand, more frequent communication and updated information is a challenge, especially in the fashion industry due to the short lead times. The distribution of goods is usually done two days before the goods actually arrive in stores, but the shipping list of what the store will actually receive is sent to the store only one day in advance.
Some stores use the online shop to get a sense of what products are new and therefore they might receive in store. But this is not reliable since it is only based on assumptions and the stores receive different deliveries, both regarding amount and assortments, depending on the size of the store.

Worth mentioning is also that a list of distribution of goods is available in the company's IT system as soon as the allocators completed it. The stores have access to this but do not use because they are not aware that it exists. This type of unutilized information can be seen as waste since the store is not using it.

The replenishment of the basic products works well, partly because the news value is not as important as for trend products with shorter sales cycle, but also since the ROP system used for these products gives an efficient automatic replenishment when needed.

The guidelines and rules for replenishment of trend- and season products are continuously changing and there have not been any standardized guidelines to follow. The periodic review system used for replenishments of trend- and season products does not work efficiently since there is no exact interval of how often the replenishments are supposed to be reviewed. This has created confusion among the allocators, and the remaining 20 percent have been handled differently by different allocators. This has contributed to long lead times for replenishments and a risk that the products have gotten out of fashion when they are finally delivered to store. The unstandardized frequency of replenishment deliveries also contributes to difficulties in planning meaning increased handling time for displaying and reorganizing a product.

Furthermore it is necessary to keep in mind that there are no replenishments sent to stores during the weekends, and during weekends the sales in the stores increase hence also the risk that garments get out of stock in stores increase. Therefore it is important that the allocators try to predict sales and popular garments in order to replenish before the products are actually out of stock and especially before weekends.

In order for the replenishment to work efficiently, it is also important that the stock balance is correct, since basing the distribution for replenishments on incorrect stock balances can lead to delayed replenishments. Before the scanning of bar codes was introduced at Gina Tricot, the only way to check if the right amount of garments were delivered was to manually compare the received goods with the shipping list, but this was not always done. That is, if the deliveries were incorrect this was not always detected and the stock balances were not adjusted. Also, if an incorrect delivery were detected, this was not always communicated to the headquarters meaning also in this case the stock balances were not updated. This shows that communication is very important. The scanning will possibly reduce the risk of inaccuracy in stock balances, but it will not solve the communication problem.

Another problem connected to delayed replenishments can be linked to garments being distributed from the online shop to stores. This type of distribution is delayed since it is necessary to see the trend and the sales before actually give up keeping selling the product online. Another reason that this type of distribution is delayed is that there is a common responsibility for the ordinary allocators and the online shop allocators to make these distributions. There is a lack of communication between the ordinary allocators and the online shop allocators and instead communication regarding this is done via the online shop controller. It can be valuable to integrate the online shop controller in this distribution process, since this person is good in analyzing sales numbers. But making this distribution is a joint responsibility between the ordinary allocator and the online shop allocator and the responsibilities are unclear and tasks can be forgotten. Hence, communication between the two parts is necessary.

The problem of the delayed replenishments can also be a perceived problem where the main problem is actually the lack of communication and information. The actual problem is that the store do not know whether or not they will receive replenishment, they do not know what to tell customers and unannounced replenishments lead to rework of plans. Being prepared for problems reduces the perception of how big the problem is. A concrete example of this is the earlier mentioned delayed replenishment of the leopard sports top. When the replenishment was received one month after being sold out in store, frustration was created among the store staff since they thought the product had been forgotten and the delayed replenishment was a mistake. If the stores had received information regarding the reproduction of the top, they would have been more accepting and they could have given the customers correct information.

A further example of lacking communication is when products are stated on the shipping list to be delivered and they are not received. This is actually a problem derived from carelessness at the central warehouse, which makes mistakes when preparing shipments and also has deficient inventory inspections. It seems like the central warehouse do not communicate problems or delivery failures from suppliers, which contributes to the inaccuracies in the shipping list and irriation in stores regarding this. The stores are putting a lot of effort into preparing room for deliveries and campaign products, and if these products are not arriving a lot of rework needs to be done, which can be seen as waste.

These communication problems are based in unclear and lacking information. The deficiencies are due to that the information channels are not working efficiently and the store staff do not know where to find relevant information. There is no structure of how to communicate and share information such as delayed deliveries, and instead the information is not shared at all. Lacking information- and communication flows lead, according to Heide, Johansson and Simonsson (2005), to badly working coordinating, control and management.

According to Forslund (2009), communication is extra important in processes of change. Both for communicating information about changes, but also to identify problem areas and make room for possible improvements. Several problems have been identified at Gina Tricot, most of the problems have existed for a longer period of time in the stores, but the head quarters are not aware of that the problems exists. Some other problems have also existed for a longer period of time, and also the

headquarters are aware of them, but they have not been solved.

Problems that the store have experienced for a longer time are for example stiff plastic around some garments, underpants being unit packed and some exclusive collection garments having three hang tags making it difficult to find the right information.

Regarding the underpants being unit packed, this came as a shock for the headquarter when mentioning it. First of all they had not heard that the stores experienced this problem, secondly suppliers are supposed to pack them in accordance with sizes and the headquarters mean that all unit packed underpants are distributed from the online store. The case study have shown that it is true that underpants are distributed from the online store to the ordinary stores, but the amount of unit packed underpants delivered to stores is not equal to the amount of underpants distributed from the online shop to the ordinary stores. That is, the underpants are in many cases sent unit packed from the supplier even though they are supposed to be sent packed in accordance with sizes. Hence, this is actually a supplier failure that the headquarter was not aware of since the communication have been lacking between headquarter and store. If the store staff do not inform the headquarter of the problems they experience with the packing and the wrapping, the problems will never be solved.

Regarding the three hang tags issue, the store have experienced the problem and communicated it to the headquarter, but with no response or feedback. This is a further sign of lacking communication channels, since the information have not reached the right persons or been ignored.

7. Suggestions for changes

In this chapter suggestions for changes to the problems earlier analyzed will be presented. To solve the underlying causes for the problems an improved communication- and information flow between the store and the headquarters is suggested, additionally clear guidelines and improved information regarding replenishments are suggested. These suggestions are on an organizational level and are relevant to improve and facilitate for the stores. After describing these suggestions, more concrete suggestion regarding how to reduce waste in the unpacking process are presented.

7.1 Motivate and encourage the staff to give suggestions for improvements

A precondition in order to improve and streamline the handling of incoming goods in Gina Tricot's stores is to solve the underlying problems. It is important that the company values the importance of solving the basic problems in order for the more concrete improvements suggestions to be powerful and to avoid that new problems appear and are not solved.

It is important to create a sense of responsibility among the employees. The current approach among employees of waiting for order and not communicating problems and suggestion in great extent needs to change in order to increase the transparency in the organization and enlighten problems. The company needs to strive to create a dialogue between the headquarter and the store staff regarding problems and the feeling of "we" and "them" need to be removed.

It is necessary to encourage the employees to communicate the problems they experience and the suggestions they have. The store staff are the ones experiencing and being affected by the decisions the headquarter takes, e.g. regarding the packing solutions. Hence, they need to be involved in order to being able to take advantage of their skills and knowledge. Utilizing the employees skills will reduce waste, since underutilizing the employees skills is a source for waste.

Furthermore it is important that the employees feel that their complaints and suggestions are taken seriously by receiving response and feedback. The feedback is important whether or not the suggestions are implemented. If the employees will not receive any feedback, they will stop communicating the experienced problems and the company will not gain the benefits from making small improvements and being a learning organization.

For this communication to work it is important that a standardized channel of communicating problems exists. There need to be one standardized communication channel to always use, to make it easy for the employees to bring up the problems they experience. The headquarter on their hand need to give response to problems and suggestions and need to tell the employees if the suggestions are evolved or not, and in the latter case why not. This way the employees will feel appreciated and they will get an understanding to why some things are solved the way they are.

According to Forslund (2009) a communication model should consist of a sender, a transfer medium and a receiver. The suggestions for creating this at Gina Tricot is to create a forum for the employees where they can communicate their suggestions and a dialogue between the headquarter and the store is created. The forum should be open for all stores, this way the stores can discuss problems

and solutions not only with the headquarter but also between each other. The stores are most likely experiencing similar problems and sometimes one store have found a solution that the other store have not thought about. Each store should assign one responsible to be updated in this forum. During store meetings problems and suggestions are discussed, and the person responsible for the forum communicates the relevant problems to the forum. When feedback is received in the forum, either from the headquarter or other stores, the responsible person communicates this feedback to the rest of the store staff.

7.2 Improve communication and information between store and headquarter

The above suggestion to "Motivate and encourage the staff to give suggestions for improvements" is one step in improving the communication flow between the store and the headquarter. Communication and dialogues between different departments in the company is necessary in order to have a well functioning organization and to continuously improve. Therefore there are more areas concerning the communication- and information flow to improve.

It is important that the stores are updated on what deliveries they will receive and how much they will receive in order to plan for how to handle the deliveries, how much staff that will handle the unpacking and how to organize and display new products and campaign products in store. Today, the stores are using the shipping list, which is received only one day before deliveries, to prepare for this. Since this result in late information it can contribute to a lot of rework. Another unreliable tool the employees use in store to figure out upcoming deliveries is looking at the Gina Tricot online shop.

The new arrival of products on the online shop is checked up and estimations of the same products to be delivered to store are made. The stores should instead get more knowledge and be more familiar with the IT-system Gina Tricot uses where they can receive earlier and more accurate information about upcoming deliveries. This list can provide the store with a good picture of what the deliveries will contain regarding both type of products and amount of products. Being updated on this list should be a part of the daily routines in the store.

In order to make this work, the first step is to make the stores aware of that this information exists. Further on, all employees should get a short education in the system and what benefits they can take advantage of by using it. To keep the knowledge of the system on a steady level, all new employees should also get an introduction and education in the system. The stores should assign the responsibility of being updated in the IT system each day to one employee, but all employees should have knowledge in how to access relevant information in the system.

There is also need for improving information regarding replenishment and delayed deliveries. If this information is improved, the stores can more easily plan reorganizations in the store and give correct information to the customers regarding garments out of stock. Regarding replenishments, the suggestion is that if a garment is reproduced due to high popularity, the store should receive this information. Replenishment of a reproduction can take up to one month, and if the stores do not know that the garment is reproduced and will be replenished they will think the garment will not be replenished and this is the information they will give customers. This was the case for the leopard

sports top earlier mentioned. If instead, the stores know that replenishment will be received, an understanding and acceptance for the delayed replenishment will be created and customers will get correct information, which could lead to more sales.

Regarding delayed deliveries, the same reasoning as above can be applied. If the store is provided with information regarding the delays, it will be easier for them to plan and understand and acceptance will be created. It is not unusual with delays, and delays of small deliveries may not affect the plans in a great extent. But if big deliveries, such as campaign products, are delayed, the stores better be informed about the delays. Sometimes unexpected things happen, and it is difficult to predict delays and inform the stores about this. Especially since there is currently a third party involved in the inventory handling. But when Gina Tricot insource their inventory handling from January 2014, they will have a greater control and involvement in this step and this information flow will be easier to handle.

The communication channels should be clear and the above described information should be easily accessed and found in a standardized communication channel. As a suggestion this information can be communicated through the IT system, as soon as the employees get comfortable by using the system.

7.3 Establish clear guidelines and improve information regarding replenishments

To handle the problem of late replenishments for trend- and season products the suggestion is to establish concrete and clear guidelines for the amount of replenishments accepted and the accepted time until replenishments are done. The periodic review system used for replenishments today need to get a better structure regarding the interval of how often the need for replenishments is reviewed, in order to avoid that replenishments are being delayed or forgotten.

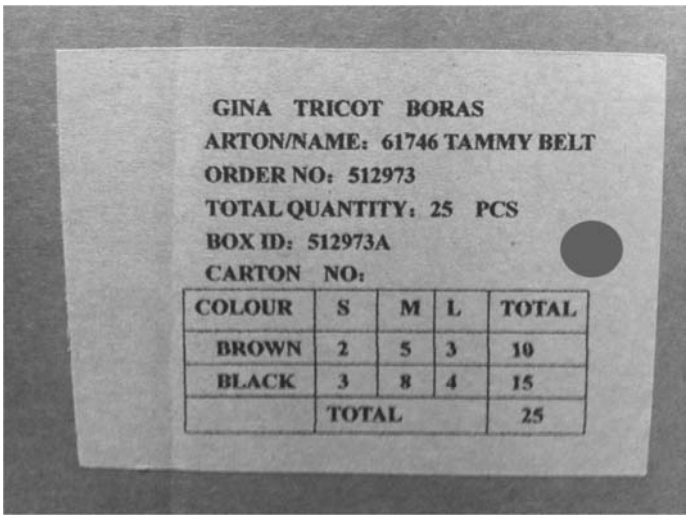
Regarding the products with a sales cycle of four and eight weeks, it is extra important to make quick replenishments in order for the products not to get out of fashion before being delivered to store. Clear and concrete guidelines will make the replenishment process more efficient, since it will avoid that the allocators wait too long before releasing the replenishment shipments. Furthermore clear guidelines will make the replenishment process more standardized contributing to that replenishment shipments are received in stores with a more even frequency, which will make it easier for the store staff to plan for upcoming deliveries.

Another essential part for being able to make quick replenishments is that the allocators always need to be one step ahead. Since no replenishments are done during the weekends it is important to distribute products for the weekend at last on the Wednesday, in order to receive them on the Friday. Hence it is important to have a sense of which products that will sell well and not and to have the routine to make distributions for the weekends on every Wednesday.

In order to reduce the lead time for replenishments, it is also important to streamline the replenishments from the online shop to store. The responsibilities for making these distributions need to be clear and the communication between the involved responsible parties need to increase in order to make quicker replenishments and not delaying deliveries from the online shop to the store. On the other hand, if the share of products dedicated to the store and the online shop is more accurate from the beginning, there would not be a need for replenishing products from the online store to the ordinary stores, which is the optimal case.

7.4 Increase the visualization

Visualization creates quick access to information connected to a specific object and can facilitate for the staff while handling the incoming goods to store. The boxes should be labeled in a standardized way for the employees to be able to make prioritization regarding what box or product to unpack first. The ordinary boxes are currently labeled with information regarding the content but it does not contain information if the product is included in a campaign. One visual tool used in 5s is the red tag system for making prioritization. In the case of Gina Tricot a red tag should preferable be marked on the boxes that should be prioritized, so the employees immediately by eye can identify which boxes to start unpacking. The products being part of a campaign should therefore be marked up by some color that tells that they should be prioritized. The product specific boxes are already marked with content and this information should be extended with a visual symbol that clarifies that it is connected to a campaign. A proposal of this symbol is a red dot printed next to the text information, see picture 19. The new mark-up would enable a faster prioritization.



Picture 19: Proposal of mark up for campaign products.

If this proposal will facilitate for the store staff during prioritization the proposal can in the future even be applied in a wider perspective. For example products within the same product group, such as

sportswear, underpants etc can also be marked with a common symbol, preferable also a dot but in another color.

Regarding the problems about the labeling of the garments made of organic cotton the suggestion for change is to only attach one tag to these products, as for the other products. If Gina Tricot despite the problem still wants to label these garments with two tags the proposal is that they anyhow should make sure that the size label is placed in the front.

Furthermore the picking boxes should also be provided with content information. When the picking process is completed at the central warehouse, a sticker that specifies the name of the products packed in the box should be attached on the outside. The advantage of this information is that the employees in store can access information about the content of the box without opening it. The boxes should preferable be marked as the product specific boxes, and the most essential information is the product name, size information and amount of products is not as necessary.

The shoes delivered to store are packed in a canvas bag that is labeled with a small with size information of the shoe. To avoid that the sticker falls off and make the label more visible for the employees it needs to be exchanged to a better one. Today the sticker is extremely small, it is transparent and it easily falls off. To fill its function, the sticker need to be better attached to the bag and it need to be bigger. By making the sticker non-transparent it will also be easier to find and read. By changing the design of the label the picking of right sizes of shoes being displayed in store will be facilitated.

The labeling existing on the product specific boxes has to better available than today. Other stickers are in some cases attached over this information which makes it troublesome to get information about the content of the boxes without opening them. A standard way of where other stickers should be placed on the cardboard box, should be introduced. This standardized way must be communicated to the parts involved, in this case Posten and the central warehouse. It is important that the parties involved get knowledge about why other stickers should not be attached over the information. The information is necessary for the employees in store at Gina Tricot and by making it better available the unpacking process will be made faster.

7.5 Minimize the use of wrapping

In order to reduce the non-value adding activities in the unpacking processes some products should be sent to store with less amount of wrappings. The tissue paper placed between garments is necessary as long as it fills a function. If it works as a protection to the garment or if it prevent folding marks it has a function and should therefore still be used. Today the presence of the tissue paper can vary between similar products, such as for the earlier explained case of the two similar jeans model. The jeans model Silvia has tissue paper between the folding and should be removed if it does not fill any function. Having less wrapping to handle can reduce the non-value adding activities and thereby waste is reduced.

A further way to reduce the handling of wrapping is to stop delivering the scarves unit packed, since it creates a lot of plastic to handle for the store staff. The main function with packaging and wrapping

is to protect the product. Scarves are not more fragile garments than other garments such as T-shirts and tank tops which are packed with multiple units in each package. The scarves should also be multi packed with several scarves packed in the same plastic bag without wrappings around each unit. The belts are also sent unit packed to the stores but in this case it is necessary since a belt normally contain more details and packing several belts together in the same packaging can result in scratches on the product.

The plastic packaging used for scarves and some shirts, blouses and party dresses is more stiff than for other garments and should therefore be exchanged. The more soft plastic should be used for all garments and products since this plastic makes it easier to open the packages. The reason why different plastic types is used can be due to different suppliers of the packages. The suppliers need to be informed by Gina Tricot to replace this plastic to a softer and more user friendly one.

7.6 Increase the amount of garments on delivered on hangers

To decrease the non-value adding activities made in the store when unpacking the products more product should be delivered on a hanger. Currently there is only a small part of all products that are delivered and these products are those that have been blown at Post Nord. During the beginning of year 2014 when Gina Tricot will be in charge of their own central warehouse and blow equipment it will be possible for them to blow more garments and at the same time keep the lead times short. By delivering the products on a hanger to the stores the unpacking process is facilitated since there is less wrapping to handle, as long as these products are not packed in cardboard boxes.

To be able to send more garments on hangers it is important to review the possibilities for the stores to receive the goods hanging. There must be space available in the store stock. The basic criteria to make it possible is that each store have at least some area reserved for hanging garments, such an area with a clothes rail. It is therefore important to have a discussion with the stores if the layout of the store stock needs to be improved, before the amount of hanging goods to store increase.
By managing the central warehouse in-house it will be easier for Gina Tricot to send the products from the central warehouse to the stores in a more accurate time to the schedule for the products to be displayed in store. This means that more products being sent on a hanger not necessary will affect the problems of keeping goods hanging in the store stock. If the hanging garments are sent to store in accordance with the just-in-time principle it will not be necessary to keep the garments in stock. They can be directly displayed in store as fast as an alarm is attached to the product. But still it is important for the stores to be able to store garments hanging since all the units delivered to store are not displayed at the same time, a part of them are kept in stock for further replenishment.

Most of the garments sent hanging to stores today are packed into cardboard boxes. When Gina Tricot will blow garments and put them on hangers in house, the proposal is to not pack the hanging garments into boxes. The hanging garments should only be surrounded by plastic that will work as a protection during transportation. Wrapping the hanging garments in plastic instead of packing them into boxes will facilitate the unpacking process for the employees in store.

Not only garments needed to be blown should be provided with a hanger before they arrive to store, other garments that in advance are stated to be displayed hanging in store should be delivered this way. This would facilitate for the store staff since it would contribute to less activities needed to be performed by the store staff and the garments could directly be displayed in store since they do not need to unpack the garments from boxes or supply the garments with hangers.

The agreement that Gina Tricot currently have with Posten is based on the number of deliveries and not the amount or weight of the goods to be sent to stores. This agreement does not cover goods supposed to be sent hanging, since the garments provided with hanger today are packed into boxes. The agreement is about to be updated in order to make it possible for Gina Tricot to send garments hanging without being packed into boxes. Since this agreement is not completed yet the cost of send garments hanging is unknown. Therefore it would be necessary to evaluate this cost before a final decision is taken regarding increasing the amount of garments delivered on hangers.

7.7 Move activities upstream the supply chain

To reduce waste in form of overprocessing, blown garments should be delivered on a hanger with the Gina Tricot logo. The garments that have been blown is today put on a black hanger without the Gina Tricot logo. This creates an extra activity in store since the hanger needs to be exchanged to the one with the logo printed on. When Gina Tricot will have their central warehouse this proposal will come natural since they will take over the blowing of garments and there will be no third party involved. If Gina Tricot would like to implement this suggestion on the short term this could also be done by sending their own hangers to Post Nord and requesting them to use their hangers instead of the black ones. By taking this activity away from the store staff the benefit of sending garments on a hanger will increase.

In order to facilitate for the store staff, alarms should be attached to the products that are blown and supplied with hangers, before arriving to stores. This is also the suggestion for garments that in the future may be sent to stores on a hanger, even if they have not been blown. Doing this will basically enable direct display of these garments when they arrive to store, contributing to less handling for the store staff when receiving the goods.

To make this proposal possible to implement, it is required that the central warehouse have alarms available to use. This will not be a problem, since the store equipment such as alarms are already stored in the central warehouse. Furthermore it will be important that the amount of alarms in store is kept on a steady level. New alarms are sent out to the stores when the stores inform the headquarter that there is a need for replenishment of alarms. Some stores only get alarm replenishment once a year, while others get up to six deliveries of alarms each year. If the garments delivered on a hanger will be supplied with an alarm as it arrives, the number of replenishments of alarms to store or the amount of alarms sent to store need to be reduced in order to avoid that the alarm level in store gradually increases.

The amount of garment sent on a hanger to store is currently 1%. The proposal is that this level should be increased, but although the level of garments delivered on hangers will be more than 1% it will still be a small part of all garments that are delivered to store. Hence, it will not be an issue that the pre-hanged garments are supplied with alarms when delivered to stores, since this can easily be handled by sending less replenishment shipments of new alarms to stores.

If the proposal of putting alarm on hanging deliveries is implemented it will mean that one activity is moved from the stores upstream the supply chain. This will contribute to less man-hour spent on the unpacking process in stores and time will be saved for the store staff. Since the activity is not removed but moved upstream the supply chain, it will still be a need of a resource to make this activity. With the new central warehouse this activity is preferable made by the same staff that will take care of the blowing of garments. Hopefully this means that no extra resource will be necessary, only that one more activity is made by the employees at the central warehouse instead of the employees in store.

Shoes that are distributed from the online shop to stores should be delivered in canvas bags instead of unit packed in shoe boxes. The shoe boxes should be removed at the central warehouse, in order to decrease the activity of removal of wrapping in stores. Since the shoes are not sold to customer in a shoe boxes, there is no reason for them to be sent to stores in shoe boxes.

The scanning activity of delivered goods to store has made the unpacking process even more time consuming than before this activity was introduced. The most problematic in this activity is when the products in the picking box need to be scanned, since every package in the box is scanned separately. As long as Gina Tricot are working with a third party it will be necessary to have the scanning like this, in order to find the source of the problem. When the reason has been found or when Gina Tricot will have their own central warehouse, and also better control, the conditions for the picking box to be scanned should changed. The suggestion is that the picking boxes should only be supplied with one bar code which is attached on the outside of the cardboard box, not one bar code for each product package in the box. This will facilitate a lot for the employees since it will decrease the number of barcodes to scan dramatically.

8. Conclusions and recommendations

This chapter presents the conclusions of the study and a summary of the recommendations to Gina Tricot, elaborated in Chapter 6. Initially a description of how the purpose was fulfilled and how the question formulations were answered will be presented. This is followed by a summary of the recommendations of how to improve the handling of incoming goods to stores at Gina Tricot.

The purpose of this study was to investigate possible improvements of the handling of incoming goods to store at Gina Tricot. To achieve this purpose three questions were formulated:

- How can the activities in the handling process of incoming goods at Gina Tricot be simplified?

- Are all handling activities in the process necessary? If not, how can unnecessary activities be reduced?

- Can any processes be moved upstream the supply chain in order to simplify the activities related to the incoming goods to store?

In order to answer the questions and achieve the purpose of the study, a description of the current flow of activities involved in the handling process of incoming goods to the Gina Tricot stores was made. From this description the problems regarding the handling of incoming goods were identified in order to continue with the investigation and find opportunities for changes that could facilitate for employees in the store. The problems identified did not only show problems directly connected to the functionality and activities involved in the handling of incoming goods, it also showed a lack of communication and information between the headquarter and the stores which was a contributing factor to some of the existing problems.

The problems identified were analyzed in order to find a deeper understanding for the problems. The analyze worked as a foundation for answering the above question by elaborating suggestions for change within the problem areas. The result of the recommendations was that the functional problems connected to the activities of the handling process of incoming goods to store can be improved by increased visualization, decreased wrapping and by removing or moving activities upstreams the supply chain. The other problems connected to the communication that has been pointed out as underlying problems, can be handled by encouraging the staff to give suggestions for improvements if they experience problems. Furthermore the communication and information between the stores and the headquarter need to be improved and there is a need for clear guidelines regarding replenishment.

To conclude, by analyzing the identified problems with help from theory, suggestions for changes were elaborated and the above question formulations stated in the beginning of the study were answered. The study shows that there are significant opportunities for improvement regarding how the company handles incoming goods to store, which was the purpose of the study.

8.3 Recommendations regarding communicative aspects

The problems identified on an organizational level concerns feedback, communication and guidelines. In order to make the handling process of incoming goods more efficient it is necessary and essential to solve these problems. The recommendations for these problems are summarized below. Achieving the goals for these recommendations is a continuous process expected to be implemented in a long term basis.

Motivate and encourage the staff to give suggestions for improvements

- Increase the sense of responsibility among the employees

- Create a dialogue between the headquarter and the store staff regarding problems

- Give the store staff feedback on their complaints and suggestions

- In order to achieve the goals mentioned above, a forum should be created for the employees where they can communicate their suggestions and a dialogue between the headquarter and the stores is established. The forum should be open for all stores, in order to create a dialogue also between the stores

- Assign the responsibility for the forum to one staff member in each store

Improve communication and information between the store and the headquarter

- The stores should get more knowledge and be more familiar with the IT-system Gina Tricot uses in order to receive information about upcoming deliveries.

- Being updated in the IT system should be a part of the daily routines in the store.

- All employees should get a short education in the IT system

- Assign the responsibility for being updated in the system to one staff member in each store

- Improve the information regarding replenishments and delayed deliveries, provide all stores with information through the IT system when big changes in deliveries are made

Establish clear guidelines and improve information regarding replenishments

- Establish concrete and clear guidelines for the amount of replenishments accepted and the accepted time until replenishments are done.

- Create a routine where replenishments for the weekends are prioritized every Wednesday

- Increase the communication between the people responsible for online shop distribution and make quicker replenishments from the online store to ordinary stores when needed

8.2 Recommendations regarding the functional aspects

The problems identified connected to the activities made during unpacking of goods in store can be linked to waste occurring during the unpacking process. Different types of waste have been identified due to lack of labeling, the amount of wrapping, goods being delivered hanging and unnecessary activities performed by the store staff. The recommendations for these problems are summarized below. These recommendations are more concrete compared to the communicative aspects, therefore they are relatively easy to realize and are expected to be implemented in a short term basis.

Increase the visualization

- Mark up the boxes included in campaigns

- Garments currently having two or three hang tags should instead only have one hang tag or the size label should be placed in the front

- Label the picking boxes with information of the content in the boxes

- Replace the stickers on the canvas bags for shoes to a bigger, non-transparent sticker that also better sticks to the canvas bag

- Inform Posten and the central warehouse of not covering information of the content when putting on stickers on the boxes

Minimize the use of wrapping

- Reduce the tissue paper that is placed between garments if it does not fill its function to work as a protection or to prevent folding marks

- Reduce the plastic wrappings around underpants

- Pack scarves in multipacks instead of unit packs

- Replace the stiff plastic used as wrapping for some garments with the soft plastic wrapping used for other garments.

Increase the amount of garments delivered on hangers

- Increase the amount of garments delivered on hangers and improve the possibilities of receiving garments hanging by providing the stores with clothing rails

- Garments sent to stores hanging should be delivered by the principle just-in-time

- Send blown garment supplied with a hanger without packing them into cardboard boxes

Move activities upstream the supply chain

- Blown garments should be put on a hanger with the Gina Tricot logo on before arriving to stores

- Attach alarms on the garment that are sent hanging to the stores

-Remove the shoe boxes at the central warehouse and deliver all shoes in canvas bags

- Enable scanning of the picking boxes with only one label outside the cardboard box instead of several inside the box.

9. Discussion and suggestions for future research

The purpose of this study was to investigate the possibilities of streamlining the handling of incoming goods to stores at Gina Tricot. Therefore the study is adapted to the conditions at Gina Tricot and the analysis is based on the company's situation during the spring 2013.

The suggestions for change that have been developed in the study are supposed to form a basis for a possible implementation. However, it is worth mentioning that it is not possible on beforehand accurately predict what result will be achieved, since the real result will be shown at first when the implementation is completed and have been evaluated. A holistic approach is of high importance in order to achieve a successful implementation, an implementation of only a few suggestions for changes will limit the possibilities of achieving the full potential of the implementation.

The study has not included any deeper investigation or evaluation of the economical aspects for implementing the suggested changes. However, the proposals regarding the packaging design are considered to be relatively small, since it do not require any new investments, but only small changes in the already existing packaging solutions. Some changes concern removal of wrapping, which should lead to decreased wrapping costs. The activities that are suggested to be moved upstreams the supply chain could lead to a need for increased staff resources at the central warehouse. But moving these activities will lead to more efficient unpacking in store, hence the staff resources in store could decrease or these resources could increase their time devoted to service which most likely will lead to increased sales. Regarding the communicative aspects, this could require investments in developing new functions in the existing IT system, which have not been considered in the study.

The result in this study is somewhat generalizable. The study was limited to the Gina Tricot stores in Sweden, but it is most likely suitable to use the suggested changes also for other countries where the company operate. But it have not been possible to secure that the suggestions are suitable for the other countries, since the stores in these countries have not been visited.

Regarding the generalizability for other companies, the result of the study could somewhat be applied in companies within the same industry. Although, other fashion companies probably have different but similar packing solutions for their clothes. Hence, the concrete suggestions for change regarding specific cases or the specific packing solutions that Gina Tricot uses are difficult to apply on other companies. However, suggestions for increased communication and feedback are generalizable in other companies, since it is important in all companies in general to have well functioning communication channels and to receive feedback.

During the study several interesting areas, which have been outside of the purpose of the study, have been revealed. These areas could be possible areas for future research. This study have focused on investigating the possibilities for streamlining the last step of the supply chain at Gina Tricot, that is when the goods arrive in store until they are displayed to customers. The reason for doing this is that it is easier to find improvement areas when focusing on one part of the supply chain. The risk of optimizing one part of the supply chain is that a suboptimization is caused. To find further

improvement areas, other parts of the supply chain could be analyzed. Since Gina Tricot are insourcing their inventory handling and starting their own central warehouse, it would be highly topical to investigate this part of the supply chain. This could concern how to optimize the handling of goods arriving at the warehouse, how to minimize the handling time of picking rounds, how to increase cross-docking etc.

Another suggestion for future research, closely connected to the purpose of this study is how to distribute the garments between different boxes before they are delivered to store. This could concern how many pieces that should be packed in each box.

10. References

Books:

Aronsson, H. Ekdahl, B. & Oskarsson, B. (2004). *Modern Logistik – för ökad lönsamhet.* 2. ed. Lund: Liber ekonomi

Bischeno, J. (2007). *Ny verktygslåda för LEAN: För snabbt och flexibelt flöde.* University of Buckingham

Bryman, A. (2002). *Samhällsvetenskapliga metoder*. 1. ed. Malmö: Liber ekonomi

Chopra, S. & Meindl, P. (2007). *Supply Chain Management: Strategy, Planning & Operations.*3 ed. New Jersey: Upper Saddle River.

Dominic, C. Johansson, K. Lorentzon, A. Olsmats, C. Tiliander, L. & Weström, P. (2000) *Förpackningslogistik*. 2 ed. Kista: Packforsk.

Eisenhardt, K. (1989). Building Theories from Case Study Research. *Academy of Management Review*, vol. 14, ss. 532-550.

Ejvegård, R. (2006). *Vetenskaplig metod*. 1. ed. Lund: Studentlitteratur

Eriksson, L.T. & Wiedersheim-Paul, F. (2006). *Att utreda, forska och rapportera*. 8. ed. Malmö: Liber

Forslund, M. (2009). *Organisering och ledning*. 1. uppl. Mölnlycke: Nordstedts Akademiska Förlag

Heide, M., Johansson, C & Simonsson, C. (2005). *Kommunikation och organisation.* 1. uppl. Malmö: Liber

Johnsson, M. (1998) *Packaging Logistics – a value added approach*. Department of Engineering Logistics. Lund: Lund University.

Jonsson, P. (2008) *Logistics and supply chain management.*1 ed. Berkshire: McGraw-Hill Higher Education.

Jonsson, P.& Mattsson, S-A. (2005). Logistik – läran om effektiva materialflöden. 2. ed. Lund: Studentlitteratur AB

Kvale, S. (1997). *Den kvalitativa forskningsintervjun*. 1. ed. Lund: Studentlitteratur

Liker, J. (2009). *The Toyota Way - Lean för världsklass.* 1. ed. Malmö: Liber

Lumsden, K. (2006) *Logistikens Grunder*. 2 ed. Lund: Studentlitteratur

Mattsson, S-A. (2002). *Logistik i försörjningskedjor.* 1. ed. Lund; Studentlitteratur.

Merriam, S. (1994). *Fallstudien som forskningsmetod*. 1 ed. Lund; Studentlitteratur.

Rother, M. & Shook, J. (2003). *Learing to See.* 1.3. ed. Cambridge: The Lean Enterprise Institute, Inc.

Segerstedt, A (2009). *Logistik med focus på Material och Produktionsstyrning*. 2 ed. Malmö: Liber AB

Slack, N., Chambers, S. & Johnston, R. (2010). *Operations Management.* 6. ed. Harlow: Pearson Education

Wallén, G. (2006). *Vetenskapsteori och forskningsmetodik.* 3. ed. Lund: Studentlitteratur

Womack, J. & Jones, D. (2003). *Lean thinking*. 2. ed. London: Simon & Schuster ltd

Önnevik, T. (2010). *Ledarskapets grunder - Organisationens hjärna.* 1 uppl. Lund: Studentlitteratur

E-books:

Klimchuk, M. & Krasovec, S. (2006) *Packaging design* [Electronic resource] John Wiley Sons. Available: Books 24x7

Hirano, H. (1995). *5 Pillars of the Visual Workplace: The Sourcebook for 5S Implementation* [Electronic resource] Productivity Press. Available: Books 24x7

Stephen, K. & Boysen, N. (2011) *Journal of Management Control* [Electronic resource] Springer-Verlag. Available: Springer Links

Articles:

Hellström, D. & Saghir, M. (2007) *Packaging and Logistics interaction in retail supply chains*. Packaging Technology and Science Vol.20, No.3, p 197-216.

Karlöf, Stefan. 2010. Handelsmannen Mikael Solberg satsar på Supply Chain. Interview with Mikael Solberg. *Supply Chain Effect*. Nr 1/2010. http://sceffect.se/files/SCE/SupplyChainEffect_2010_01.pdf [Viewed 2013-03-01]

Edström, A. (2012). *Fast fashion – snabbhet präglar modeindustrin.* http://www.aktiespararna.se/ungaaktiesparare/Nyheter-och-artiklar/Fast-fashion---snabbhet-praglar-modeindustrin/ [Viewed 2013-03-21]

Appendix 1

Allum Partille
Gamla kronvägen 7
433 33 Partille

Backaplan
Backavägen 2
417 05 Göteborg

Femmanhuset
Postgatan 26-32
411 06 Göteborg

Frölunda Torg
Frölunda torg
421 44 Västra Frölunda

Kompassen
Kyrkogatan 11
411 08 Göteborg

Kungsgatan 31-33
Kungsgatan 31-33
411 15 Göteborg

Kungsmässan
Borgmästaregatan 5
434 38 Kungsbacka

Appendix 2

Interview guideline

Delivering of goods

- Is there any problems regarding the deliveries of goods to store?

-What connecting to the delivery routines could be improved in order to facilitate for the store staff?

Activities

-What activities are carried out by the store staff when the goods have been received until they are ready to be displayed in store?

- Which of the activities do you think could be improved to facilitate for you in store?

- How would it facilitate for the store staff if it was possible to remove some activities from the store upstream the supply chain?

Packagings and wrappings

- How should the products preferable be delivered to store, in cardboard box, picking box or on hanger?

-Is there any problems connected to how products are delivered? If yes, what kind of problems?

-Is there any problems connected to the wrappings connected to the product? If yes, what kind of problems?

Communication

- How does the communication between the headquarters and the stores work?

- How can the communication be improved in order to facilitate for the store staff?