Barriers when implementing lean in administrative functions

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ABSTRACT

PROBLEM - Lean is a concept that help companies to become more efficient and more focused on their customers and their goals. Previously lean have mostly been used in production but today it is a trend to implement lean in other types of organizations. To get maximum efficiency in a company all parts and divisions need to be involved in the improvements. Organizations realizes that administrative functions can be the least efficient and that part of the organization need to be changed. There are not yet much research about lean in administrative functions and for an organization that want to implement lean in their administrative environment an understanding of complications and barriers they might face can help.

PURPOSE - To get an insight of what barriers that an organization will face when implementing lean in administrative functions.

THEORETICAL FRAMEWORK - The framework was developed for the purpose of this study and it is done by a combination of the lean concept and administrative functions but with a focus on barriers when implementing lean. The framework is presented through four blocks of barriers in the implementation of lean in administrative functions. The four blocks are, lack of knowledge about lean, lack of management support and involvement, lack of patience and long-term perspective and also lack of motivation.

METHODOLOGY - The approach is based on a qualitative study where empirical data have been collected through four Swedish organizations. The organizations have all implemented lean or been part of an implementation of lean in administrative functions.

CONCLUSIONS - The barriers in administrative functions can be compared to barriers in production and it can be said that they are similar. When implementing lean in administrative functions the barrier lack of knowledge about lean is large as it is common that organizations misunderstand the lean concept and that it can be used in administrative environment in the same extent as in production. It is also a barrier that the lack of knowledge lead to that the organization do not know how to use the lean concept in their organization. To overcome the barriers the management support and involvement is highly important.

LIMITATIONS - Limitations of this study is that the findings need more investigation to be generalized. The chosen barriers for the framework can have affected the conclusion and more barriers can be found.

KEY WORDS - Lean implementation, Barriers, Administrative functions
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1 INTRODUCTION

This part will introduce the background, problem and purpose of this research. Under the headline of purpose, the research question is introduced.

1.1 BACKGROUND

The concept of lean have been tested and proven as a good way to work in the manufacturing industry. Even though the differences in productivity can be even higher in administrative functions, previous studies has not yet come as far there as it has in manufacturing and production. As the concept of lean started in the car industry many people get confused that it can only be used there, but lean can be used in many different organizations. The concept of lean has come from a new approach to human resources in production plants, this new way to work became a success and Toyota experienced that when developing this new revolutionary concept (Womack, Jones & Roos, 2007). The Toyota Production System underlies what we call lean production (Liker, 2009). The business system, lean production, was made up by Toyota and is today spread all around the world (Womack et al., 2007). The purpose of lean is basically to identify and eliminate the factors in a process that does not create value for the end customer by reducing waste and to work with continuous improvements (Womack & Jones, 2003). The success of Toyota’s implementation of lean production is built on the ability to develop leadership, create teams and a functioning culture, to strategize, build up a cooperation with suppliers and maintain a learning organization (Liker, 2009). The principles of lean can be applied in every industry and it will have a deep impact on human society, as Womack et al. (2007) declare it, lean production will change the world.

The lean concept provides a possible way to do more activities with less equipment, time, human effort and space. Through working in this way it will get the organization closer and closer to give the customers what they want. According to Achanga, Shehab, Roy and Nelder (2006) lean is one of the most popular tools that provide efficiency in the workspace.

There are many definitions of lean and descriptions of what it is and what it is not. A description that still summarizes what most seem to agree on, is that lean is a business strategy in which the efficient flow is the key. The concept leads to improved resource efficiency with the objective of a continuously increased efficiency (Womack & Jones, 2003).

For a couple of years in the beginning of 1990s the interest of using lean production was mainly in the car industries and to a smaller extent in other manufacturing industries. However, during 1990s the lean production diversified to an amount of additional application domains besides the production and assembly. This kind of changes was reflected in concepts such as “Lean
Management”, “Lean Supply”, “Lean Design” etc. Furthermore, the spread and diversification of different ideas of lean even came to apply to businesses entirely outside the car production and manufacturing (Sederblad, 2013). From that it can be understood that lean has spread out to many different organizations and it can also be implemented in administrative functions. In administrative functions it can be hard to distinguish what is of value and what is not, that is a reason why many companies think that the lean concept are limited to the factory (Keyte & Locher, 2008). Lean is not just a concept to create a culture for continuous improvements within a company’s construction process. The methods, philosophy and tools that are used to create efficiency of the production resources in the factory could also be used for the administrative processes. Lean can be useful in different types of service companies as well, such as banks, travel agencies, insurance companies, municipalities or hospitals (Larsson, 2008). As lean have been a strong trend in the 2000s the interest in implementation of lean in administrative functions have increased, as companies strive for further efficiency (Sederblad, 2013). When getting exceptional improvements in the factory by using Lean production, the question if the same improvements could be made in administrative functions come up (Liker, 2009).

1.2 PROBLEM

Originally the Toyota Production System was focused on the factory, but the principles are comprehensive and can equally be used in construction and service according to Liker (2009). Lean has been a successful method in the manufacturing and lean is now growing a lot in service organizations to make their operations efficient as well. The lean approach in service organizations has led to decreased cost, improved quality, increased flexibility etc. That has been done by much time of learning how to implement the manufacturing techniques and methods to be more "lean" in the service organizations. The service organizations have changed their focus on activities of service to a lean perspective (Suárez-Barraza, Smith & Dahlgaard-Park, 2012). One area that is a challenge with lean for most of the administrative services is to get maximum effect from the processes. To improve the processes it is important to come up with some questions, for example, how much time and how much staff is needed to perform the service processes well? Also, it is important to be precise with time and quality in the process performance for service organizations when working with lean. Because quality and service will be poor with a small amount of staff and with a large amount of staff it will instead be high expense of waste in the organization. In order to avoid these challenges, the organizations have to stabilize the work with lean in the service according to Brewton (2009).

The operational excellence of Toyota is based on tools and methods for quality improvement (Liker, 2009). But to transform a business operation, tools and methods are not enough. Why Toyota was successful with these methods was because the company had a philosophy with a base on knowledge of the human nature and motivation (Liker, 2009). The Lean concept could be seen as a problem because it is wider in relation to other concepts. The problem with that is that users can choose to just implement some parts and still mean that they are practicing lean
(Melbi, 2012). Lean is more than different techniques, it is a culture, where the confidence in people is of a large scale (Liker, 2009). Perfection is the goal of a lean producer, it has never been reached and it might never happen because lean production changes the way people work, but not the way they think (Womack et al., 2007).

The connection between lean service and lean administration is the tools that are used in the work environments. It is tools that help to organize the workplace, control the visualization and reduce waste (Brewton, 2009). In service and administrative organizations the main waste is the information that is just lying around, waiting to be processed, which lead to delays in the processes. Divisions in administrative organizations often support several different value streams, which is one of the reasons why it can be hard to document the workflow of a specific stream (Keyte & Locher, 2008). The structure of administrative functions has been divided into divisions for a long time and it can be hard for the employees to understand why they should change their behavior. This can also be a barrier in the implementation of lean in administrative functions.

The bottlenecks will create stocks of information instead of physical stocks, and it can be harder to measure the size of it (Liker, 2009). Keyte and Locher (2008) explain the value stream for administrative organization as a series of activities or processes that support the company’s daily need in the production. To identify the workflow and the waste in administrative functions the easiest way to start is with the customer and to identify the process that adds value for them (Liker, 2009). It can be understood that as administrative functions does not have as clear value stream as in manufacturing, the confusion of how to work with lean in administrative functions can become a barrier for companies that would like to implement it there. When a company invests in lean in the production, the waste in the information process can still affect the company negatively as a whole. It can be explained with the expression that the information stream is the fuel for the material stream, therefore it is of importance to consider lean in the administrative organization as well as in the factory (Keyte & Locher, 2008). It is therefore a need for more information about implementation of lean in administrative functions.

When studying an organization, it is harder to map the workflow in service organizations than it is in a factory as people are busy moving around between different tasks and often sit by a desk with computers, walk around or sit in conference rooms (Liker, 2009). At this point there are no models ready made to follow when implementing lean in administrative functions (Liker, 2009). As lean is a way of working towards high efficiency and low costs the need for a model specifically for administrative functions might not be needed. The importance is to understand how to work with the lean concept, independent on where in the organization you are, and to be aware of what barriers that the company can face during the implementation process. Karlsson and Åhlström (1996) suggest that the first step in the implementation process is the objective. As the implementation process will lead the organization into a journey of continuous
improvements (Karlsson & Åhlström, 1996) the process will not be divided into parts of fixed 
time periods but instead the process could be divided into different activities.

Management and leadership-styles are often recognized as the most critical success factors for 
lean implementation (Achanga et al., 2006). If the organization does not possess good leaders 
during the implementation it will become a barrier. Besides these factors, Achanga et al. (2006) 
add additional factors that are critical for a successful adoption of lean, such as; finance, 
organizational culture, skills and expertise. Laureani and Antony (2012) describe that the 
connection between the organizational culture, the business strategy and the management also 
is a critical success factor for lean implementation. To have management that are comfortable 
with the lean concept, meaning that the management have ability to solve different problems 
and having engaged actors that should be capable to discover the sources behind the problems, 
tends to be important parts of a successful lean implementation (Ballé, 2005). Ballé (2005) also 
believe that the basic confusion of how to handle lean is one of the first reasons why many fail 
when implementing lean in their organizations.

To be successful in the implementation of lean in an administrative organization there are 
several critical success factors that have been found. The main success factors according to 
Keyte and Locher (2008) is that the management in the organization have to understand and be 
dedicated to lean as a way of thinking, the leaders of the value streams should have the time 
and competence to support the implementation of lean, and there should be suitable employees 
that could implement and develop continuous improvements in every team to manage the 
implementation further. Ballé (2005) explains that even if the lean concept is increasing among 
organizations, few of them actually succeed. The question then arises, why it is like that. We 
want to get an understanding of what barriers that affect the implementation of lean in the 
administrative area. In order to be able to implement lean successfully it is important to 
understand what barriers that can be faced. Lean is usually known as a way of working in 
manufacturing and production, where the administrative functions are forgotten. To be able to 
make a company with efficiency in the workplace the whole company has to be included, thus 
including the administrative area (Ballé, 2005).

1.3 PURPOSE

The purpose of this study is to get an insight of barriers when implementing lean in 
administrative functions. Lean is a concept that helps the company to strive for lower costs and 
higher efficiency and to reach the ultimate level the whole company has to work together 
towards this. The understanding of lean in production as well as in administrative functions is 
therefore of high relevance. As previous research have its focus on production but the relevance 
of administrative functions are high, the research questions in this study arise. The 
administrative functions should not be forgotten, as lean strategies can help the companies’ as 
much there as in production, if not more. The research question for this study follow:
What are the barriers when implementing lean in administrative functions?

This study can help organizations to be prepared for what barriers they might face and how they can avoid them during the implementation of lean in administrative functions.

1.4 DELIMITATIONS

As lean is a strong trend in the 2000s (Sederblad, 2013) and it is a comprehensive concept that can be used in the administrative area (Liker, 2009) it has the potential to help companies towards becoming more efficient organizations. The implementation of lean strategies in a company is a process where the company has to be prepared to face obstacles on the way. It would have been possible to do this study in a implementation process perspective but we do not believe that it would profit this study. Karlsson and Åhlström (1996) explain how the implementation process cannot be divided into fixed time periods, as it is a process with continuous improvements it makes it difficult to get clear divided process parts. We understand that it is difficult to make clear divisions of the implementation process where you would be able to see differences in the barriers affection connected to specific activities.
2 THEORETICAL FRAMEWORK

Figure 1 summarize the theoretical framework through thematic blocks. The first step in this chapter starts by emphasizing the lean concept with principles and methods. After that the administrative area is introduced to give a picture of how the administrative functions work with the lean concept. The barriers in the implementation will include in the third step. When the lean concept, the administrative functions and barriers in the implementation are introduced, a conceptual framework will be developed.

2.1 THE CONCEPT OF LEAN

The first step in this chapter emphasizes the lean concept with principles and methods.

2.1.1 THE PRINCIPLES OF LEAN THINKING

Lean is not only a production method, it is a way of thinking that removes waste and improves the efficiency (Hasle, Bojesen, Jensen & Bramming, 2012). Below one way of lean principles will be presented.
THE 14 PRINCIPLES OF LEAN

Liker (2009) describes 14 principles, which are divided into four different sections, and these principles can be seen as a guide of how to work with lean.

Section I - Long term thinking

*Principle 1* - This principle explains the importance to have a long term thinking for the final results, even if bad results is shown in the beginning. To be able to have a long term thinking it is required that the whole organization share the same values and that everyone have the same information to easier achieve the common goals. To be able to achieve the goals the organization should always put the customers in focus and have continuous improvements. This principle is a base to make the rest of the principles work (Liker, 2009).

Section II - Right results come along with the right process

*Principle 2* - Start to define and develop a stable process, make the process as simple as possible. Avoid performing activities that are not necessary to satisfy the need from the customers in order to make the process less complicated. Try to make problems visible and try to obtain a place where the employees solve problems by themselves to decrease extra work. By creating this kind of thinking in the process positive achievement will appear (Liker, 2009).

*Principle 3* - It is important to avoid overproduction of products and therefore the demand from the customers should control the production. To make it in the best way, the organization should use the principle Just in Time (JIT). JIT means that only the demand of a product should be produced (Liker, 2009).

*Principle 4* - In order to make lean successful it is important to smooth out the workload. When organizations are trying to implement the principles of lean, they have to understand that they should not overburden employees and equipment but also to eliminate problems (Liker, 2009).

*Principle 5* - Quality should be built-in in the organization in the beginning and to do that, it requires that employees find the root problems and make sure that it will not emerge all over again. To just fix the problem temporary and later on fix the same problem will be waste of time and resources (Liker, 2009).

*Principle 6* - To get a stabilized process in the organization it requires a standardized way of work. It is done by continuous improvements and involvement from the employees. In order to make the process flow between all the employees it is good if the methods that are used in the
CHAPTER 2 THEORETICAL FRAMEWORK

process are adapted to everybody (Liker, 2009). This principle can be connected to what is called Kaizen.

**Principle 7** - Try to avoid hidden problems, therefore the employees should use visible and simple indicators to help them to make conclusion if they are working according to the standards or not (Liker, 2009). 5S is a tool that is helping with what this principle indicate.

**Principle 8** - New techniques that are introduced into the market requires to match the employees and the processes. The new technique should be proven before it enter the processes and knowledge of how this new technology will be connected to existing solutions and working methods is needed. Otherwise new techniques could create problems to standardize the process, therefore they should be avoided if they do not fit into the process (Liker, 2009).

**Section III - Develop employees and cooperation partners to add up value of the organization**

**Principle 9** - Develop a leader who understand the work and that live the philosophy. Develop a leader that can teach others in the organizations and that can act as a role model for the company’s methods and philosophy. Moreover, it is better to develop leaders internally than develop leaders externally (Liker, 2009).

**Principle 10** - Teamwork is something that must be taught to get the maximal effect together with the best quality. It is made by combining specific groups and develop them after the company’s philosophy to get a stronger culture in the organization (Liker, 2009).

**Principle 11** - Respect the expanded network of partners and supplier by challenging them and helping them become better with different goals to achieve (Liker, 2009).

**Section IV - The continuous search for the root cause of the problem drives the learning further within the organization**

**Principle 12** - When a problem arise everybody that are engaged within this problem should physically see the whole situation with their own eyes. This is to clearly understand the problem and make it easier to solve it, instead of only listening to other employees or to only see the problem at a computer screen (Liker, 2009). In the language of lean this is called go to Gemba.

**Principle 13** - Do not make decisions before taking all kind of considerations and comparing all opportunities that are available. When a decision is made it is important that the decision is implemented quickly but with careful steps forward (Liker, 2009).

**Principle 14** - To have the ability to become a learning organization it requires stability in the whole organization. A learning process refers to having the capacity to enlarge the knowledge
and to move forward. Therefore it is important to always reflect on the process and see what could be better (Liker, 2009).

2.1.2 THE LEAN-HOUSE

The lean-house indicates a base of principles, tools, and methods that are included in the lean concept. The purpose with the lean-house is to give an understanding and to visualize how the different parts can be connected. The philosophy of the lean-house is to correspond the organizations strategy into one clear goal and the purpose it to eliminate waste and create value with a focus on the customer. It will deliver the requested quality, at the demanded time, with the lowest possible cost (Johansson, Broman & Alsterman, 2005).

The foundation

The foundation of the lean-house is to standardize the work and to manage effective work of improvements. Standardization can for example include educating employees to make them work in the same way, which is a condition at the implementation of lean (Larsson, 2008). Womack et al. (1996) described eight types of waste and according to Larsson (2008) those eight wastes make it easier for the organizations to discover waste in administrative functions.

1. Mistakes
2. Correction (of mistakes)
3. Production of items nobody wants
4. Unnecessary production steps
5. Unnecessary movement or transport of employees
6. Unnecessary movement or transport of goods
7. People waiting downstream
8. Goods or services that do not meet the customers’ needs

5S is a tool that is common to use when standardizing and it is a step-for-step method and stands for Sort, Set in order, Shine, Standardize and Sustain. 5S is a tool that creates and maintains a good order and clarity in the workplace (Larsson, 2008).

When the foundation is done the two columns can be built.

The left column

The left column is called Just in Time (JIT) which is a demand driven work method and the purpose is to produce and deliver everything in the exact right time to avoid waste (Womack & Jones, 2003). The intention is to avoid waste by minimize unnecessary work (Larsson, 2008). But when looking at a service company it is hard to plan requested products by the customer because there it is about offering good service directly to the customer.

The right column

The right column is called Jidoka¹ and that means that intelligent humans and machines discover and fix errors (Leanforum, 2014). The intention is to get good quality in every step, for example to build up the quality in the processes through different methods and troubleshoot to increase the quality of the final product (Larsson, 2008). There are several tools in this part that work well, for example; Andon, 7QC and PDCA. Andon is a tool that through visual controlling shows quality goals and how the processes are advancing. Whiteboards are one example of what could be used with this tool (Larsson, 2008). In 7QC the QC stands for Quality Control. PDCA, stands for Plan, Do, Check and Act and it is a tool for continuous improvements (Larsson, 2008). These tools are used to identify, analyze and prioritize all kinds of administrative problems, failures and shortages (Larsson, 2008).

¹ The Japanese word for quality
CHAPTER 2 THEORETICAL FRAMEWORK

The roof

When the columns are put to place, it is time to build the roof. It is now the organizations can obtain the large potential that lean creates. The roof includes Kaizen\textsuperscript{2}, which is an ongoing process. Further, the roof has its focus pointed on the customers, which mean that everything should create value to them (Womack & Jones, 2003). The Value Stream Map (VSM) give a view of how the organization work together with the purpose to create value for the customer. By establishing a VSM it can increase the understanding of how the administrative functions work in reality as it is a tool that help the organizations to map out and evaluate the processes (Larsson, 2008).

The center of the house

In the center of the lean-house the engagement can be found, with flexible, motivated employees that continuously search for better work methods. Lean is challenging and requires engagement, driving forces and motivation from all the employees in the organization to be able to succeed. The engagement is created through improvements of the daily work and that makes all employees included in the continuous improvements (Larsson, 2008).

2.2 LEAN IN ADMINISTRATIVE FUNCTIONS

The administrative area is introduced to give a picture of how the administrative functions work together with the lean concept. Authors have emphasized in previous studies that the lean principles with advantage can be used in administrative functions as well as on the factory floor but differences can be found (Larsson, 2008; Womack & Jones, 2003).

According to Chen and Cox (2012) there are differences between manufacturing environment and administrative environment. In administrative environment the waste is more difficult to measure, while in manufacturing environment the waste is visible in a clearer way and easier to measure. A difference is for example when measuring the time when transporting a product in manufacturing environment, which is easily done. While in administrative environment it is more difficult to establish the time of the transportation because most of the work is via phone or Internet. In manufacturing environment it is easier to indicate things in the ongoing process at the workstation and also the finished work that can be found in the warehouse. Compared with administrative functions where it is harder to identify the items that are in the ongoing process (Chen & Cox, 2012).

\textsuperscript{2} The Japanese word for continuous improvements
It is hard to define operational measures of lean in service organizations and in administrative functions as there is not enough conceptual clarifications in earlier research (Malmbrandt & Åhlström, 2013). The waste of time when waiting could be indicated by the idle time of machines in manufacturing environment. However, in administrative environment the idle time is hard to estimate because some tasks need to be accepted by customers. To measure defected products in the organization is done by counting how many of the finished products that have failed. In administrative environments it is harder to do the same, because there are many variables in the tasks (Chen & Cox, 2012).

According to Åhlström (2004) clear differences between manufacturing and services should be avoided, instead they should learn from each other and focus on the similarities. If the focus is too strong on the tools it can lead to a belief that lean cannot be implemented in certain situations. It is therefore important to understand that all organizations are different and the tools can be modified for the particular organization. It is all about interactions between technical and social systems in the organization (Lander & Liker, 2007). The same can be said about administrative functions.

During the implementation of lean in administrative functions, the organizations have to be aware that principles, practices and tools may have to be developed and changed over time (Malmbrandt & Åhlström, 2013).

2.3 BARRIERS IN THE IMPLEMENTATION OF LEAN

In this part, four main categories of barriers have been found for the implementation process. The categories are; Lack of knowledge and understanding of the concept of lean, lack of management support and involvement, lack of patience and long-term perspective and also lack of motivation of all the people involved. These categories have been formulated mainly from research about implementation of lean in production and they will be introduced below.

2.3.1 LACK OF KNOWLEDGE ABOUT LEAN

An important part of the implementation is the employees and the training that they receive during the process (Malmbrandt & Åhlström, 2013). According to Yang and Yu (2010) the barriers of implementing the lean concept into an organization could be that the company never heard of lean and how it works. Other barriers could be the misunderstanding of the lean concept, one example given by Yang and Yu (2010) is that smaller companies think that the lean concept is suitable only for larger companies or that lean is suitable only in specific industries. The education of lean should be in the beginning of the lean implementation process according to Dickson, Singh, Cheung, Wyatt and Nugent (2009).
According to Mefford (2009) the employees will make it difficult to implement new work procedures and practices in the organization as they will feel uncomfortable with changes in their everyday work. Bamber and Dale (2000) explain that the changes can lead to that the employees refuse to do their job. Employees get more pressure when the goal of implementing lean is continuous improvements, to eliminate waste and to decrease the waiting time for customers (Womack & Jones, 2003). A barrier in the implementation is the lack of education of the employees (Bamber & Dale, 2000). Further, Mefford (2009) explain that it would be good in the long run to hire people that are interested in lean and let go of employees that do not accept the implementation of lean and have negative attitude.

The understanding of that all organizations are different and that the tools can be modified for the particular organization is of importance (Lander & Liker, 2007). Lean production has its root in the car industry and the misunderstanding of that the concept only can be used there is common. When aiming for an implementation of lean in administrative functions, it therefore has to be clarified for the employees that the concept can be used in any type of organization. Larsson (2008) argue that lean is equally useful in administrative processes as in production processes. The employees’ and management’s understanding of that the lean concept is useful in administrative functions is important (Malmbrandt & Åhlström, 2013). The problem is often how companies look at lean and how they are trying to approach the implementation of it (Lander & Liker, 2007).

A suggestion from Yang and Yu (2010) is the importance of having good communication in the process to avoid barriers. By using tools such as Value Stream Mapping, 7QC, 5S etc. it can help to make the whole organization communicate with the same language. From these theories it can be summarized that it is of importance to have an understanding of lean in the whole organization as the lack of knowledge and understanding of the lean concept can be a huge barrier in the implementation process. Mefford (2009) explain that the organizations need to trust that the lean concept will work and be successful.

**2.3.2 LACK OF MANAGEMENT SUPPORT AND INVOLVEMENT**

To introduce the lean concept in an organization the management have to adapt to it and the organizational structure is of importance (Bamber & Dale, 2000). To avoid the barriers that appear, Yang and Yu (2010) suggest some principles and one suggestion is that the involvement and attention by the managers must be high when lean is implemented, to show the whole company the high-level of awareness and belief in the lean concept. According to Scherrer-Rathje, Boyle and Deflorin (2009) one of the most important things during the implementation of lean in an organization is to get maximal support by the top management. Mefford (2009) explains that the management need to be fully committed to get a successful implementation. When it comes to the top management during the process, they must indicate their true
commitment because that will convince everybody in the organization that the implementation of lean is the right path for further development of the company (Mefford, 2009).

The leaders and management in administrative functions must spread and teach the employees about the lean philosophy for administrative functions every day. With lean in administration the managers must always be visible in the organization to help and to supervise problems that come up. Moreover, the management should be on the “floor” in the administrative processes a lot to create a developed and learning organization (Larsson, 2008). It is important that the management are confident (Ballé, 2005) and have a strong belief in the lean concept so that all the employees want to follow and get confident in the concept (Liker, 2009). As a leader you should not be afraid to involve the employees into the decision processes, the leaders must see themselves as coaches that guide their employees (Larsson, 2008). From this it can be understood that the lack of management support and involvement can be a huge barrier in the implementation process.

2.3.3 LACK OF PATIENCE AND LONG-TERM PERSPECTIVE

The costs of the implementation of lean can be large, which can make the organizations end the implementation because of delayed benefits and improvements of the work. Further, it is hard to achieve good results in a short-term view and therefore as an organization it is important to have patience for the final results (Mefford, 2009). Liker (2009) explains the importance to have a long-term thinking towards final goals even if the results are bad in the beginning. The implementation of lean is not something that can be made over a day, it is important to understand that it is a long-term process.

Patience is important when implementing lean, to always have a long-term focus rather than short-term thinking and continuously invest in employee development. It is important that the management show their commitment to lean and the implementation process to convince the employees of the long-term focus (Mefford, 2009). Implementation of lean in administrative functions should not be made to make short-term value and one-time efficiency (Larsson, 2008). It is hard to get good results in a short-term perspective so the management and employees have to be committed to the long-term thinking (Mefford, 2009).

Administrative functions are usually divided into different divisions and as it has been that way for a long time it can be hard for the employees to understand why they should change their habits and behavior. When changing a culture there is a need for a long-term perspective (Keyte & Locher, 2008). Keyte and Locher (2008) explain that in administrative functions it is hard to distinguish what is of value and what is not. It will be harder to see fast results in the administrative functions, as it is not visible in the same way as in the production. A barrier can therefore be the companies’ lack of long-term perspective. Here it can also be understood that
commitment to the lean implementation is crucial for its success and it is connected to the long-term thinking.

2.3.4 LACK OF MOTIVATION

Yang and Yu (2010) suggest to have a learning organization, where the implementation of lean has to be carefully planned by the top managers so that the trust and motivation of the employees will not get lost during the process. A suggestion could be to show measures of the improvements after a while to increase the motivation. Scherrer-Rathje et al. (2009) argue that during the implementation it is important to show positive results for the employees to motivate them to continue with their work and to avoid that they return to previous routines. Motivation of the employees is needed as Mefford (2009) argue that the whole organization must be involved in the process.

As motivation is a state of mind, Pinder (1998, pp 11; Latham & Pinder, 2005) define motivation as “a set of energetic forces that originate both within and beyond an individual’s being, to initiate work-related behavior and to determine its form, direction, intensity and duration”. It can be explained that motivation is a type of interaction between the individual and the environment that results in a psychological process (Latham & Pinder, 2005).

Motivation in a learning organization can be an output from that problems should be seen as opportunities to improve, because that give the people a chance to make mistakes and learn (Lander & Liker, 2007). Work-related stress can affect employee well-being but when work is simplified from the lean process it can have a positive effect on work depression. The job characteristics mediated from the lean process led to employee commitment. If the organization will work with the lean process so that the employees get allowed independence in their job, use of skills and participative decision making, it will lead to that the employee well-being and motivation increase (Latham & Pinder, 2005). To get a successful implementation of lean the importance of getting everybody to work together towards the same goal is high and therefore the lack of motivation of the employees and the managers can be a barrier during the process.
2.4 CONCEPTUAL FRAMEWORK

Starting from the concept of lean and then combining it with administrative functions with a focus on barriers in the implementation the conceptual framework is developed.

Above the framework is presented by four blocks of barriers in the implementation of lean in administrative functions. We assume the barriers are all influential during the implementation but that they difference in the level of influence. The four blocks are, lack of knowledge about lean, lack of management support and involvement, lack of patience and long-term perspective and also lack of motivation. These blocks will be used as a base for the data collection and for the analysis of this study.

![Conceptual Framework Diagram]

Figure 3 - Conceptual Framework
3 METHODOLOGY

In this section, the methodological framework and approach are presented for this study. This section will start with a reasoning to our research design and further describe the approach for this work. Subsequently the data collection with the interviews and the background to this will be declared.

3.1 APPROACH

To fulfill the purpose of this study a qualitative study was done. The ambition and goals with this study is to find themes, categories and patterns in the material, and therefore a qualitative approach is best suitable according to Saunders, Lewis and Thornhill (2003). Furthermore, Jacobsen (2002) and Lantz (2007) argue that a qualitative method is best suitable when you want to see a connection between the context and the individual person. This method is suitable when you want an overall picture of how the humans experience and understand a phenomenon. It is also suitable when an unclear problem within a subject needs to be explored and it requires an openness and adaptation to fix it, which the qualitative study provides (Jacobsen, 2002). We felt that a qualitative study was the best suitable to get an answer to our research question.

The information used in this study were obtained from books and articles with the topic focused on lean. Lean as an operation method have been created of a production environment and from that it have been developed further to be used within administrative functions. This makes the literature and tools that are used in administrative functions originally developed from lean production, and therefore it was not possible to get away from certain tools and expressions that are connected with lean in production. To handle lean in administrative functions we decided to adapt the literature as much as possible to this area, but since a lot of the lean theory is adapted to lean production we also decided to choose books and articles with a general focus on lean.

To find relevant information about lean for administrative functions we have used different collection methods. The library of Halmstad University has been a resource of books within lean and the selection on which books that have been relevant for this study have all been connected to lean. Databases have been used for relevant scientific articles to this study: Google scholar, Diva, ISI Web of Science. The keywords that have been used to search for relevant information are “Lean” and “Administrative” alternative “Lean Administrative” etc. After looking at the article’s abstract, introduction and conclusion, we selected out which ones of the articles that were relevant for this study.
We divided the theory chapter into different parts, "The concept of lean", "Lean in administrative functions" and "Barriers in the implementation of lean", because we considered this to be a good way to achieve the purpose of this study.

There are several methods to collaborate data in a qualitative study, such as ethnographic observations, focus groups and qualitative interviews (Bryman & Bell, 2011). Our investigation was made on eight informants from four Swedish organizations where the results of the interviews were expected to provide an overall picture of a number of specific areas. It was important for us to get a broad understanding of this subject to be able to understand the informants’ perspective and view (Morgan, 1996). The interviews were made with two informants from each company and they have different positions in the organizations. It was made because of two reasons, to get more reliable material and to get various perspectives.

In summary, this study is a qualitative study and this approach was chosen to fulfill the purpose and provide a deeper understanding of the subject. The interviews gave us an insight and reflection of the chosen topic. To achieve the purpose of this study, the data collection was aimed to get as close as possible to the respondents experiences to be able to understand the phenomenon from the interviewees point of view. These following steps indicate how the study was done: First, the literature of existing lean theory in administration was viewed. This was followed by interviews with eight members from four different organizations, which have already implemented lean in the administrative functions or been part of the implementation process. Finally, there was a discussion where the theoretical framework is compared with the empirical data and the analysis led us to the conclusion.

3.2 QUALITATIVE STUDY

In order to clarify a concept, it is important to collect data, and it can be done through interviews with a number of selected informants. From the interviews in this study the informants shared their knowledge, experience and translation of the subject which provided a deeper understanding. A qualitative study was a clear choice for this study, considered getting the companies’ and informants’ experiences, reflections and to understand what the informants wanted to pass on to us.

The advantage of collecting data through interviews according to Bryman and Bell (2011) is that it will be an interactive process and at the same time it is open to be an iterative process. An interactive process means when the interviewees describe a phenomenon that the authors do not have knowledge about before the interview and during the interview ask about an explanation of the phenomena. An iterative process means when the authors could contact the interviewees to collect more information when it is needed to get further development on previous answers.
According to Bryman and Bell (2011) there are some areas where a qualitative study can be criticized. For example when another researcher want to operate a similar study as a study that already have been done and the result turn out differently in the end. The reason of that can be the previous author’s resourcefulness and the strongly unstructured work. It can also be a problem during the interviews if the informants do not feel that the authors are neutral in the topic and therefore the questions were non-leading and open for discussion.

Moreover, Saunders et al. (2003) describes that in qualitative studies it is often a smaller part of the relevant population that are interviewed and hence it is not faithful to establish the results as representative for all the population. That is a weakness in this study that we were already aware of, but our results can help for further research. It was not possible to investigate every company that have implemented lean in administrative functions because of the small amount of money and time for this study (Jacobsen, 2002).

3.3. SELECTION OF ORGANIZATIONS AND INTERVIEWEES

Here we present what criteria that was used when choosing the organizations and informants:

- The organizations must have implemented and/or been involved in the implementation process of lean in administrative functions.
- The informants work in administrative functions.
- The informants can have any work position in the company.
- The informants should have experience in the concept of lean.

This kind of selection is suitable to use when it comes to understanding, discover and gain an insight according to Merriam (1994). By using these criteria that are presented above it helped us to identify appropriate organizations and informants. The fact that lean in administrative functions are quite a new area compared to lean in production made it more difficult to find appropriate objects in form of informants and organizations. We decided to study a public organization and three private companies in Sweden, where one of the private companies work as consultants. This decision was made to see if there are any differences between private and public organizations and it was also to get an insight if consultants see the barriers differently than the companies that have implemented lean themselves.

The selection process of the organizations started with a research on organizations that was suitable to study according to the purpose. It was done by using diverse search engines to find information that indicated that the organizations were serious with their lean initiative, such as awards, prizes, rewards and other statements. To make sure that the organizations practice lean in administrative functions and fulfill our criteria, we discussed the subject through telephone and e-mail.
The choice of that the respondents had different positions in the organizations had a purpose to fulfill, which was to give us an increasing understanding and better insight of their barriers when implementing lean in administrative functions. In order to increase the value of the data and also give deeper and more complete insight it all depends on the selection of the respondents, which is an enormous emphasis in a qualitative study (Merriam, 1994). Below a further presentation of the eight informants is presented in table 1.

<table>
<thead>
<tr>
<th>Name &amp; Age</th>
<th>Organization</th>
<th>Position</th>
<th>Interview &amp; Time</th>
<th>Ownership</th>
<th>Experience of Lean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edna Sinkjaer Sköld – 39 years old</td>
<td>Halmstad municipality</td>
<td>Head of Unit for communication, development and quality</td>
<td>Face interview – 40 min</td>
<td>Public</td>
<td>7 years</td>
</tr>
<tr>
<td>Kristina Rosendahl – 51 years old</td>
<td>Halmstad municipality</td>
<td>Quality Strategist</td>
<td>Face interview – 60 min</td>
<td>Public</td>
<td>More than 10 years</td>
</tr>
<tr>
<td>Magnus Thordmark – 48 years old</td>
<td>Swerea IVF AB</td>
<td>Team manager for product development</td>
<td>Face interview – 80 min</td>
<td>Private</td>
<td>More than 10 years</td>
</tr>
<tr>
<td>Jonas Laring – 64 years old</td>
<td>Swerea IVF AB</td>
<td>Business developer</td>
<td>Telephone interview – 45 min</td>
<td>Private</td>
<td>7 years</td>
</tr>
<tr>
<td>Einar Gudmundsson – 56 years old</td>
<td>Rejmes Bil AB</td>
<td>CEO</td>
<td>Face interview – 100 min</td>
<td>Private</td>
<td>30 years</td>
</tr>
<tr>
<td>Lars Wenström – 56 years old</td>
<td>Rejmes Bil AB</td>
<td>Production Control Manager</td>
<td>Face interview – 100 min</td>
<td>Private</td>
<td>20 years</td>
</tr>
<tr>
<td>Christian Svensson – 43 years old</td>
<td>Lindab Profil AB</td>
<td>CEO</td>
<td>Face interview – 60 min</td>
<td>Private</td>
<td>20 years</td>
</tr>
<tr>
<td>Oliver Stepanoski – 42 years old</td>
<td>Lindab Profil AB</td>
<td>Production Manager</td>
<td>Telephone interview – 55 min</td>
<td>Private</td>
<td>20 years</td>
</tr>
</tbody>
</table>

**Table 1 - Description of the Informants Participating in This Study**

3.4. DATA COLLECTION AND ANALYSIS

The primary data has been obtained through six face-to-face interviews and two telephone interviews. We decided to make eight interviews, considering that to be the best way to
accomplish a good mixture of width and depth on the subject, keeping in mind the quite limited amount of time that we had on our disposal. We chose to do individual interviews with key figures from the implementation of lean in each organization, because an individual interview give a deeper understanding.

Before the interviews the informants got the interview guide on e-mail to have a better understanding of the topic area that was the most important in this study. In that way, the informants could prepare and give us the information that was needed. During the interviews, we started with a short presentation of this study and then with the first question from the interview guide. Later in the interview we picked out the question from the interview guide that was most suitable for the discussion at the moment and added follow up questions to get more information. That led to a more open discussion but with the base structure from the interview guide. In the end we let the informants summarize the interview and discussion with which barriers they think are the largest.

During the interviews the informants were giving their own views on which of the four blocks of barriers that have most influence of the lean implementation in administrative functions. The scale was between one and four, where one is the least influential and four the most. The results from this question have been used to analyze the data. This was done to get an easier overview of which barriers that the informants felt like the most influential and to create clear discussion points.

The interviews was summed up by giving the informants a short update on what was going to happen next and also that we got clearance that is was okay to return with follow up questions if it would come up. All the interviews was recorded and lasted between 40 and 100 minutes.

The interview guide was made through brainstorming to provide the most important areas and then to cover the most important question for these areas. After that the theoretical framework helped to formulate the base questions and these questions was adapted to fit the interviews with the different organizations, informants and their positions. When the interview guide was structured on an appropriate way for this study, it was sent to people without any connection to this study for control reading. Through this step some unclear question could for example be rewritten or developed. The whole interview guide can be found in Appendix 1.

Directly after an interview we listened through the recorded interview and transcribed it. The transcribed document was sent to the informant for control and then they had an opportunity to comment about possible faults, because the information can be used as a basis for citation.

The interviews started with the question if the respondent wanted to be anonymous, but they were all open and had no problem with anonymity.
In the section of Empirical data the three companies Swerea IVF, Rejmes Bil, and Lindab Profil will be introduced, as well as the public service organization, Halmstad Municipality. The data collected from these organizations will be presented with the structure of the four blocks of barriers and one part about the challenges when implementing lean.

4.1 SWEREA IVF

Swerea AB is a company working with applying research practically and industrial knowledge. Swerea IVF is one out of five consulting institutions from Swerea AB, where they have the focus on production efficiency, product development, process development and material development. Swerea IVF help and coach companies to implement their action plan, usually during 18 months.

The first informant is the team manager (TM) for product development at Swerea IVF. His professional background is many years with jobs in areas of development, both product development and development of processes. He has worked in some smaller companies, with around 35 employees, that have tried to implement lean. The first contact the team manager had to lean was in a production company where they started to introduce the methods because some of the employees came from the car industry. At that point they did not talk about the concept lean, instead they realized that it was lean they were working with. The second informant is a business developer (BD) at Swerea IVF where he is working mostly with manufacturing companies. He has a background from Chalmers University where he was working at the institution for product and production development with a focus on ergonomics. Mostly about how to get people and technical systems to work well together as a whole. The BD has a background from the industry with production techniques and business management and since 2007 he have worked intensely with lean.

Both of the informants have taken a course in lean production at Chalmers University in Gothenburg. They are both members of a lean network for product development, through Swerea IVF, called Produktionslyftet. In that lean network they work together with around 180 companies. When asking the informants what an organization can get out of implementing lean, they agree that the company will get a great focus on the customer. The organization get forced to think about what the customer want, what the customer need and then how the organization can do to achieve it. Thinking of lean as a strategy for the future the TM argue that lean should not only be related to efficiency but also to innovation and renewal. The BD believe that most companies have most of their waste in administrative functions and it is therefore unfortunate that the concept is called lean production.
4.1.1 LACK OF KNOWLEDGE ABOUT LEAN

It can be understood, as the TM argue, that lean production and lean administrative both have similarities and differences. The BD agree and add that the methods and tools will differ between the different organizations. When measuring in administrative functions there will be some repetitive tasks that you can measure in the same way as in production. The BD say that for the more customer related tasks the difference is that the process is information in the administrative functions. The TM argue that it can be a barrier if the organization just say that they are going to implement lean from nowhere, because many people still think of lean as a concept that can only be used in the car industry.

The BD argue that the most common barrier is the misperception of what the lean concept is and how it can be used. Many people in the administrative functions does not understand that lean can be used in their work space. One of the reason for that is that the officials think that their work is too special. When Swerea IVF educate they do it through practical experimentation and only give a brief introduction of the lean concept. After that they mainly work with the management to make them lead the implementation further. Swerea IVF does not have one way that they always use when implementing lean, they always adapt it to the organization. Though one common way is that they first stabilize the processes, which can be done by using for example the lean-house and the 5S. According to the BD a common mistake many companies do is that they focus too much on the tools and methods, it is important to zoom out and see the whole picture. As the BD say “you will not become a good carpenter just because you can hammer and saw, you need to know how the house should be built” (Personal communication, 14th of April 2014) and it is the same with the lean tools.

When it comes to the use of different methods in the implementation, one thing that Swerea IVF believe in is the visualization. Visualization is a method that fit in well in for example project rooms, as it is about communication. The use of visualization will help the team work and it is great when you need to involve all functions and competences as you will find a common language for everybody internally. A common language is a step to be able to easier reach the goals together in the projects. Visualization is also a way to show problems so that nothing is hidden in for example a computer somewhere. When visualizing, Swerea IVF use tools such as Gantt-charts\(^3\) to plan the time and resources, according to the BD. Another suggestion from the TM is to start with value stream mapping, especially with projects in product development. To be able to make a value stream map, a description of a finished project can help to analyze, and to be able to ask yourself, what did we do last time?

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\(^3\) A Gantt-chart is a type of flow chart used in projects to describe the time phases
Swerea IVF put a lot of time into getting a common understanding inside the organization. They argue that if you get a consensus in the organization it will show later in the implementation process. If someone or some people just go out in the organization and say, we are now going to implement lean, so let us start with cleaning the office, make sure your desk is clean, and so on, the motivation will disappear and it will fail. The employees need to get an understanding of why things should be changed and how they and their daily work will be affected. The planning and education of employees is prioritized, it is needed to get a consensus, they think at Swerea IVF. According to the BD the main reason why the implementation will not work is if the employees disagree and therefore work towards different directions.

It is common to talk about waste and waste hunting but the TM say that in product development it is better to talk about customer value and make sure you know what the user want. By focusing on what the customer want, the focus will be on what adds value instead of what does not. When implementing lean Swerea IVF say that they work according to Swerea’s production system but use the lean philosophy as a basis. The reason they call it like that is as the TM say “It’s not a copy paste, you have to base it from your own conditions and challenges” (Personal communication, 7th of April 2014). It is important to develop their own business concept and development program. The BD explain it as “the way to move forward, by bicycle or walking or running or skiing or by air-balloon, it all depends on the company’s conditions” (Personal communication, 14th of April 2014).

The TM say that the largest barrier when implementing lean is when the organization cannot get a consensus and also when they cannot get a common language to be able to work in teams. So a barrier is defiantly if the process starts too quickly so that there is not enough time to spread enthusiasm throughout the company. If there is only one enthusiast, and that person quit, everything will get lost.

4.1.2 LACK OF MANAGEMENT SUPPORT AND INVOLVEMENT

According to the TM the toughest challenge is to bring the management along, to make them want it, make them understand why and make them communicate it. It is easier to get the management in smaller companies to understand and be enthusiastic about a lean implementation.

If the organization is too dependent on one person or an external firm, like Swerea IVF themselves, it can easily fail when or if they quit. Therefore there is a need to get an improvement ability in the company so that they can operate the development further by themselves. The system should be as a culture and there should also be a change manager internally.

The person contacting Swerea IVF to get help with a lean implementation is often an enthusiast that thinks it is interesting and want to know more. But the TM say that they hope that it is the
management that contact them. When signing contracts with companies, through the lean network that the informants are included in, it is always the management that have to sign. To be able to really start an implementation of lean the whole company should be included and not only the enthusiasts. One common reason to failure is the change of CEO or managers during the implementation due to that it can lead to disagreements on the strategy, the BD explains.

According to the BD one of the most common mistakes that companies do when implementing lean is that they have incompetent managers. With incompetent managers he means that the manager is either pointing with the whole hand when giving orders or hiding. The impact of this mistake can differ, but the most common is that the investment will fail. The BD also add that it is usually toughest for old organizations. In old organizations it is easy to just say that we have always done it in this way. Often managers work for a short while and then move on in their carrier so the faithful workers think they know best how the work should be done. What the managers should do to be successful is that they should give out responsibilities to employees but still be interested in what is happening and support them along the way, says the BD.

4.1.3 LACK OF PATIENCE AND LONG-TERM PERSPECTIVE

The companies that Swerea IVF have been in contact with all agree that lean implementation is a never ending process. It is a continuous process of business development and renewal with the ability to improve all levels in the company. According to the TM, successful organizations are the ones that are persistent. It is easy to be enthusiastic in the beginning as it is all new and fun, but later it can become tougher. It is therefore important to always ask the question why? So that everybody understand, with a connection to the company’s vision, what they want to achieve. Swerea IVF have a focus on getting the management involved, and they usually spend four to six months, sometimes more, to get the team agreed on where they are going and what they are going to do to get there.

According to the BD one of the most common mistake is that the organization move too fast forward, that they expect the development to be faster. Many things that the organization can measure will not show any effect until after a long time. The TM gave an example that if the organization measure the income from new products they might have to do it three years after launching the product to get any results. So it is important to have a strong believe that what we do now, this approach, will lead us in the right direction. By having a long-term thinking lean can help companies to survive for example a recession. It can often be heared that organizations think it takes too much time and resources when implementing lean, but the TM is convinced that lean will make it better in the long-run.

Lean is not the solution for a company in crises because a long-term thinking is needed, according to the TM. In the implementation of lean the company have to set both time and
resources aside to get a successful implementation process. Crises usually lead to that the company need to let go of resources such as personnel. If the company are giving notice during the implementation of lean it can give the lean concept a bad reputation. When a company is in crises it does not mean that they cannot implement lean, according to the TM, but they should change priorities and start with the short-term changes. To avoid making mistakes like this it is smart to look into what others have done and not rush things.

The BD have data from their lean network that made an analysis on the first four years of implementation in 60 companies. The results shown is that the first two years they did not do that well, but at the third year it went well and instead they got better results than other companies. The BD explains that the first years it will be a large investment in both time and money, and that is one reason why the results might not be that good the first two years.

The TM advised that companies should have a long-term thinking but it is also important to have short-term goals to be able to follow up and make sure the organization is working in the right direction. It can be said that lean is a continuous implementation process as it has to be developed all the time.

4.1.4 LACK OF MOTIVATION

In a small company it is easier to understand what you provide for the process and therefore it is easier to get the motivation of doing a good job. In a large company you can be a small part and it can be hard to understand how it is connected to the whole. To keep the motivation up for the employees, according to the TM, it is important to tell them how the changes will affect them, will my job be more fun? Will it be easier? Will it be better? and so on.

It is common that companies can be frustrated in the first part of the process where they get educated about the concept of lean as they cannot see anything happen, according to the TM. But he also say that when the employees are put together they realize they have different views on things and that is when they start to talk about the implementation process. When they later go out to do things they will have the same picture of where they are going, says the TM.

The motivation is usually high in the beginning but later it can start to be tough. The TM say that there is usually a downturn in the implementation process but then the organization just have to fight through it. At that point it is important to remember why they started this change and stay convinced that it will be better. In the downturn it can be easy for the companies to go back to old routines, which is one point where many organizations fail. Therefore it is important to have enough people that really believe in the concept and keep the focus on where they are going. The BD arise that there is always positive and negative people according to the question of change. The effort should not only be put on convincing the ones that are negative, instead focus on experimenting and developing with the ones that are positive. That can lead to good
results which will convince the negative people in the end. So when putting teams together it is important to have mixed groups.

To be able to stay motivated during the whole implementation process there should be goals and follow-ups that show that the organization is in the right direction. It is important to find ways of measuring that are closer in time, like if they are good with visualization, and if they are good at working in teams and so on. But it is even more important to have a strong belief that the concept will make it better according to the TM. There should also be time to be able to work with the new concept so that employees do not lose motivation because of time pressure. There have to be an understanding and respect from both management and employees that when people learn new things it might take a little longer time.

When the implementation is no longer in its first phase the employees can be motivated easier by seeing where they are heading, easier seeing the workload and that they can affect the planning of their own work. Usually they can also see a positive effect of stress and participation, says the TM. To ease the workload between the coworkers, a visual planning on individual level can be used so that everyone can help each other. It can also make all the employees understand what everybody else are doing so that they can help out in a better way. The TM arise that this can of course be a barrier because the employees need to be comfortable to plan together, be open with what they are doing, and how much time it will take. There have to be an open culture if this is going to work. After 18 months when Swerea IVF usually finish their support they see it as a failure if the motivation and ability of the company is not enough to continue forward.

4.1.5 REFLECTIONS OF CHALLENGES IN THE IMPLEMENTATION

The TM think that it is most important to come up with a plan on how the organization are going to implement lean in the organization. There is not really a good methodology to implement and spread lean in a sustainable way, which can be a barrier for companies. But the planning is also very important because the organization need to have a common view of where they are going and what their goals are. The BD think that the planning with education and goals are the most important to succeed and it can become the largest barrier. Swerea IVF think that the company need to have a common understanding to be able to work together towards success. The activities in the implementation process are connected and Swerea IVF see the planning as a good way to start because then the organization can get a consensus. After that they can start the changes according to lean philosophies and at the same time develop their own production system.
4.2 REJMES BIL AB

Rejmes Bil is a company that provide services in sales of both new and used cars and trucks. They also provide workshop services, maintenance services and sales of spare parts and accessories (Rejmesbil, 2014).

The first informant is the CEO of Rejmes Bil and he has got 30 years of experience in the concept of lean. His first contact with lean was through a leadership education where he met a man who was involved in the study of how Japan was working in production in the late 1980s. During his time working with lean he have gathered a wide network with lean experts. A Japanese that the CEO have been talking to advised him that if you want to be successful with lean you need to have production control. The second informant in this study is the production control manager (PCM) in combination with that he is helping out with the lean implementation at Rejmes Bil. He has 20 years of experience in the concept of lean and he has been working in many firms with lean principles in product development. He has also been working for the leading consulting firm of Japan, and helped many large companies with lean implementation.

Both of the informants agree on that you can never become fully-trained in lean. They also say that when comparing lean in production and in administrative functions it is all about processes. It is just important to find the main processes. At Rejmes Bil there are four main processes
which are to sell new cars, buy, repair and sell used cars, repair cars and to repair crashed vehicles. The only difference according to the CEO is that in administrative functions it is a flow of information instead of a physical production. Both the informants strongly believe that lean will grow and be a great thing for administrative functions in the future. The CEO add that “I've been doing it my whole life, and getting there is pretty damn difficult” (Personal communication, 15th of April 2014). The PCM add that lean is a trend and it will grow, but to be able to make it work in administrative functions it is about getting all functions together so that the organization creates a system.

4.2.1 LACK OF KNOWLEDGE ABOUT LEAN

Rejmes Bil educate the workers through coaching, and they have a strong focus on coaching the managers. As the PCM and the CEO have a long history and knowledge about lean they can coach the managers, and as the CEO say, it is the managers responsibility to make sure all employees can develop themselves, the managers should not be away on meetings, they should be available. Rejmes Bil is also using external help from consultants as the CEO raise the importance of having many people that know the lean concept in the management.

To be able to be competitive on the market, organizations need to have low cost and happy customers. The CEO raise that it is important to strive for low cost, and by using lean the organization can reduce waste and through that receive lower cost. If the development will continue like it does today companies have to be more efficient in administrative functions to survive. But a large risk is that the organization do not have enough knowledge about processes and how everything works. Another large risk is that the organization need to change peoples’ habits, and that is not easy, it takes time.

In the implementation both the informants think that the main components are to define the leadership, the processes, visual planning and how to measure, the tools themselves are not the main components. When implementing lean in administrative functions the CEO say that it is important to use value stream mapping. Especially because it creates the ability to see the flow, what add value and what does not. If you look at an organization you will not be able to see anything if you cannot see the value stream. It all starts with processes and leadership according to the CEO. It is important to understand what lean is and to understand that is about a management system and not about organizing the obvious. Because it is common that people try to make some changes here and there, like cleaning the desk, but they have to start from the processes and value adding work. Rejmes Bil use production control and by that they mean that every level have to be involved in the process so that the top management do not just make a plan and then leave it to the others to do it. Because then the manager will have no idea what is going on and if it actually work in reality. The system Rejmes Bil work with can be called a bottom-up and top-down system according to the PCM. They are working with, target
conditions and current conditions and from that making goals that they follow up every week. In production control the use of PDCA is high.

The CEO think that Liker’s 14 principles are good to use during the implementation but there is no point of rewriting them, he says “It is a bit like rewriting the obvious” (Personal communication, 15th of April 2014). He also say that it is important for all the managers to know and understand the 14 principles, the lean-house, what Kaizen means and what a stable state is, and so on. The CEO think that it is nonsense to try to transform for example the 14 principles, instead the organization need to have an interest in processes and a understanding of how to get the stream to flow. Rejmes Bil build their foundation through the 14 principles, so that their streams follow them.

A mistake many companies do is that they use 5S as a type of housekeeping that the top managers do not have to work with. 5S is supposed to help to make a standardized way of work and it work well together with the PDCA according to the PCM. At Rejmes Bil they adapt the 5S method to the organization, they use 5S for housekeeping and standards in the workshops and the showrooms, while in sales they will only use it for the housekeeping.

The atmosphere in the company have to be open because if it is an environment of blame the problem-solving focus will be lost. The CEO argue that in the work culture the organization need to have respect for people because in a lean culture, problems are nobody’s fault it is a possibility to make it better, and to do it together. If this does not work it can become a stressful workplace where people blame each other.

The informants say that because they both have a long background of lean, and a lot of experience of lean a mistake that easily can happen is that they tell the employees what to do but the employees do not really understand exactly what to do and why. That is why it is important that the managers are visible to support and help the employees. A common misperception that people have is that they do not understand the difference between problem-solving and Kaizen. It can be explained that by problem-solving you find problems, solve them and make a stable standard, but with Kaizen you improve what already works.

Rejmes Bil will not talk that much about lean in the company, they are going to call it Rejmes’ production system, “we will explain it as the way of Rejmes”, the PCM says (Personal communication, 29th of April 2014). The most common barrier when implementing lean in administrative functions is according to the PCM that mainly white collar workers do not believe that lean is something for them, it is something for the car industry. That is why it is important, and maybe the most important, to know why the organization should implement lean, how they should do it and what will be the results of this. But especially, why they should implement lean.
4.2.2 LACK OF MANAGEMENT SUPPORT AND INVOLVEMENT

The CEO points out that lean is 99% about leadership. He says that the most common problem for companies is that they work with lean in just one cell of the company, such as the quality department, and then it is not a management system, that is the mistake. He specifically says that lean is a management system, not a production system. The CEO says that lean is all about leadership and it is important that the company starts with defining what a good leader does. A good leader should have a challenge mind, a natural ability of wanting to challenge and seeing opportunities in current state. Also, a good leader should be a process expert, to be able to understand how you can optimize the processes. To be a good leader you have to be able to make good teams, that can help and learn from each other, but also be able to see individuals. As a leader it is very important that you have respect for people and believe in them.

The management also have to be involved in all levels of the company and that is the difference between having lean and not, the CEO explains. The management have to go to Gemba, be engaged in the employees and to coach them forward. So when working with lean, the management should not hide in meetings, which usually are ineffective, they should be visible. That is one of the CEO’s goals with the visual planning, because then everybody can see if the things get done and the management cannot hide.

The managers in a lean organization have the responsibility to make sure the lean system can work without one enthusiast instead it should be built in like a natural system. Also to make that happen the top managers have to work as role models, because if the employees see that the managers follow the lean principles they will more likely do it as well. So first of all the top management should know where they are going, what they want to achieve and have the understanding of how it will how they can do it. But one other thing is, according to the PCM, is that you need a person in the top management that are obsessed with the lean concept. All in all, the management have to be involved and to take the ultimate responsibility. The management should not blame things on the employees, they should instead find the problem and solve it. If the management are not clear what they want and being supportive in the process disorders in communication can become a barrier.

According to the CEO the organization have to talk with the lean language. He argues that the lean language is needed because otherwise the managers will not understand what they are supposed to do. He also adds that in the end it is almost only about common sense. When recruiting managers for an organization that are working with lean, you should ask them what they think about going to Gemba and their motivation towards lean. Because if the managers are not convinced of the lean concept, the implementation will not work. The PCM is very clear to say that the most important part in the implementation is the management, he says that the management comes on the first, second and third place and then on the fourth place is if the organization have thought through the concept enough.
When you talk about lean as a management system, the CEO point out that it will bring the whole company together, towards the same goal, because it can only be one management system in a company. He says that around 80% of all lean project fails just because the organization do not see lean as a management system, they see it as a quality system and then it can lead to a cell activity. Also if there is only one enthusiast, and this person quit, the lean investment will follow this person out of the company. According to the CEO many companies are trying to recruit a person that are talented, a star that can solve their problems, but they are usually not interested in what a good leader actually does, that is the basic issue.

The CEO mention that all companies have more or less the hierarchic structure but at Rejmes Bil they call their structure the mountain top. They use all positions to have a view over what is going on. The CEO compare it with other companies that have an iceberg, the top managers just sit there and have no idea what is actually going on underneath. The PCM is a key part of the mountain as he helps to find problems in the process.

4.2.3 LACK OF PATIENCE AND LONG-TERM PERSPECTIVE

The CEO explain that it is important to put a lot of time into what it is that the organization want to deliver, and they should not be too hasty, if they give it time it will usually turn out good. Planning should be done visually so that everyone in the organization can take part of it, if it stays in outlook Rejmes Bil call it unvisual planning and that is not how they want to do it.

The time aspects is like principle one from the 14 principles of Liker (2003), long-term thinking, according to the CEO. He says that an implementation process can take between two and ten years, dependent on how complex the business is. The PCM mention that the implementation of lean is easier for a family owned company, such as Rejmes Bil, than a company that are listed on the stock exchange, because of the long-term thinking. Some companies have extremely high profit, with huge margins, there efficiency can be seen as less important as it will be hidden in the enormous profit. The CEO mention that this can be a problem for those companies, they do not see the point of changing.

Usually the organizations will not see anything in the investment because it will be worse before it get better. The down turn is often due to that the management is not engaged in the implementation, they are not involved in the changes. An implementation is a process of learning so the PCDA is a way to reflect and understand that everything the organization does is not going to be perfect. When looking at preparation for the implementation the organization will need some time, but the preparation will be a continuous process that will be endless. But as the PCM say, they have made a system at Rejmes Bil for around five months and now there is no turning back, because now there are pressure from both the management and the employees. He also say that the implementation has been going fast at Rejmes Bil, usually it can take six to 18 months to establish a subsystem.
CHAPTER 4 EMPIRICAL DATA

To be able to come far with the lean implementation there is a need to build up a skeleton which can stabilize the activities. The strategy should be long-term and the organization have to be aware that it can take four or five years before the new concept is a natural part of the organization. The most important part to think about during the implementation except for the management is that the organization have to be perseverance and have a long-term thinking.

4.2.4 LACK OF MOTIVATION

During the implementation of lean it is often said that it will be worse before it gets better, the CEO say. He also mention that as he started the implementation only six months ago they are right now in a quite messy situation where a lot of changes are taking place and many people question why they do things. People usually do not like to change habits and that’s why everything will be questioned. He says that the motivation in the workshop is today very low as the lean implementation is changing the culture they had in there. The CEO say that before the management in this company have been poor and the employees have made up their own rules. That is why the motivation will be lower when someone suddenly start telling them what to do.

The PCM say that if you pick a group of ten people there will always be one to two that think the changes are awesome, there is one to two that are very critical and then around six that think it is a good idea. The very positive people think it is great at start but will lose motivation fast and the critical people will question everything. It is the middle part that will support the others and make the motivation stay positive.

One logic thing that motivate the employees is that when reducing waste the work will be easier and that is always a positive feeling, it is just important to reach the time when they can feel the difference. Also if the management is present and engaged in the workers it will also provide a positive experience. The CEO especially say that if the management is engaged in the organization where the employees are, it cannot be negative for the employees. Generally it is harder to get the management motivated than the employees. As the CEO explain it “the managers on the top see it as a slap in the face” (Personal communication, 15th of April 2014), that they have to leave their one million office, they do not see it as their job. The PCM explain it as the higher and more educated, the harder and close minded people often are when it comes to lean implementation, they are resisting that they have to change and be involved.

In administrative functions the organization have to find ways to measure value, target and core conditions and reflect over what you are doing. In administrative functions the employees can often feel changes but they cannot touch them. To stay motivated it can be good to find measurements and to make people reflect over the changes. Often the target of a company is to earn money, but that usually motivate very few people. Instead the organization have to know
why they should go there in the morning and why they would like to tell their friends and family about what they do at work, according to the PCM.

The CEO say that “change management is tough, no doubt about it, very tough” (Personal communication, 15th of April 2014), so to keep the motivation up is a hard task.

4.2.5 REFLECTIONS OF CHALLENGES IN THE IMPLEMENTATION

The PCM think that first it is very important to create a clear Why, for example why does the organization not make more money when lean is so great. But then the organization have to work with the concept development on both the system and the benefits of the business. The organization always have to connect what they do with the business model and that is why concept development is important.

When planning for the implementation of lean, the PCM argue that it is important to get a clear goal and get time for communication. He does not think that education is that important but the training during the implementation is extremely important. This part is very important for the management as they have to know how work works.

![Diagram 2 - Rejmes Bil's Opinion on the Barriers' Influence in the Implementation, from 1 to 4, with 4 as Most Influential.](image-url)

**Diagram 2 - Rejmes Bil’s Opinion on the Barriers’ Influence in the Implementation, from 1 to 4, with 4 as Most Influential.**
4.3 HALMSTAD MUNICIPALITY

Halmstad is today Sweden’s 19th largest municipality with just over 94,000 inhabitants. In recent years, Halmstad has been one of the nation’s fastest growing municipalities. Halmstad municipality as a company has 13 departments and eight municipal corporations that work with different areas (Halmstad, 2014).

The first informant is the Head of Unit for communication, development and quality at Halmstad municipality. Her professional background is computer engineering and she has worked as a consultant at a large company in Sweden before she started to work at Halmstad municipality. She has a background as an IT-strategist, but now her focus is on quality and to implement lean in the quality thinking. Her first contact with Lean was at Halmstad municipality, and recently she has taken courses about the concept of lean. The second informant is the Quality Strategist (QS) at Halmstad municipality. Her professional background is mechanical engineering and she has worked as a quality manager in the vehicle industry for many years. Right now her focus is to help with management systems and to support different organizations. Her first contact with lean was in the vehicle industry and she also has taken courses about lean at Chalmers University.

Both of the informants are members of a lean network within Halmstad municipality, they have been in contact with each other but they have not collaborated as they are around 8000 employees and they work at different divisions. When asking the informants what they think about lean as a method, they agree that lean is about working in steps, to continuously develop a structure and to make documentations visually on boards so that everyone can see what is going on. The informants consider lean as a way to do more with less resources, avoid unnecessary duplication of work, to make the customers satisfied and to decrease stress for the employees.

4.3.1 LACK OF KNOWLEDGE ABOUT LEAN

The head of unit argue that there are similarities and differences in lean production and lean administration. She believes that the largest difference is that it is easier to measure things in production compared to administration. Further, the informant explain that they want to be able to measure things in administration because right now they do not know how long time things take, instead they estimate their measurements.

The QS agree that there is difficulties to measure things in administration. Further, the informant means that if an organization just implement lean without taking into account the quality standards from the customers, the result will have shortages as lean and quality are clearly connected to each other. The informant explains that a large amount of people think that lean is only for the vehicle industry and therefore it is important to create an understanding of
what can fit in the administrative functions. The organization should for example not take the whole concept and slavishly follow all the 14 principles.

The QS describe the usual mistake that organizations make when implementing lean in administrative functions and it is that they throw themselves on the tools, forget the philosophy and forget include the customer. To avoid making mistakes in the implementation of lean it is important to be careful when choosing consultants and to be tough on them because all they want is to earn money, which could actually be a threat, the QS argue. Further, the informant argue that the meaning of implementing lean in administrative functions is for them to not waste the taxpayers’ money, to really makes sure to do good and create value for money as it is the peoples’ collective money that are being used.

According to the head of unit it is important to test the lean concept during the implementation in administrative functions to be able to see if it is something the organization want to continue with. The head of unit suggest that the focus should not be on the word lean, she believes that everyone should start to work with culture- and value projects, and then if it is called lean or something else does not matter. The head of unit continue the explanation that the culture and value is their focus, it is what they should actually work with and maybe later on use the lean tools.

The head of unit thinks that they are still doing well enough for the moment but they could be better. The informant means that they should for example be more confident in themselves, the discussion about the customer should be in focus naturally. Further to act in a professional way and start to ask more questions and explain themselves without being afraid for criticism.

The QS say that it is not enough to use 5S to decrease waste, the organization should map the processes because that will help to indicate waste. It is also a barrier when organizations throw themselves on the tools and forget to consider the value of the customers. The informant give an example “When I worked at an organization, they said, now let us work with lean and let us work with 5S. Then they made a general fault, the managers went out from the office to the workshop and said, now you have to clean up. The people who stood and worked then said, do you not think I have a good order of my tools? they had completely missed the leadership. So there it was collapsed for a few years, you could not talk about lean and about 5S because people were just angry” (Personal communication, 30th of April 2014)

The head of unit experiences is that the organization should not use the 5S tool in the beginning in administration compared to the production floor, because it turned out not to be good at all for Halmstad municipality. She says that it is culture differences between 5S in the production and in administration functions. Further, the informant still think that the process mapping and value stream mapping are good to use early in administrative functions.
The QS explain that they do not have the same type of processes as the industry. She says that when organizations are mapping their processes they often forget the customer’s perspective and therefore it is important to put themselves in to the customer’s situation to be able to know what they need. The informant argue that it is of importance to start with the value stream mapping and to keep track of the processes and to understand that all organizations have processes.

4.3.2 LACK OF MANAGEMENT SUPPORT AND INVOLVEMENT

The head of unit think that management is a huge barrier. The informant has experience of this barrier when working as a consultant in her previous jobs. The barrier was because the companies were saying that they can work with lean when they have time. What they meant was that they would work with lean during the low season and then do the usual work during the high season. The problem with that is that the management did not see that lean is part of the work culture and that is the largest barrier according to the head of unit.

The head of unit think that when the management feel that something does not work the way it should be in the process, then it is important to make a plan on how to fix the problem and give it time. It is also important to get the entire management along with the concept because without them it is not going to work, the informant mean. Further, the head of unit explain that if the management feel that there are no problems in the organization, then it is unnecessary to implement lean in administrative functions.

The head of unit explain their lean journey as a roller coaster. They were very active in the beginning but about two or three years ago the administrative manager quit and he was the one that introduced lean. After that it was not stable anymore, but the desire was to continue even though it became more stressful when a manager quit. The informant mean that the focus was at that point to find a new administrative manager, they found a good administrative manager, but he only worked for a short while. Then it became even more stressful and more energy was used to find a new manager. The head of unit end with “So I can say that we have stayed in the implementation process, but we had clear downturns. Now we have started to fight us up again and we started to find out that perhaps we should continue to work with it” (Personal communication, 31st of March 2014).

The QS says that the management are only supporting the employees a little bit when it comes to lean implementation at Halmstad municipality. The quality strategist means that when an organization is implementing lean in administrative functions it requires that the management give space to the employees so that they can have improvement meetings. The management do not to have to be at the meetings every time, but they should be there maybe once a month to ask how it is going. The management must also show that it is okay to raise all issues to the surface and to test even if it may be wrong. Because from trying the organizations can learn
from it instead of sweeping the problems under the carpet. The informant also talk about the importance that the management should drop the detailed controlling and instead have confidence in the employees, focus on following up the processes and asking how it is going. That would get the whole PDCA cycle to work according to the QS.

The QS explain that it was the employees that decided to implement some parts of lean in administrative functions with only some support from the management. It has led to that when the activities is going to be standardized, it have to be agreed both from the employees and the management. The informant also mean that a common barrier for organizations depend on the management, because the management might think that through firing employees it will become more effective. Therefore the QS think it might be for the best to do some work and improvements without the management’s knowledge. She says that it is not a disadvantage as long as the management is involved and understand a little bit of what they are doing with the implementation of lean.

4.3.3 LACK OF PATIENCE AND LONG-TERM PERSPECTIVE

The head of unit feel that the problem during the implementation of lean in administrative functions have been that they did not have any time aspect, instead they said “now we have started this so let us try” (Personal communication, 31st of March 2014). Moreover, the informant mean that no one said how long time they would try, which meant that the implementation took two years instead of maximum one year to test the implementation. It might have been good to make a control to see if it would be possible to continue the implementation further and what to do in such case. Also, to set a rough time schedule of when everyone should enter the lean journey to be able to get the management team on the journey, and that is something that we missed to do the head of unit says.

The QS give an example of how organizations handle the time perspective “It was an organization, they started five years ago, by mapping their processes and then it took maybe two years before they took down some shelves with old files in order to put up visible boards. To just put up the boards, it is like an indication. Once you have the boards and realize that you can work with a pen, we can write here and it is work as well. The attitude was that we do not need to do everything today, so yes it took a few years actually” (Personal communication, 30th of April 2014). The informant’s explanation describe why the implementation can take a lot of time.

To not end up with time pressure, the head of unit describe that first and foremost it is important to make a plan schedule because simultaneously it will become a risk when it is long-term. Because then the organization will postpone the work in front of them and might forget to do it later.
The QS cannot say exactly how long time they have been working with the lean implementation. Because she cannot say that they are actually working with lean, only in some places with some parts of the lean concept.

4.3.4 LACK OF MOTIVATION

The head of unit thought that lean education was very motivating. However, it was not enough to understand lean because the education did not give the tools, instead it was more suited to the lean culture and why they should work with it.

The head of unit explain that the motivation can decrease if the employees get too much work because of an enthusiast that suddenly want to implement lean. According to the QS one way to keep the motivation up is by having continuous meetings where the main discussion should be about what improvements that can be done, how to do it and what that can be simplified. Another way could be to get help from colleagues, so that they can shoot in some energy by supporting and being the leader on meetings. The informant also says that by letting everyone have the ability to see the big picture of the processes and to get the understanding of what everybody does, makes the work more fun and motivating. Because if the employees are not motivated the implementation fail in the organization.

The head of unit have never felt that they have lost their motivation for the implementation of lean. The head of unit mention the connection between employees and management, by saying that as an employee you want to know what the managers think and also to get positive feedback from them. If the employees do not get any feedback from the managers they will continue with their job in the same way they have always done it. The informant see the management as an important part of motivation, she says “they should help and be there to keep the motivation up in the organization” (Personal communication, 31st of March 2014).

The QS explain that lean in administrative functions is a work method for the future and it will expand. By having right education and right consultants to work with, the workplace will be good and the motivation will increase among the employees. The education at Halmstad municipality was made within the organization and the thoughts of that was great, which made the motivation increase. By having the education internally everybody knew who took the lean education and therefore they could support each other.

4.3.5 REFLECTIONS OF CHALLENGES IN THE IMPLEMENTATION

The head of unit says that planning is the most important as a first step when implementing lean in administrative functions. The planning is also an aspect where the PDCA is well used in the lean context. The development of how to implement lean in the organization can be the largest barrier because it depends on the goals. Further, all the parts of the implementation are
dependent of each other in the process. Dependent on the goals and ambitions in the beginning it can create or lead to barriers later on.

The QS like the idea to start by mapping the purpose and to ask what the purpose of the processes are. The purpose of everything the organization does is important to keep in mind. A barrier for organizations can be that they throw themselves over all the principles and believe that they must start with everything at the same time.

**Diagram 3 - Halmstad Municipality’s opinion on the barriers’ influence in the implementation, from 1 to 4, with 4 as most influential.**

**4.4 Lindab Profil AB**

The Lindab group is an international company with around 4400 employees. Their headquarters are outside Båstad, Sweden. The company is developing, manufacturing, marketing and distributing products and system solutions in thin plate and steel for a simplified construction and a better indoor environment.

The first informant is the CEO who has an academic background in engineering with a focus on quality. He has been working with companies where they were establishing certified quality systems and for a long time been in charge of quality systems. The second informant is the production manager (PM) and he has been working at Lindab Profil since the early 90s. His background is in engineering and with he have been working with internally at Lindab Profil with the concept and also had some education and collaborations with consultants.
Lean is according to the CEO about streams and how to get more out of less resources. He says that the main waste is overproduction but also waiting time and when it stops. A negative thing about lean is that if the organization do not do it the right way it will hit back at them and they will sink lower and then have to start over, the CEO says. The PM describe lean as something the organization have to work with every day so that they can find ways to move forward and improve. He also think it is very important that lean is implemented in administrative functions because that is usually where it all starts.

4.4.1 LACK OF KNOWLEDGE ABOUT LEAN

It is much easier with lean in production where everything is visible. If the organization are able to make it visible in administrative functions it is easier to work efficient and in real-time. So according to the PM a good way to start the implementation process is to visualize. Today Lindab Profil have daily meetings in front of a visual board where they discuss what they are doing and if there is any problems. At this meeting the top manager is involved.

In some companies a lot of people have been working there for a long time and they need to be educated because otherwise they will look at changes very negatively. A mistake many companies do is that they spend a lot of money in the education but afterwards they do not follow up.

The CEO say that knowledge is a barrier, people are afraid of changes that they are not familiar with. It is important that everyone in the organization get educated so that everybody will be involved, and as the CEO say, they have continuous training, with problem solving and continuous improvements, which will never be finished. It is important with education and that the employees get it from different perspectives. As the PM mentioned, they have been using consultants at Lindab Profil to help out with different tools and lean coordinators which role was to manage the projects forward. Lindab Profil have not used consultants that much, but instead learned from experience and been around observing other companies. The PM do not think that an organization should start a lean implementation without education, it also have to be someone that have experience of lean around to help.

Lindab Profil use a system called QTE/M which stands for quality, time, efficiency and efficiency through the employee. They have taken the concept from SAAB\(^4\) but adapted it to their organization. The concept is for the whole company, both production and administrative functions.

\(^4\) SAAB is an automobile company
The CEO strongly recommend the 5S to be used in the beginning of the implementation process as it will help to stabilize and the organization will get basic standards. “Everybody likes is neat and tidy” (Personal communication, 23rd of April 2014) the CEO says. Both informants say that PDCA is a great tool to start with in the beginning of the process. A mistake that many do with the PDCA is that they focus on P and D but then forget about the following. The CEO advice to use 7QC and value stream mapping later on in the process because he think the organization need to achieve a maturity stage first. Another method that Lindab Profil use that are very important for them is Hoshin Kanri which is a method to capture and unite strategic goals.

The CEO say that every department has a standard to follow, they have standards that are both shared and individually adapted. The administrative functions have processes, and at Lindab Profil they have made maps over their main processes, sales processes and order processes. The CEO say that it is powerful to make maps over the processes as there are much waste to find there. They are very structured with checklists where they write down every step of an activity, write down the tools and then what value it adds, how long time it takes, if there is documentation, is it critical, is it necessary and so on.

4.4.2 LACK OF MANAGEMENT SUPPORT AND INVOLVEMENT

The CEO say that the lack of management support and involvement is definitely a barrier, if they are not interested nothing will happen. During an implementation it is important that everyone is involved, but without the management, it will fail. Lindab Profil have started up lean implementation three times and it gets harder every time. The failures have been because of poor management and also that the management have changed. Previous management have mostly believed that lean is something for production and that it has nothing to do in administrative functions. Through the failures of lean implementation Lindab Profil have learned how important it is to demand and also to follow up properly.

The management see the importance to always request changes and to support and coach it forward. It is important that the structure is shaped from the top and not from below. At Lindab Profil it was the top management that took the initiative of implementing lean already in the 90s. When replacement of management happens the outcome can become a down turn and the implementation process will be slowed down or stopped. The PM say that it is important that the management is involved in the implementation from day one. If the top management come and say that they are going to implement lean, but then they are not included in the lean work, it will fail directly.

5 Hoshin Kanri is a method to make strategic decisions in management processes
Before starting an implementation of lean, the informants at Lindab Profil, thinks that it is important that the management meet and together think about how they will be involved in the lean thinking. If you can make a plan for the management it will work out in the long-term. At Lindab Profil they have education in leadership four to five times every year so that the management really understand how important it is to do their job well. The PM talk about the importance of that the management reflect downwards to the employees.

The CEO thinks that the management have to be more visible and available, nowadays management are spending too much time on meetings, in the office and in closed rooms. It all should be done visible, on for example visible boards. Today the CEO is on visible meetings maybe six to seven hours a week, but he should reach 20-30 hours a week. He think that it is what everybody is looking for, visible and present management and leaders. The PM also mention that he is really trying to be out in production as much as possible.

### 4.4.3 LACK OF PATIENCE AND LONG-TERM PERSPECTIVE

When the CEO got the question, what the most common mistakes organizations do when implementing lean in administrative functions he answered “I think that you want to move forward very quickly, that you want to get results fast, but this is not a quick-fix, this is something you have to believe in and that the results will come” (Personal communication, 23rd of April 2014).

Lindab Profil have central goals but also many activities that will support the central goals in the end. They have regularly follow ups where they check how the changes are going and what more they can do. Their main goal is long-term but they have many steps on the way. Their long-term goals is five to ten years ahead from now and they update it every year. The PM think that the long-term goals are very important for the company, because then they know what they are striving for. The organization have to look forward and be patient, it is important to not give up.

The both informants mention the fact that it is important not to move too fast forward, as the production manager say “you should not move to step two if you cannot see that the majority of the team is along on step one” (Personal communication, 7th of May 2014). The CEO says that it is not possible to put a time schedule on the lean implementation because it is a never ending process. “But when starting from zero, it requires a lot of structure and planning” (Personal communication, 23rd of April 2014), he adds. In the beginning the implementation require a lot of resources but when the organization pass that phase it will lead towards more efficient work.
4.4.4 LACK OF MOTIVATION

When implementing lean Lindab Profil had more problems in administrative functions than in production. The CEO says that the hardest have been to get the finance department along because they have many strict laws to follow and therefore they do not understand how they can change. He also add that he think this have been the largest barrier during the implementation of lean at Lindab Profil.

When Lindab Profil where implementing 5S they had resistance because many employees have been working there for a long time and they did not like changes. The PM says that they just needed to make the employees think in a new way, but it was hard to get everybody to think in the same direction. At Lindab Profil they are using focus groups where they meet regularly, and everybody get the chance to be seen and to raise thoughts and ideas. All the employees get responsibilities and they can express themselves. The CEO say that the motivation have increased a lot since they started with the focus groups. As the CEO express it “one main waste is unused creativity and when people give 100% they are unbeatable, that is what it is about, to hand out responsibilities and power to everybody, it is very important” (Personal communication, 23rd of April 2014). Lindab Profil have performance reviews for all employees every year so that they have the chance to talk to their closest boss about their performance and their developing opportunities. This is often seen as a positive motivational factor for the employees to do a good job.

At Lindab Profil the employees have felt the difference and that the work feels easier since the lean implementation. They also use a survey about job satisfaction to see how it affects the employees and the results have been positive. The PM mention that the changes have to be adapted to the employees and when working with people, patience is important. When implementing lean in administrative functions there will be many new changes and if there are too many changes the employees might say stop.

The PM say “try to include everyone and explain the target goal, so that you will know that it will get easier and better for everyone, so everybody knows what we are doing and if we follow up it will be easier in the long-run. But the most common mistake, even I have made such mistakes, and I know that it is that you give up too easily” (Personal communication, 7th of May 2014). The organization have to get the majority of the employees with them in the implementation to keep the motivation up.

The CEO says “by small means you can find the perfect way to make a customer very satisfied” (Personal communication, 23rd of April 2014). Now Lindab Profil have a 99% supply reliability and it has never been that good before, and for their line of business it is very good. Their shipping time has decreased and attendance of healthy employees has increased, that is some of the positive effects that Lindab Profil can see which can motivate people.
4.4.5 REFLECTIONS OF CHALLENGES IN THE IMPLEMENTATION

The CEO does not think that there is much of a point to put much effort on developing the lean concept for their organization as the tools are well tested and proven to work well. The CEO say that lean is more than just tools it is a philosophy, and the philosophy have to be built up inside the company.

When it comes to planning with education and goals, Lindab Profil see this as a very important part, if not the most important, to succeed. The CEO mention that in this part the management need to set demands and follow up. The PM argue that it is very important that everybody get educated, the organization should not miss one single employee. He does not believe that a company can succeed a lean implementation without this part.

When developing the way to approach the lean implementation it is important to see and understand the nature of the processes and the streams. This part is highly important as it will give an overall perspective and this is where the organization can work with shortening lead times and so on. It all include planning, but when the organization have found their approach it can get started. All in all the CEO say that the organization cannot take away any of the important activities in the implementation process as they are all connected to each other.

Diagram 4 – Lindab Profil’s opinion on the barriers’ influence in the implementation, from 1 to 4, with 4 as most influential.
5 ANALYSIS AND DISCUSSION

In the analysis and discussion the theories will be connected and analyzed with the empirical data. It will create a discussion about what barriers that influence an implementation of lean in administrative functions and the discussion will lead to the conclusion of this study.

5.1 BARRIERS RELATED TO LACK OF KNOWLEDGE ABOUT LEAN

Knowledge about lean and understanding of the lean concept is an important part when organizations want to implement lean in administrative functions. All the companies that have participated in this study have said similar things about lack of knowledge about lean. In order to give employees a wider understanding and to be able to actually work with lean, education is needed.

Every company can have different types of education, but there is two main ways of giving education to everyone, it is internal or external education (Malmbrandt & Åhlström, 2013). The QS from Halmstad municipality mean that the education should be internal because then everybody knows who had the education and that makes it easier to know who to talk with and also know who to support. Rejmes Bil and Lindab Profil mean that the education should be external by consultants or people who know the area very well. Swerea IVF means that through their consultants, the organizations that hire them, they can get the best help to make the lean implementation work. But every company agree with Dickson et al. (2009), who says that the planning of the implementation should include education and preparations, and also that everything should be done in the early stage of the implementation process. Because without the right education for the employees, the implementation will fail as Bamber and Dale (2000) also describe it. It can be understood that to be able to work with lean, the involved people need knowledge about the concept. So it will become a barrier if the knowledge is lacking as the employees will not understand why they should change their behavior.

There are many researchers that argue about differences and similarities when it comes to different areas of lean. As lean was developed in the production of the vehicle industry it have been debates if it also work in administrative functions. The companies explain that it is important to understand that all organizations are different, which Lander and Liker (2007) also argue. The companies also agree that the largest differences between lean in the production and lean in the administration is how to measure things. It is easier to measure things in the production through for example clocking the process and that does not work in the exact same way in the administration, where most of the work is paperwork or information. From this it is shown that to avoid the barrier lack of knowledge about lean in administrative functions the
organizations need to get an understanding of that the concept can be used for them but also how they can work with it.

It is a large barrier when people without knowledge about lean in administrative functions think that lean is just a concept that are suited in the production part. Therefore Swerea IVF who have been in these situations before say that it is really important to visualize the work. The companies agree that visualization is really good to use in their work because it helps to see everybody’s work and problems can easier be shown in the organization. Further, it is also important to use the concept of lean, the lean-house that describe how everything is connected with the standardization, stabilization, JIT, quality and the customer but also use the 14 principles with some adjustment to the administration (Liker, 2009). We can see that visualization can be a tool to help organizations to overcome barriers.

Another tool that is good to use to avoid barriers in the implementation is the PDCA. Rejmes Bil and Lindab Profil are working hard to use PDCA into every division and step in the organization because that helps to make every employee and the management involved in the process and that make it easier to standardize the work (Larsson, 2008).

Halmstad municipality is against the 5S tool, they see it as a barrier with the experience of that employees think they have everything in order but then someone points at them and tell them to clean up. The effect of that is a beginning of employees’ dislike of the lean concept. But Swerea IVF, Rejmes Bil and Lindab Profil really mean that the 5S tool can be used in the beginning to help stabilizing the work. So as long as the tools are used in the correct way it will help avoiding barriers, but if the tools are implemented without background knowledge of why it is used, the tools will instead become the barrier.

To change the work method can affect the employees badly sometimes and it can make it difficult for an organization to implement lean because the employees feel uncomfortable with changes in their daily work. This is something described of Mefford (2009) and it is a situation that Halmstad municipality is trying to explain. This is also a point where the changes will become a barrier if the involved people lack of knowledge about why the changes are made.

The most important to think about during the implementation of lean in administrative functions is to communicate and also have the understanding of why the organization do what they do, according to Swerea IVF. Swerea IVF also point out that the five why is something that can be used to get an understanding of why the organization do things and it will lead all the way back to the vision of the company. A very important tool for Swerea IVF is to visualize everything. Halmstad municipality talk about not calling the implementation and the work for lean but instead work with the culture and philosophy that comes out of lean. Rejmes Bil for example call their improvement system for ‘Rejmases production system’. A barrier when implementing lean in administrative functions can be explained as that the lean system itself can confuse with that it can only be used in production as it is called lean production.
Rejmes Bil and Lindab Profil think that the main components are not the tools in the implementation, instead it is to define the leadership, the processes, visual planning and how to measure. Further, all the companies agree that it is important to use value stream mapping at the implementation of lean in administrative functions because that will help to see the flow, what add value and what does not. Keyte and Locher (2008) explain that the value stream in administrative functions could be indicated as a series of activities or processes that support the companies’ needs within the daily production. In lean the customers are usually seen as the ones that can say what add value and what does not. But in the case of administrative functions the customers can actually be internal, as it can be support for the next step in the process. In the end of the process the customers will always be the ones that give the demand and say what creates value for them. But if we look into a production company for example, the administrative functions can be the first step of the process. So in that case we can agree with Keyte and Locher (2008) and say that the administrative functions support the daily production, and the daily production creates value for the customers. The organizations that want to implement lean in administrative functions can face the barrier lack of knowledge and understanding about the lean concept as the organization need to agree and be clear of what their value stream create value for.

An issue that easily happens is that the employees do not know what to do and why the managers tell them to do several things. That is why it is important that the managers are visible and are there to support and help the employees, this is something that all the companies mentioned and agreed on. Moreover, Rejmes Bil means that a common misunderstanding is that organizations do not understand the difference between problem solving and Kaizen, which can make confusions.
From diagram 5 we can understand that the average of knowledge about lean is medium or higher, which means that it is a high influential barrier in the implementation of lean in administrative functions. We can also see that managers at Halmstad municipality, Lindab Profil and Rejmes Bil together find the knowledge important to have in their companies. They find it important as knowledge makes it easier for all the involved people to speak with the same language and easier understands different situations in the implementation. Swerea IVF work as consultants and they offer knowledge about lean when they are helping different organizations to implement lean in the administrative functions. Therefore, they do not see the knowledge part in the same level as a barrier compared to motivation and leadership, which are the barriers that have more influence on the lean implementation according to them. At Halmstad municipality, informant 1 believes that the knowledge about lean is a highly influential barrier in the implementation of lean in administrative functions. The informant has already been in a situation when their division had huge problems and decided to drop the implementation of lean and then started it all over again. Informant 2, at Halmstad municipality, has not been in such situation because their division has not implemented lean in the same extent as the other divisions, they have only used some different lean tools.
5.2 BARRIERS RELATED TO LACK OF MANAGEMENT SUPPORT AND INVOLVEMENT

The four companies that have been part of this study agree that the lack of management support and involvement can be a large barrier. If management are not involved or interested in the implementation, then it is doomed to fail. Though the companies do not have exactly the same view on how the management should be active in the process.

When looking at principle 9 of Liker (2009), where the organization should develop a leader who understand and live the philosophy, it is something that three of the companies see as a very important part to succeed. Rejmes Bil also mentions that it helps if the top manager is obsessed with lean, because that will make them become an engine in the process. At Rejmes Bil they see lean as a management system, they say that it is 99% about management. The informants at Rejmes Bil have both a long history and a lot of experience about lean and it is from that they can draw the conclusion of the management’s importance. It can be understood from both data and theories that the management is crucial for a successful implementation. For example Mefford (2009) argue that managers’ commitment to the implementation of lean is needed to make it succeed.

A common problem for organizations, according to Rejmes Bil, is that they do not implement lean in the whole organization, it becomes more like a cell structure. But if the implementation come from the top management it will be easier to spread the implementation throughout the whole organization. This leads us back to principle 9, where the leader have to live the philosophy so that it will become a culture in the organization (Liker, 2009). Rejmes Bil argue that the organizational system should not be seen as a quality system because that is why companies often implement lean in cells which can lead to downturns when the manager quit. Three of the companies have had experience in that a manager quit and then the organization lose the desire of continuing with the concept.

We can see that Halmstad municipality has used what Rejmes Bil call quality system, that lean is implemented in cell functions and not in the whole organization. Like Melbi (2012) explain it, there is a problem with that users of lean can choose to just implement some parts and still mean that they are practicing lean. At Halmstad municipality the management is not strongly involved and from that we can understand that it might be the reason why the implementation has not come as far as for the other companies.

Swerea IVF say that the toughest task is to get the management involved, to make them believe in the concept and to make them engaged. The management needs to understand that the most important is that they are the ones that have to give maximum support towards the implementation (Scherrer-Rathje et al., 2009). Swerea IVF also mentions that if the company is small, this task is usually easier. Both the informants at Rejmes Bil, who have backgrounds
of lean in large companies, agree with that. Large companies might have a stronger hierarchic structure and the top management can be too proud of their position. Also in large companies it is a larger challenge to get everybody involved in the concept and in the same direction. It will therefore include a larger challenge and a lot more pressure for the top management in large companies and that can scare them.

It can also be tougher to implement lean in old organizations according to Swerea IVF because people have habits that can be hard to change. If the management is replaced often it will make it harder to develop new habits and a new culture. If we look at principle 13 that is about taking decisions and that organizations have to take all considerations before making a move (Liker, 2009), we see that in old organizations this principle might be even more important. If you move too quickly in old organizations where the workers have strong habits and are not very open to changes it can become a huge barrier. The management therefore need to understand their own organization and what kind of people they are working with.

At Halmstad municipality, a problem is that the management can say that lets work with lean during low season and then during high season we have to do our “normal” work. But according to Ballé (2005) it is important that the management is confident and has a strong belief in the lean concept. If the managers decide to take a break in the implementation process every time the organization have a lot to do, the implementation will never be successful. Then the process would be disturbed and the company would have to start over again and again. If the company decides to implement lean it has to be consistent, either the organization do it or they do not, because if they place themselves in between, it will most likely fail.

The importance of that the managers are visible have been raised at three out of four companies, and it can be connected to principle 12 of Liker (2009). If the management is not around to get an understanding of what is going on, they will work under uncertainty. As it is described at Rejmes Bil they work as a mountain and not as an iceberg, because on an iceberg the management only see the top and have no idea what is going on underneath. The three companies that have agreed on the management culture is Rejmes Bil, Lindab Profil and Swerea IVF. They all see it as crucial that the management is part of all levels and that they are there to help finding and fixing problems. As Liker (2009) describe it, the management have to be engaged with the problem and they have to see the situation with their own eyes. Because if they only sit in front of the computer screen or only listen to the employees, it will be harder to understand and the problem will be harder to solve (Liker, 2009). With this we can understand that if the management go to Gemba they will be involved in the process and it will make it easier for both them and the employees. Rejmes Bil say that the difference about lean and not lean is that the management is involved at all levels in the organization.

In administrative functions visualization is the key, as Lindab Profil and Rejmes Bil does, they have boards and visual planning where they meet every day and even the top management is
involved. With visualization it will mean that behavior have to be changed for both employees and management (Bamber & Dale, 2000) and that can be a challenge but it is needed to get a successful implementation. To get past the barrier of the lack of management support and involvement the organization and its employees need to have an open mind.

At Halmstad municipality they think it is important that the management give space to the employees to work with developments by themselves and also so that they can test and learn. According to Halmstad municipality the management should not strictly control, instead only ask how it is going sometimes. That actually contradicts the lean principle 12 of Liker (2009) about management that are visible and involved.

The top management have to know where they want to go, how they will get there and what they want to achieve, this is a thing raised by Rejmes Bil. Lindab Profil also raise the fact that the management need to get a common plan before starting the implementation. They also say that the management have to discuss how they will be involved in the process and with the lean thinking. Because of that, three companies see the management as the ones who will lead the implementation to success and it would definitely be a barrier if the management does not know where they want to go or if they are not involved. As Yang and Yu (2010) argue that the management’s attention need to be high to show the company its way forward.

Both Lindab Profil and Rejmes Bil raise the importance of the management as role models. If the management is not working after the new system the employees will not do either. As Swerea IVF express it, the organization needs a consensus, where the management is included. If the management is seen as role models the employees will follow them and they will get confident in the concept (Liker, 2009). So if the management can be consequent and really believe in the concept they will spread the belief in the company through their confidence.

People can often have a hard time to understand how or why lean should be implemented in administrative functions. As they describe it at Lindab Profil, it has been a large problem for previous management. Because they saw lean as something for the production only, the implementation of lean in administrative functions did not succeed. From that we can easily understand the importance of the management, if they are not on board the implementation will most likely fail. The background of this study tells us that lean can be implemented in businesses outside the car production and manufacturing but this can still be a problem for many organizations (Sederblad, 2013). Lean as a word is related to manufacturing and people in administrative functions do not understand how it can be used for them. But if the top managers are the ones that are the driving force of the implementation it can help the employees to get the right understanding.

According to Rejmes Bil it is the management’s responsibility to make sure the lean concept will work as a system in the organization. It should be a culture, where it would be okay if the lean enthusiast quit, because everybody works with lean as a part of the working system.
Rejmes Bil also think that the management have to take the ultimate responsibility to make sure the organization will not turn into a blame culture. As many things in lean at administrative functions is about visualization, employees have to be more open with what they do. The management should be involved in the problems because they have the responsibility. The management should have the responsibility of the lean implementation but they should also let go of some responsibility and give out responsibilities to the employees (Bamber & Dale, 2000). This means that it is a need of trust between managers and employees, so as a manager you have to respect and believe in people.

A good manager, according to Rejmes Bil, is someone that can make good teams but at the same time see the individual. Teamwork in Liker’s (2009) principle 10, mentions how good teams should be structured after the organization’s philosophy and it will help to get a stronger culture. As the management are the ones that will structure the teams we can once again see how they influence the whole organization.

Halmstad municipality mentions that if the management in an organization work without any problems it is unnecessary to implement lean in administrative functions. While the other companies agree that lean is a way to help organizations to become better than they are. Lean is not only a tool to get rid of problems it is a system that help organizations to develop themselves and lead them to higher efficiency. But if the management feel like everything is working in a good way it can be hard for them to be convinced that a lean implementation can help them in any way. It can be a barrier if the management do not understand the reasons to implement lean.

Swerea IVF mentions the importance of having the right type of manager. A common mistake is that the manager is either hiding or pointing with the whole hand. This is what can be connected to that a manager in a lean organization should be supportive and coaching the work. Rejmes Bil mention that a problem is that many companies try to recruit a person that can solve all their problems instead of thinking about what a good leader is and what a good leader does. It is also important to ask the person what they feel about going to Gemba and their motivation towards lean. Because the management have to be on the “floor” and talk to the employees (Larsson, 2008). According to Liker (2009) and the principle 9, it is suggested to develop a leader inside the company rather than recruit someone externally.
From the diagram 6 we can understand that the lack of management support and involvement is high, if not the largest, barrier when implementing lean in administrative functions. The informants with the longest and most experience with lean agreed that the management is the most influential factor in the implementation. At Halmstad municipality we can see that one of the informants think that the management is the least influential factor because in that part of Halmstad municipality’s organization the management are not really involved. But what we also know is that they have not been successful in the implementation.

If we compare the four companies involved in this study we can see a clear difference between Halmstad municipality and the three others and it is clear that they have different views on the management. At Halmstad municipality it is not the management that is the driving force, it is the employees and the other way around at the three others. What we also understand is that the best way to get a successful implementation is to have a driving force from the top. Rejmes Bil and Lindab Profil have the driving force from the top have built up a lean culture, while Halmstad municipality have the driving force from the bottom and they have only implemented lean in some parts of the organization. It is clear that the lack of management support and involvement can be a huge barrier when implementing lean in administrative functions, because if they are not involved the implementation will fail.
5.3 BARRIERS RELATED TO LACK OF PATIENCE AND LONG-TERM PERSPECTIVE

All the companies agree that the implementation of lean in administrative functions is a never ending process, which means that with the help of the lean concept the companies have the ability to continuously improve all levels in a company. In order to have continuous improvements Womack and Jones (2003), Larsson (2008) and Liker (2009) agree that organizations require having a structure with continuous preparations and planning.

Long-term thinking is also something that all companies agree is needed and it can be connected to Liker’s (2009) first principle. Without a long-term thinking it is unnecessary to implement lean because as a company it is needed to have patient for the results. Swerea IVF have made an analysis of 60 companies that have implemented lean and the conclusion was that the results from the two first years was not good but in the third year the results got better. Further, Rejmes Bil mean that it is important to give the implementation time and not be in hurry for the results because an implementation process could take between two and ten years. To be able to have a long-term thinking the company must have a vision, clear goals to accomplish and to work with visual planning.

Swerea IVF mention that it is common that people are enthusiastic in the beginning of the process but it could become tougher later on. Therefore it is important to indicate why lean is the right concept and what can be achieved. To accomplish that, Swerea IVF has their focus on getting the management to agree with the employees what they want and for that preparation is needed which can take up to one year. Rejmes Bil on the other hand have already implemented a lean system after five months, but they say that it usually takes six to eighteen months to establish a system according to their experiences. Halmstad municipality says that the implementation of lean took a very long time for them, and they acknowledge that they have not yet fully succeeded. They were in a phase of trying the concept lean and nobody said how long time the implementation should take, which led the implementation to take longer than it could have. It can be understood that the implementation for Halmstad municipality have not yet fully succeeded because they have faced some barriers. One barrier is that they did not have clear goals connected to the time perspective.

When companies implement lean in administrative functions and they wish to see good results quickly it will become a barrier because lean implementation cannot be correctly done with a short-term thinking (Liker, 2009). Lindab Profil thinks that this barrier can hit the company and therefore they might drop the whole implementation. Further, Swerea IVF mean that the measurement of things in the process will not indicate any results until after a long time and that can be another factor why companies drop the lean implementation. However, Rejmes Bil mean that it is easier to have a long-term thinking for a family owned company compared with
a company that are listed on the stock exchange because the family owned companies do not have the same need for quick results.

All companies agree that it is important to believe and have a long-term thinking during the implementation, and the results will come with the time because it is not just a quick fix. In order to be able to avoid barriers in the lean implementation, then it is needed to make controls where the companies could see if it is possible to continue with the implementation further, which connects with what Malmbrandt and Åhlström (2013) says. Moreover, it is needed to make a good time plan that show when employees and management should enter the lean journey, Halmstad municipality explains. By having a good plan, risks can be avoided, otherwise companies postpone work and forget about it later and this is a problem that Larsson (2008) also mention.

It is also important to have short-term goals to be able to follow up and make sure the company is working in the right direction. Swerea IVF, Lindab Profil and Rejmes Bil describe and share the same meaning with Larsson (2008) that an implementation is a process of learning, so the PDCA is a great tool to use to be able to understand and reflect over what the company does. Moreover, Rejmes Bil also mean that if a company want to come far with the lean implementation it requires to build up a good base that standardize, stabilize and make other factors connect, like the philosophy of the lean-house indicated by Johansson et al. (2005). The companies must also be well prepared that the lean implementation can take four or five years to become a natural part of the organization, so it is important that the companies is perseverance with the work with lean in administration.
Even if the companies have different methods of how to accomplish the long-term goals, the companies agree that to be able to manage the implementation of lean with good results it is important to be patient and not give up. If we compare the four companies in this study we can see both similarities and differences. Similarities between the companies are that they do not see this barrier as the largest. If the company that is implementing lean is in too much of a hurry it will be a barrier and especially in administrative functions. In administrative functions there is a need to be patience to see results because compared to production it is not as clear what the changes affect.

The differences between the companies in this study are what the diagram 7 show. We can see that informant 2 at Halmstad municipality compared to the three others believe that if the company do not have a long-term time perspective it will become a barrier that have high influence on the lean implementation. The reason for that can be that Halmstad municipality have felt the barrier for themselves, their implementation has not come as far as the others even if they at some parts have been working with it for a longer time. Halmstad municipality mentioned that they have not had a structured time plan and that have affected their implementation process.

5.4 BARRIERS RELATED TO LACK OF MOTIVATION

Understanding of the lean concept can be seen as something that will motivate the organization towards an implementation. This is something the companies in this study can agree on. But
there is also many other factors that can create a lack of motivation and then it can become the barrier because then the organizations can lose the driving force of the implementation process.

Both Swerea IVF and Halmstad municipality mention the fact that if the employees do not see the whole picture, an understanding of the whole process, they can lose motivation of what they do. A factor that influence people is that they have a need to understand the reason of why they do things, not only the lean concept, but also how their own work affect the whole process. This is something that can be tougher in large companies because there the employees might have a very small part of the process. But even if it is a large or a small company a motivational barrier can be if the employees do not have an understanding of the whole picture. Because every employee need to know that they are all important for the end product or service. That is something we can understand have been something that Halmstad municipality has had a problem with because of the organization’s size. In a company like Halmstad municipality with around 8000 employees it is a big challenge to bring everybody along, both employees and managers, but if they manage it will lead to success (Larsson, 2008).

Motivation is usually high in the beginning of the implementation process but it can faint later on. Lindab Profil explain that every implementation will face a period where the motivation will go down and then the organization just have to fight passed it. At this downturn it is common that companies go back to their old routines and that is a barrier the organizations have to be prepared on facing. To avoid failure at that point it is important to have enough people that strongly believe in the lean concept so the focus stays on the goal. Principle 5 of Liker (2009) suggest that you should not fix problems temporarily but instead find the root cause and fix it from there. This can help avoiding the downturn, as problems hopefully will not come back in the same matter. At Halmstad municipality they thought that some education would be enough as a motivational factor but from their experience they would suggest to have education more in depth. Because if you do not understand the tools and the meaning of them the motivation will be lost fast or it will lack from the very beginning. To actually get past the barriers in the implementation it is important that there is a trust in that the lean concept will work and be successful (Mefford, 2009).

Lindab Profil have faced the barrier with that departments in the organization do not understand how they can use lean because they are working with many strict rules. They felt like they could not do anything differently because of the laws and standards that were set on their work. They have to follow some rules, but there is also a lot of work they do in between that can be improved with the lean concept. The hard thing was to motivate these people and convince them that they do things that can be improved and developed, they said at Lindab Profil. Lindab Profil saw this as a huge barrier when implementing lean in their administrative functions. Because if the organization cannot make the employees believe that the lean concept will work and help it will not be successful (Mefford, 2009).
Motivation can be connected to time perspective as many people lack of motivation if they cannot see any differences directly. Swerea IVF mention this as a problem, and therefore they raise the importance that everyone should have knowledge about where they want to go. Mefford (2009) mention that it is crucial that organizations to have a long-term view of the results and that the employees need patience to get a successful implementation. As motivation can be lost because of difficulties to see positive results quickly, it is good to find ways to measure changes. Latham and Pinder (2005) argue that if the organization work with the lean principles it will increase the employee’s well-being and it can help to increase stress. The important thing is then to make sure the employees have an understanding and patience of these results. It is good to stop and reflect over what changes the employees can feel. If the organization does not have short-term goals that can motivate employees to continue their work it can become a barrier through lack of motivation. People need motivation to continue and to stay focused on the main goal.

Something that can be a motivational barrier is that employees have habits that they do not want to change. The employees might have worked there for a long time and it can be hard to bring them onboard. Lindab Profil have many employees that have worked there for a long time, and they especially mention this problem. During the implementation it is therefore important to make these people motivated in why they should think differently. Rejmes Bil has the same problem, where the old habits now is questioned and changed, and it can make the employees frustrated. To overcome this barrier the organization need to have patience because if the motivation go down to the bottom it will be a barrier for continued work, but once the employees understand the reasons why they change it can turn around again. As motivation is a type of psychological process, with a connection between the individual and the environment (Latham & Pinder, 2005), habits can be something emotional. If the changes interact too extremely with this process it can become a negative effect and it can lead to the barrier with lack of motivation.

As lack of motivation of the employees and managers is a barrier for a successful implementation one way to keep them motivated is to have regular meetings. Lindab Profil, Rejmes Bil and Halmstad municipality all have regular meetings to raise issues and suggestions about improvements. They all say that this motivate everybody to keep working with the lean implementation and the development work. With regular meetings it can create a feeling of teams and that connects to principle 10, which helps to build a stronger culture in the organization (Liker, 2009).

Rejmes Bil, Swerea IVF and Lindab Profil all agree that the employees have gotten the feeling that the work gets easier after implementing lean. A strong motivational factor is that the work gets easier and that the employees can feel less stressed. Halmstad municipality mentions one of their goals with the implementation is to reduce stress at the workplace. If the employees feel the other way around, that the lean implementation is a bourdon and that they feel stressed it
can become a huge barrier. Because that would lead to unhappy employees and it will turn into lack of motivation, further that can lead to failure of the implementation. Principle 2 of Liker (2009) is about getting the processes as easy as possible and in the end it will lead to positive achievements. What can be tough is to reach the point where the employees actually feel the difference in their work. Visual planning is an example of a tool that can help the work to be easier. At Rejmes Bil they have only heard positive reactions towards visual planning after its implementation. It is a tool that supports all the employees to help each other out and it is a good base to teamwork. When people work in teams it is often seen as a motivational factor. But visual planning can also become a barrier if the organization has a blame culture. Then the fact that the employees have to be open with what they do can be very stressful and make people lose motivation. Principle 7 raise the fact that to avoid hidden problems, the organization should make things visible (Liker, 2009) and that can work in administrative functions, but if there is a blame culture the employees will not feel good about it. Though at Lindab Profil they have seen positive changes in health, where the employees seem to be healthier since they implemented lean.

If you find people that truly believe in the concept and are positive to change, they can be a motivational force for all the others. If the majority of the employees are positive to the changes it is a better chance not to fail. Halmstad municipality mention that because they had optional education inside the company they knew who had been there and they can help and support each other to spread the knowledge. Principle 4 is about smoothing out the workload (Liker, 2009), and helping each other can do that.

Management is connected to the barrier lack of motivation, because if the management lack of motivation in the implementation of lean, the rest of the company will lose their motivation of it as well. So it can be said that the first step of motivation is to make sure that the management is motivated. If for example the management wants to stay in their office, and not go to Gemba, they do not show any motivation at all to the implementation process. Changes can be tough to implement in an organization and it usually need some time. Both to learn the new way of working but also to spread the understanding of why the changes has been made. When changing a culture people needs time to process, and if the organization is in too much of a hurry, it can damage the implementation. It needs time as people should have a chance to make mistakes and learn (Lander & Liker, 2007). Halmstad municipality adds that if the management gives positive feedback to the employees it is a very strong motivational force.
From diagram 8 above it can be understood that the companies see motivation and its influence on the implementation in different levels. Informant 2 at both Halmstad municipality and Lindab Profil see lack of motivation as the factor that have the highest barrier influence on the implementation’s success. These informants are persons that are not in the top management but instead involved with the implementation as a lower level manager or as a strategist. We would say that the top management see motivation in a different way than others, they see it more as an effect from other actions. While the lower level can see motivation as the most crucial factor because their driving force is more likely motivation than knowledge about lean, time perspective or management. We can see that at Swerea IVF’s both informants see lack of motivation as the second largest influential barrier. Swerea IVF help other organizations to implement lean, and from that it can be understood why they think motivation is important. If they cannot find motivation in the company they will have more problems to help the company towards a successful implementation.

To keep the motivation up for everybody in an organization is a very tough task. It is therefore important to understand the importance of motivational factors, without them it will all fail. The right people are needed to keep the motivation up, and the management is of high importance for this.

5.5 REFLECTIONS OF CHALLENGES IN THE IMPLEMENTATION

When implementing lean in administrative functions there are many challenges that the organization might face. The companies in this study all agree that to avoid barriers the
implementation should start with planning and education. Because that will lead to a common view of where they are going, the goal will be clearer and the management will get a chance of training and understanding how the work works.

As there is no good methodology how to actually do a successful implementation in administrative functions (Liker, 2009) it can become a barrier if the organization does not know how to do it. Lean implementation in administrative functions is still a subject, which can be hard to find good material about. To avoid barriers the organization therefore need to spend time on making a plan how they will implement lean. The organization needs to understand their processes (Womack & Jones, 2003) and through that they will understand the purpose and then they can come up with an approach. It is more challenging to get an understanding of the processes and to document it in administrative functions than in production (Keyte & Locher, 2008). When approaching lean in administrative functions it is a barrier if the organization does not understand how to implement it.

To avoid barriers it is important to get a clear understanding of why the organization does things. But then they should adapt the concept to their organization so that they can create benefits for the business and an organizational system, according to Rejmes Bil. Lindab Profil mention that it is not that important to adapt the lean tools as they are well tested, but the concept as a philosophy need to be built into the organization. As lean is a way of working towards high efficiency and low costs the need for a model specifically for administrative functions might not be needed. The importance is to understand how to work with the lean concept, independent on where in the organization, and to be aware of what barriers that the company can face during the implementation process. Barriers in the implementation are connected to each other but also to different activities during the implementation process. It can therefore be understood that if the organization take away any of the parts the implementation is more likely to fail.
Chapter 6: Conclusion

In this part the conclusion and implications will be presented. The answer to the research question is presented here. The last part of this section will provide limitations and suggestions for further research.

The answer to what the barriers can be when implementing lean in administrative functions, it can in an overall picture be explained that the barriers are similar to implementation of lean in production. The clearest difference is that people do not yet have an understanding of that lean can be used in administrative functions and then the lack of knowledge in how to approach it.

It is nowadays a trend to talk about lean production and its concept. The fact that the word lean can be confusing and misunderstood is proven as one barrier in the implementation of lean in administrative functions. The lean concept is originally from the car industry and has spread around the world (Womack et al., 2007). Lean production has become a barrier of itself because of its industrial origin and people have now a hard time to let go of lean as a pure production system.

The four barrier blocks that have been discussed in this study can all be barriers for the implementation of lean in administrative functions. But there are patterns between the companies and their thoughts on barriers, which ones that should be taken into consideration more than others.

Top managers that have been part of an implementation of lean in administrative functions see the importance of managements’ support and involvement to avoid barriers. The lower level employees see lack of motivation as a barrier with high influence on the implementation though the motivation can come from the management. Moreover, the barrier that can be concluded as the largest in an implementation process is the lack of managers’ understanding of the lean concept and their lack of support in the process. It can be understood that if the management do not see the reason of why to implement lean, and also that lean can be implemented in administrative functions, the barrier will be too large to overcome. Achanga et al. (2006) argue that the management is a critical success factor and from this study it can be concluded that the management is crucial for lean implementation in both production and in administrative functions.

If the organization do not have a long-term perspective it will become a barrier in the implementation, but in this study it is the barrier with least amount of impact. In administrative functions the organization need to be patient to see the results. The barrier connected to this is that it is hard to find ways to measure results and therefore people chose not to measure or wait...
for the long-term results. The barrier lack of patience lead to another barrier, the lack of motivation, because people want to see positive measurements of change.

In this study we can see that there are differences between public and private companies, where the implementation of lean can face larger barriers in the public sector. Public companies have many rules and regulations that they have to follow and that can make it even harder for employees and managers to understand that the lean concept can still help them work more efficiently.

Another barrier when implementing lean in administrative functions is if the organization is old and therefore the culture and habits have deep roots. This can affect the implementation through that the employees do not want to change and that they do not see the point of changing. This is a large barrier in administrative functions because that part of the organizations where usually not many changes is made.

In summary it is a barrier that organizations do not understand that lean production is a system that can be used in administrative functions, but another barrier is that they do not understand how they can use the lean concept. Processes are not as clear in administrative functions as in production and that can make it confusing.

6.1 THEORETICAL IMPLICATIONS

As mentioned in the purpose lean is a strong trend in the 2000s (Sederblad, 2013) and it is a comprehensive concept that can be used in the administrative area (Liker, 2009). This study show that lean in administrative functions can help the companies to become more efficient but the implementation of lean is a process where the company can face many barriers on the way.

It can be concluded that it is difficult to distinguish what is of value and what is not in administrative functions, the same as Keyte and Locher (2008) argue, this is a reason why many companies think that the lean concept are limited to the factory. From this study it can be argued that another reason why people think lean is limited to the manufacturing is that they do not understand that administrative functions have processes. Employees and management need to get a clear understanding of the lean concept and that it can be used in every organization.

In the problem discussion of this study according to Ballé (2005) the basic confusion of how to handle lean is one reason why many fail when implementing lean in their organizations. This study concludes that this is one of the largest barriers when implementing lean in administrative functions. It can also be said that when implementing lean in administrative functions the organization need to have an understanding of who they create value for as the administrative functions can be the first step in the company process and they can be the support of the daily production as Keyte and Locher (2008) explain it.
Liker (2009) mentioned that there are no models ready made to follow when implementing lean in administrative functions. This study explains that there is no need for a specific model to follow because every organization has to adapt the lean concept to their own.

When leading up to the purpose of this study we can find that Ballé (2005) explains that even if the lean concept is increasing among organizations, few of them actually succeed. From this study we can see that an organization can face many barriers during the implementation and as the implementation of lean is a continuous process, organizations can fail because of many reasons. When implementing lean in administrative functions the organization need to understand the concept of lean and the employees and management have to be open for change.

### 6.2 Managerial Implications

Organizations that want to implement lean in administrative functions have to understand that they will face some barriers. The barriers can be that the management is not engaged in the process or supportive towards the employees, it can be that the employees have lack of motivation, it can be that the organization and its employees do not have enough knowledge about lean, or that the organization does not have a long-term perspective and does not have patience for the results. It can also be a combination of all of these barriers.

An organization should before deciding on an implementation of lean in administrative functions make sure that the management understand the lean concept and how it can be used for their organization. It is possible to use lean in any type of organizations but the organization in question need to understand how they can use the concept and how it can help them. In administrative functions it is good to call the concept something else than lean, as the word lean easily get confused of something that can only be used in production.

To avoid barriers when implementing lean in administrative functions there are some suggestions from this study. First of all the management need to agree on what they want to do, where they want to go and also why. If the management is consistent it will help the organization to fulfill their goals. It is important that the management not only agree on the points just mentioned, they should also have a knowledge and a strong belief in the lean concept. The management is the ones that have the best chance to spread the system throughout the whole organization. To avoid the barriers for the management they should be visible and supportive for the employees and they should use visualization. Visualization is the key to easier work, an open dialogue, problem solving and it will all lead to continuous improvements for the organization. A lean tool that is helpful when visualizing is the PDCA. Though the visualization can become a barrier if the culture is not right and the managers are not around.

When implementing lean in administrative functions it is important to be aware of barriers that can come up. In the administrative environment an implementation can be tough because people
are close minded and do not see the point of using lean, they do not think lean is something for them.

6.3 LIMITATIONS AND FURTHER RESEARCH

There are limitations in this study and the conclusions cannot be generalized. Four Swedish companies with two informants each have been the sources of empirical data in this study, and these companies cannot stand for every company’s lean implementation. The study had a short time limit and therefore the study only include four companies. We suggest for further investigation on more organization and other cases because more data is needed to generalize the findings.

The chosen informants have different positions in the companies and there is not a clear structure of their positions. The comparison between top management and employees views of the implementation of lean in administrative functions can be interesting for future research.

It can be mentioned as a limitation of this study that certain barrier blocks have been a structure for this study and that have given the study a viewpoint out from them. Other barriers can be found and a wider or other perspective can be used for analyzes more in depth.

Another limitation of this study is that during the gathering of empirical data the theoretical framework was still under progress, which made the questions in the interview guide very open. For future investigations the study can be more focused to get clearer and more specific results.

The chosen companies in this study were different types of industries, such as consulting, service and production. An interesting point of view would be to compare two different or see patterns in administrative functions in one type of industry sector.

The purpose of this study was to see what barriers that an organization can face when implementing lean in administrative functions. For future research we suggest to investigate further on how to overcome the barriers.
REFERENCES


APPENDIX 1 - INTERVIEW GUIDE

Introductory information and structure

1. Can you tell us about yourself?
   Ø How long have you worked here?
   Ø What are you working with right now?
   Ø Previous education and work?

2. What is your experience of lean?
   Ø When was your first contact with lean?
   Ø Do you have any specific education in lean?
   Ø For how long have you worked with lean?

3. How would you briefly describe lean as a method and concept?
   Ø What are your goals with Lean as a method?

4. What motives should an organization have, according to you, to implement lean?
   Ø What can an organization get out of implementing lean?
   Ø What kind of properties are required for an organization to implement lean?

5. What is the difference between lean production and lean in administrative functions according to you?

Implementation of lean in administrative functions

6. How should an organization do when implementing lean in administrative functions?
   Ø What is the most important thing to consider?
   Ø Who/whom took the initiative of the implementation and how was it decided?
   Ø Did you use any external help, and if so, how was the work distributed?
   Ø To what extent is education about lean required to employees?

7. How does the timeframe look like when implementing lean in administrative functions?
   Ø Time for preparation?
   Ø Time for implementation?

8. Consider the implementation as a process divided into three different categories, planning (training, goal setting), concept development (Customize the lean concept to your organization), process development (How the lean is implemented, in which steps, which methods).
   Ø Which category is most important for a successful implementation?
Ø Which category contains the largest barrier?
Ø How do they interact?

The use of lean in administrative functions

9. It is common to use certain tools in lean, such as 5S, JIT, 7QC, PDCA, value stream mapping, etc. Which tools do you think are most appropriate at an early stage and a later stage of the lean implementation in administrative functions?
   Ø Why these tools?
   Ø Are certain tools more important than others?

10. In what way have you mapped out/visualized your administrative processes?
    Ø How do you use this mapping?

11. How do you see the standardization of activities in administrative processes?

12. Do you think it is hard to keep up the motivation of the lean work after the implementation in administrative functions has occurred?

Results and evaluation

13. How does the employees experience the working with lean in administrative functions?

14. What are the most common mistake you make when implementing lean in administrative functions?
    Ø What are the consequences of that?
    Ø How can you avoid these mistakes?

15. What are the most common barriers that arise in the implementation of lean in administrative functions and what are the consequences of that?

16. What are the strongest motives for an organization not to implement lean in administrative functions?
    Ø What are the disadvantages of implementing lean?

17. What are the strongest motives for an organization to implement lean in administrative functions and what will it require to avoid barriers and succeed?

18. Can you categorize the four barriers from 1 to 4; Lack of knowledge and understanding regarding the concept of lean, lack of management support and involvement, lack of motivation and lack of patience and long-term perspective?
Where 4 is the barrier that has the most influence on the process of implementation and 1 the least.

Final questions

19. Do you think that lean in administrative functions is a working method for the future?

20. What do you think lean will lead to in 5 years?
   Ø Do you think you will still work with lean in administrative functions?

21. Is there anything else you want to add or bring up that we have not already talked about during this interview?

22. Can we get back to you with more questions via email or telephone if we need more information?
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