Exploring Lean in the Swedish Service Sector

Applicability, Success Factors and Challenges
Acknowledgements

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Abstract

Background: Working Lean, i.e. “eliminating non-value activities from work processes by applying a robust set of performance change tools and emphasizing excellence in operations to deliver superior customer service,” has received significant attention and become a concept of interest for businesses, especially during recent years. Fundamentally, the concept of Lean is built on the aims of waste reduction and value creation with keywords such as continuous improvement, quality, and efficiency guiding the process. Lean was originally developed with production in mind, but many in the field argue that its applicability reaches further and holds potential within other contexts, such as service, as well.

Purpose: The purpose of this study is to derive lessons learned from individuals working in the service sector regarding whether or not Lean is applicable in the context of service and to explore what factors and challenges are perceived to influence the likeliness of success.

Method: An abductive approach has been pursued by the use of semi-structured interviews with employees from different levels within organizations in the Swedish service sector. In addition, an external perspective by interviewing a Lean consultant has been of interest. The data gained has been analysed to identify patterns which have then been searched for in existing literature.

Conclusion: The findings provide evidence that Lean is applicable in service. Furthermore, success factors related to the following core categories; employee engagement and competence, having a philosophical approach, leadership, management, implementation, organizational and national culture, and management of variation were identified. Lastly, a misconception of Lean, employee resistance and suboptimization were three challenges found.

Keywords: Lean, continuous improvement, organizational culture, change management, Lean culture.
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1 Introduction

As globalization increases competition, businesses today operate under constant pressure to become more efficient and effective (Abdi, Shavarini & Hoseini, 2006). Through internationalization and the opening of borders, resources such as cheap labor have also become more readily accessible, making it increasingly difficult to differentiate and achieve competitive advantage. Mainly due to one of the main drivers of globalization, namely technology, the modern day consumer is also more informed and demanding than ever before (Schaefer & VanTime, 2010). As such, there is a rising pressure even for public organizations to do more with less (Oakland & Tanner, 2007). With those realities in mind, businesses of all sorts are continuously looking for ways to improve and stay competitive. Working Lean, broadly defined as, “eliminating non-value activities from work processes by applying a robust set of performance change tools and emphasizing excellence in operations to deliver superior customer service,” has as a result received significant attention and become a concept of particular interest for businesses, especially during recent years (Allway & Corbett, 2002, p. 45).

Fundamentally, the concept of Lean is built on the aims of waste reduction and value creation with keywords such as continuous improvement, quality and efficiency guiding the process (Liker, 2004; Womack, Jones, & Roos, 1990). The Lean philosophy, which often is used synonymously with words such as Lean thinking, Lean manufacturing and Toyota Production System (TPS), can be traced back to the 1950’s and the Japanese manufacturing sector, which was the first to develop a set of lean tools and techniques to optimize performance (Leite & Vieira, 2015; Womack et al.,1990). Even though Lean originally was developed with production in mind, many in the field argue that its applicability reaches further and holds potential within other contexts such as service as well (Bowen & Youngdahl, 1998; Levitt, 1976).

The empirical evidence concerning Lean and its potential is somewhat mixed however, especially within the context of service. There are many convincing studies showing that Lean definitely holds great potential within manufacturing as well as service (Piercey & Rich, 2009; Swank, 2003). As Bateman, Hines, and Davison (2014, p. 552) state in their investigation of wider application of Lean, “Whilst much speculation and conjecture exists around the validity of lean and its transferability to service sectors, increasing evidence has emerged over the last 20 years, demonstrating clear business improvements within service-based organizations, as a result of a lean thinking approach”. But, on the other hand, Repenning and Sterman (2001, p.1) conclude in their study that, “[T]he number of tools, techniques and technologies available to improve operational performance is growing rapidly, on the other hand, despite dramatic successes in a few companies most efforts to use them fail to produce significant results”. A question of interest that naturally arises then is what the service companies that have managed to achieve results from implementing Lean are doing differently than the ones that have failed? As we live in a service society, with the service sector making out 72 percent of
Swedish GDP in 2014 and over 50 percent in all major economies other than China, being able to derive lessons learned from those successful service companies is unquestionably knowledge of interest and value for many, lending even further relevance to the topic (The World bank, 2014; Shanker, 2008).

1.1 Problem statement
The interest of trying to adapt and apply Lean thinking into the service sector has existed for over 40 years, yet not an exaggerated amount of articles exist on the topic (Levitt, 1976). Suárez-Barraz, Smith and Dahlgaard (2012) were, for example, only able to locate 172 references when conducting their literature review study on Lean service - a relatively low number in comparison to the research available when looking at Lean in manufacturing. The authors specifically remarked that, “Most papers were peer-reviewed, however due to the scarcity of articles on this subject other publications from less-academic sources were also considered” (p. 361).

Furthermore, the fact that existing literature on the topic of Lean implementation in service offers mixed results lends in itself additional support for the fact that more studies should be conducted so that a state of consensus can start to develop. If it can be concluded that Lean indeed holds significant potential in service, more companies would most likely gain an interest, which ultimately could help both grow and improve the sector as a whole. If, on the other hand, it can be determined that Lean is not as effective in service as many may have first thought, businesses would undoubtedly benefit from using resources invested towards other more effective strategies instead.

1.2 Purpose
The purpose of this study is to investigate the applicability of Lean in service and, more specifically, to explore what factors and challenges are perceived to influence the likeliness of success, defined as sustained positive change.

Thus, our research questions are:

- Is Lean applicable in the context of service?
- What success factors and challenges are relevant to consider when implementing Lean in the context of service?

Keywords: Lean, continuous improvement, organizational culture, change management, Lean culture.
1.3 Delimitations

There are several areas of Lean within service that are of research interest as the concept is still relatively unexplored. It is not fully understood how to exactly measure Lean results within service for example, and the development of specific Lean tools and practices adapted to service are also still relevant. However, this is not the focus of this study, partly due to constraints related to time and resources. This research will only focus on implementation of Lean in service and the factors and challenges relevant to consider.

It should also be emphasized that this thesis does not distinguish between the governmental organizations and the private company participating. Rather, it sets out to investigate service-oriented organizations, not putting emphasis on whether they operate within a public or private sector. If and how the differences between a public and a private context impact the organizations in their pursuit of a Lean way of working is in other words not explored. It is perceived that rich, informative and interesting insights can be generated without taking such a differentiated approach.

1.4 Definitions

Lean
“Eliminating non-value activities from work processes by applying a robust set of performance change tools and emphasizing excellence in operations to deliver superior customer service” (Allway & Corbett, 2002, p. 45).

Organizational culture
“Is the set(s) of artifacts, values and assumptions that emerges from the interactions of organizational members” (Keyton, 2011, p. 28).

Lean culture
Lean culture is characterized by the employees’ understanding of the company’s objectives and goals. Once a Lean culture is established, the employees have been handed a reasonable independency in order to effect the improvements within the company. This is done by the usage of Lean tools, training and a well-established understanding of Lean improvements (Harrington, Charron, Voehl & Wiggin, 2014).

Continuous improvement
Within the concept of Lean, continuous improvement is known as “kaizen” and refers to the constant pursuit of improving the organizational performance (Goldsby & Martichenko, 2005).

Flow
As the value stream consists of every factor that needs to be included in a process in order for the customer to receive the desired service, flow is defined as the continuous
movement of achievements that are developed by tasks along the value stream (Kaplan, 2008).

**PDCA – Cycle**
PDCA is an acronym for Plan-Do-Check-Act and is defined as the process in the company where the target and the actual results of the process are monitored. If the differences between them are too significant, corrective arrangements are made. This is a repetitive process with the purpose of always striving for continuous improvements (Basu, 2004).

**Suboptimization**
When focusing on making changes in the system of an organization, suboptimization occurs when one component draws more attention than others and consideration of how the changes will affect the organization as a whole is excluded (Spitzer, 2007).
2 Frame of reference

2.1 Theoretical background

2.1.1 The service sector
Kutscher and Mark (1982) define the service sector in a broad sense by stating that it includes transportation, communication, public utilities, wholesale and retail trade, finance, insurance, real estate, other personal and business services as well as government. The service sector is often characterized as being intangible, heterogeneous, perishable along with production and consumption within the sector being inseparable; thus making service more challenging to appraise than goods (Lewis, 1989)

The definition of what a service actually is has been expressed and interpreted in different ways and from different perspectives by the bigger names within service management and marketing (Rao, 2011). Kotler, Armstrong, Wong and Saunders (2008, p. 248) define it as, “Any activity or benefit that one party can offer to another which is essentially intangible and does not result in the ownership of anything”.

2.1.2 Lean
When comparing the characteristics defining American and Japanese car manufacturers, Krafcik (1988 cited by Åhlström, 2004) was the first to use the term lean in correlation to the Toyota Production System (TPS). The TPS was described as a Lean production system due to several aspects. First, the amount of inventory was kept low which helped reduce cost. A low amount of inventory also made it easier to detect and solve problems when the products were lacking in quality. The flow of production was important as well; a flow was maintained due to assembly lines and workers that made sure the production ran smoothly even if a co-worker was absent. In addition, by focusing on the importance of quality during production, there was little need of repairing products later on (Krafcik, 1988). The attempt to characterize Lean from a manufacturing perspective, i.e. the TPS, has been pursued by other researchers as well; the term Lean production specifically gained more attention through the book The Machine that Changed the World by Womack et al. (1990). They describe lean production as in fact Lean due to the differences from mass production. Hence, it is Lean since half of the amount of important inputs are used in the production process, e.g. human effort on the production floor, manufacturing space, investment in tools and reducing the time to engineer and develop a new product. Toyota, the company behind the successful TPS, simply describes the process as the complete elimination of all waste (Toyota Global, 2016). However, reduction of inputs aside, the ultimate aim of the Lean production system is to achieve perfection (Womack et al., 1990).

Even though various processes within manufacturing have had an important impact on what is now referred to as Lean, Liker (2004) argues that a sole focus on technology and tangible resources is not the tool for success. He states that Toyotas achievement with
Lean lies in the company’s ability to understand and motivate its workforce; this is in fact the sole philosophy of the Japanese company. Liker continues by describing the philosophy in more detail as the competence to manage leadership, teams and culture, to devise strategy, to build strong relationships with suppliers and to always keep the importance of learning in mind. Mann (2015) has a similar view stating that Lean is not difficult to understand, yet many organizations fail when shifting towards a Lean approach mainly due to not recognizing the importance of management. Drew, McCallum and Roggenhofer (2004) as Liker (2004), suggest that the actual production tools and the processes surrounding them are not the most important aspect. Instead, it is the Lean mindset and behavior that is of essence. Combining these two is what results in success; Toyota’s ability to do so is the reason behind the company’s competitive advantage according to the authors.

With the aim to describe the TPS in more detail, Liker (2004) has generated fourteen principles portraying the important processes defining a Lean manufacturing approach. The principles have been divided into four parts, also called the 4P model and is illustrated below; *philosophy* (long-term thinking) emphasizes adding value to customers and society, the *process* focuses on decreasing lead time (eliminating waste) and plays a subordinate role to *people and partners* (respect, challenge, and grow them) helping them with *problem solving* (continuous improvement and learning) (Liker, 2004).

![4P Model Diagram](source.png)

*Source: Jeffrey Liker, The Toyota Way, McGraw Hill, 2004*

In summary, the perception of Lean within a manufacturing context has through the years changed. The focus has shifted from an approach emphasising ways to make production more effective towards realizing that the success of Lean lies not in what one does, but in what one thinks, as illustrated by Likers 4P model with philosophy as the foundation.
2.2 Previous research

2.2.1 Applicability of Lean in Service
The evidence regarding the positive effects seen as a result of using Lean within service is mixed and the applicability is questioned by some (Arfmann & Barbe, 2014). Looking at studies lending positive support for the use of Lean in service, Swank (2003) found that the insurance company Jefferson Pilot Financial was able to improve operations and increase revenues by using Lean principles, reflected by astonishing figures such as a 70 percent reduction of processing time, a 26 percent labor cost cut, and 40 percent less errors committed. Similarly, Piercy and Rich (2009) found in their study of three financial service companies in the UK that after going through a Lean transformation, all three organizations managed to reduce costs, become more efficient and ultimately increase customer satisfaction. For example, comparing pre-transformation data with data collected nine months later, the three companies reduced the average number of calls received each day with 37, 38, and 23 percent, the longest time to complete customer requests with 44, 36, and 73 percent and their so called “failure demand” with and 56, 36, and 68 percent (Piercy & Rich, 2009). Taco Bell is another case often cited in research as a good example of how Lean has been found effective in service (Bowen & Youngdahl, 1998). Many companies fail to replicate the same results, however. As concluded by Repenning and Sterman (2001, p.1), “the number of tools, techniques and technologies available to improve operational performance is growing rapidly, on the other hand, despite dramatic successes in a few companies most efforts to use them fail to produce significant results”. Ultimately, it can be said that in theory, Lean should be able to “work” in service as well as manufacturing, but adaptation might due to the difference of sector characteristics be necessary. However, even beyond adaptation, there are arguably other factors that seem to exist in order for Lean to be implemented successfully as some companies have been successful while others have not. As such, the next section will discuss what these factors have been found to be.

2.2.2 Success factors

2.2.2.1 Overview and Management related factors
Firstly, an overview of what success factors have been identified when implementing Lean in service will be presented. Looking at the literature, it is worth to mention that the amount of existing studies of Lean in service is significantly fewer than the case of manufacturing (Fryer, Anthony & Douglas, 2007). In their literature review study of what critical success factors (CSFs) exist when implementing continuous improvement initiatives in the public sector, Fryer et al., (2007, p. 503) were able to collect 29 papers and the key CFS identified were:

(1) Management commitment.
(2) Customer management.
(3) Supplier management.
(4) Quality data, measurement and reporting.
(5) Teamwork.
(6) Communication.
(7) Process management.
(8) Ongoing evaluation, monitoring and assessment.
(9) Training and learning.
(10) Employee empowerment.
(11) Having aims and objectives that are communicated to the workforce and used to
prioritize individual’s actions – a corporate quality culture.
(12) Product design.
(13) Organizational structure

The same authors also argue that management commitment is the one critical factor seen
across different sectors and concludes that, “Without the visible and active support of
senior officers a continuous improvement programme is unlikely to succeed” (p. 509).
Furthermore, Laureani and Antony (2012, p. 274) concluded in their mixed-methods
study of critical success factors of Lean implementation, which both reviewed existing
literature and included a survey with managers from manufacturing and service
companies, that, “[T]he most important factors are: management commitment, cultural
change, linking Lean to business strategy, and leadership styles”. Additionally, Manville,
Greatbanks, Krishnasamy and Parker (2012) conducted a survey with 200 managers
answering what critical success factors they perceived and experienced in their fields
when implementing Lean. The results were very similar to the already cited ones, but the
authors especially highlight “[T]he importance of developing learning capabilities in the
middle management team and the empowering of them - a greater role should be given
to middle management in performance improvement and strategy formulation” (Manville
et al., 2012, p. 7). Related to this notion - that management need to be engaged, supportive
and capable on all levels, Mann (2015, p. 237) also summarizes his book Creating a Lean
Culture with the argument that, “Consistent [emphasis added] leadership is the crucial
ingredient in Lean operations”. Looking at these studies, management related factors in
the form of commitment (strategy-integration), establishment of aims and objectives,
coordination (all layers of management must be synchronized) and consistency, where
management actually do what they ask for, are especially highlighted as significant when
implementing Lean in service.

In the following sections, a more detailed overview of specific success factors is
presented.
2.2.2.2 Philosophical factors

2.2.2.2.1 Process focus
One of the fundamental ways of thinking Lean, especially within the context of service, is to take on a so called process focus, where the delivery of services is visualized from the beginning to end (Modig & Åhlström, 2015). In their case study of Lean applied in an office, Chen and Cox (2012) state that Value Stream Mapping (VSM) is one of the most powerful Lean tools there is and that, “By mapping the whole processes, team members are able to visualize more than the single-process level and realize the connection between information flow and material flow (p. 18). Learning from Toyota, they also allowed their employees to socialize and mix in-between departments at an early stage to dissolve barriers and increase exchange (Liker, 2004). This way of working horizontally and linking different departments are focal features of Lean and also offers employees a greater insight regarding what they are actually working on and how their contribution is significant. As Zarbo (2012, p. 322) puts it, Lean organizations “work horizontally along the path of workflow so that a perfect work product can be produced consistently. Breaking down barriers between departments ... is one of the keys to obtaining collaborations with small, granular process improvements at the level of the work that the employees truly own”.

2.2.2.2.2 Continuous reflection
From the fact that it is an idea of continuous improvement that Lean is built upon, the concept of being a “learning organization” has developed (Runebjörk & Wendleby, 2013). The expression holds several meanings, both reflecting the mindset that operations can always get better, which in turn is seen through constant feedback and evaluation of results and progress, but also the fact that employees are invested in to become problem-solvers (Liker & Hoseus, 2008). In order for such an approach toward learning to arise and become established, an open and accepting environment, where employees feel comfortable and free to express opinions and make suggestions for actions, is necessary (Howell, 2014). As in the words of Bhasin (2015, p. 32), “Acceptance of the Lean thinking can only exist when an organization inaugurates a listening and learning culture; in this situation, the process design is produced by those who deliver the product or service, and not by a business analyst situated within an ivory tower who has little of no direct knowledge about the product or service”. A Lean climate is thus forgiving and transparent and does not focus on blaming or pointing fingers when people make mistakes or criticize (Marksberry, Bustle, & Clevinger, 2011). Related to the notion of a learning organization and continuous improvement is also the scientifically based model of problem solving that is often used in Lean organizations – plan, do, check, act (PDCA) (Clark, Silvester & Knowles, 2012; Imai, 2012). Ross (2014) identifies the PDCA model as a tool to aid and develop employees to become problem solvers. By using the PDCA approach on a daily basis, they will train themselves to become better at identifying problems and better serving the customers she proposes. Ultimately, she argues, PDCA
can be used to make continuous reflection and improvement a natural feature of the daily work, which she defines as a Lean organizational culture.

2.2.2.2.3 Teamwork
Another philosophical factor that has been identified as important when implementing Lean is teamwork. Ukhassan, Westerlund, Thor, and Sandahl (2014) found that group functioning and Lean results in the context of hospitals were significantly and positively correlated. Group functioning increased when Lean implementation success started to show. However, the authors point out that the direction of the relationship is difficult to establish. Thus, it is suggested that Lean could either require or produce positive group work. In other studies, on the other hand, teamwork has been identified as a critical factor when implementing Lean, especially so in the context of public services (Fryer et al., 2007).

2.2.2.3 Engaged and competent staff
2.2.2.3.1 Engagement
Since employees are the ones directly interacting with customers and fulfilling their demands in service, it can be argued that human resources are especially important. This notion is supported by Suárez-Barraza et al., (2012, p. 368) who in their literature review of Lean in service conclude that, “[I]n all service organizations, the most important element is the people themselves who manage and deliver the service in question”. Respect for people is further emphasized extensively regarding what Lean stands for—Lean organizations truly value and invest into their human resources and have customers and their needs as the number one focus (Modig & Åhlström, 2015; Runebjörk & Wendleby, 2013; Liker and Hoseus, 2008). Clark et al. (2013, p. 637) further assert, “[C]ontinuous improvement can only occur if the people who actually do the work are actively engaged and understand the principles that make up a Lean system”. In other words, everyone needs to be on board in order for a Lean organization to start to develop – a notion that also Searcy (2012, p. 42) shares, as illustrated by imagine 1. This image illustrates that it is top management that is responsible to initiate any Lean initiative by presenting a vision, but it is not until Lean as a philosophy and way of working has reached out to the outer layers of the organization that a Lean culture, where working and thinking Lean has become natural, can start to develop.

Image 1.

Searcy, 2012, p. 42
As Atkinson and Nicholls (2013, p.11) conclude in their magazine article on the topic of how to demystify Lean culture change and continuous improvement, “Until attitude changes, nothing changes. We must focus on changing the mindset and the attitude”. One specific way to engage employees is by involving everyone in the actual process and having them take part in the development phase of missions and visions (Radnor, Walley, Stephens, & Bucci 2006). By involving employees in the creation and planning of the implementation, a feeling of ownership is more likely to arise and they tend to feel more part of the change (Zarbo, 2012). As Atkinson and Nicholls (2012, p. 13) put it, “The nature of lean focuses on developing a culture of engagement and participation. It is about listening to those who work in core business processes and give them equal weight in decision-making…to those who may manage the process”. Furthermore, Angelis, Conti, Cooper, and Gill (2011) conducted a study related to how a high-commitment Lean culture can be built and found that one work practice favorable is to allow workers to participate in improving projects.

2.2.2.3.2 Competence
Employees do not only have to be engaged, training, learning and employee empowerment have also been identified as critical success factors when implementing Lean in service (Fryer et al., 2007). In her study of competence-based operations in human processes of companies, Kiss (2012, p. 99) also concludes that, “Companies can increase their efficiency by focusing on their human processes, and establishing specific business competence model, thereby enabling companies to match their human resources with the human resource needs, as there has always been and will always be a shortage of creative, communicative staff, who are able to identify with the organizational goals, to adapt changes easily, and to know the way about the information”. Competence among staff is in other words also important in addition to engagement.

2.2.2.3.3 Self-management
Lastly, staff members of Lean organizations are expected to be more autonomous and less managed by supervisors (Liker & Hoseus, 2008). In their study of teams and their impact on operational performance, Dunphy and Bryant (1996) found that so called self-management teams are associated with quicker decision making, higher degree of loyalty, and increased value in the form of service quality, reliability and adaptation to work processes. Being able to take such responsibility is thus another competence-related factor that could help mediate Lean success.

2.2.2.4 Leadership factors
Even though it is the employees that actually implement Lean initiatives to a great degree, leaders nevertheless play a significant part in igniting and maintaining a Lean culture. Working in a Lean organization requires leaders to be very hands-on and lead by example.
At Toyota, the concept of “Gemba,” meaning that the leaders go to and are present at the physical location where the work is actually done, is directly related to this notion (Liker & Hoseus, 2008, p. 4). “It is all about leadership” is one of the key messages by the executives of Henry Ford Health System, a hospital that has been able to achieve great results working with Lean when sharing the route to their success (Clark et al., 2013, p. 642). Research also reveals that what leaders pay most attention to and how leaders respond to critical incidents are the two main factors that shape culture (Atkinson, 2014). In regards to the function that leaders fill in the implementation of Lean, Atkinson and Nicholls (2013, p. 11) assert that Lean leadership is about, “developing an inspiring vision, enabling people to take action, managing by example and rewarding continuous improvement”. This in turn has implications in regards to how managers and leaders communicate, where they move away from order and control towards helping, coaching and supporting (Runebjörk & Wendleby, 2013). Further related to Lean leadership, Allen (1997) recommends a change of focus from controlling to helping, from evaluating to empowering, from directing to coaching and from planning to listening.

2.2.2.5 Implementation factors

2.2.2.5.1 Systematic approach
In regards to what implementation approach to adopt, Bhasin (2012) interviewed and surveyed managers within companies that were implementing Lean and also empirically compared performance indicators with the degree to which Lean was being implemented, finding a significant association between a systematic implementation strategy and successful results. Accordingly, Clark et al., (2013, p. 641) also conclude in their study of hospitals using Lean as a strategy that, “The most successful approach (success being defined by sustained improvement) has been where a whole healthcare system or primary care or hospital organization takes a high level executive decision to apply Lean to all its management processes. This is a massive undertaking, requiring long-term commitment to achieve large-scale cultural change”. Atkinson (2014, p. 13) shares this view and specifically warns that, “Without strategic focus any road will get you to where you want to go. If Lean isn’t part of your competitive strategy, then it’s purely an ‘add on’ which equates to no more than ‘flavor of the month’”. The number of authors sharing this view and firmly assuring that a total approach in comparison to isolated tools is necessary in order to truly begin to incorporate Lean into the very DNA of an organization are many (Liker, 2004; Shingo, 1989; Runebjörk & Wendleby, 2013; Bamford, Forrester, Dehe & Leese, 2015).

2.2.2.5.2 Adaptation
Further related to implementation, Bhasin (2012, p. 439) asserts that, “Every company needs to find its own way to implement lean and it should be viewed as a never-ending journey”. In Bhasin’s work from 2015, he similarly argues that, “Whilst proponents of Lean such as Toyota inform us of the Lean instruments, organizations need to discover
their own methods of improving these instruments” (p. 12). Clark et al. (2013, p. 641) also suggest that this type of adaptation will ultimately help get employees to embrace Lean and thereby increase its impact and results - “Organizations that are successful with this approach often take the Lean philosophy and methodology and then customize and rename it in order to build it into the fabric of the organization and enable staff to identify with the new way of working”. By allowing the nurses to be part of the development of its strategic Lean plan and objectives and to take on a so called “Grass root way” stemming from below and within, rather than an externally introduced “Band-Aid” approach, O’Brien and Boat (2009) also argue that the hospital in Iowa that they studied was able to implement Lean especially successful, with engaged and empowered staff as a foundation.

2.2.2.5.3 Long-term and continuous approach

Lastly, an implementation aspect not to forget according to literature is that changing corporate culture, which Lean as a strategy ultimately sets out to do, is a process that takes time and requires persistence (Liker & Hoseus, 2008; Bhasin & Burcher, 2006). Looking at eleven large organizations and their experiences, Kotter and Heskett (1992) suggest that it may take four to six years for a smaller organization to begin to truly change their corporate culture. In the case of Toyota, their results have definitely not shown up overnight, but rather developed over a period of more than 30 years (Ohno, 1988). Thus, as summarized by Karlson and Ahlstrom (1996, p. 7), “[T]he important point to note…is that lean should be seen as a direction, rather than as a state to be reached after a certain time”. An organization can thus in other words never be completely Lean - there will always be room for improvement.

2.2.2.6 Cultural factors

2.2.2.6.1 Organizational culture

Bhasin (2015, p. 27) connects the importance of a philosophical foundation with the fact that employees on the individual level have an exceptional degree of influence within service and the concept of organizational culture, stating that, “Organizational culture impacts performance because it affects individual behavior. It is a key determinant in whether an idea or process is accepted or rejected. Both empirically and in the author’s own experience fundamental to almost every collapse of Lean initiative is the primary concern of corporate culture and change management”. Ultimately, it can be argued that implementing Lean successfully equals being able to change the way of thinking and behaving among employees, in other words to change the very culture of the company. Practitioners verify this, by indicating that 80 percent of becoming Lean is related to culture (Ransom, 2008). Related to the notion of organizational culture having an impact on Lean implementation, Wiengarten, Gimenez, Fynes and Ferdows (2015, p. 383) also found that, “[L]ean practices have a stronger positive impact on a plant’s performance when plants practice a high level of collectivism”. On the other hand, individualistic
organizational culture was found associated with weaker positive results. Lastly, Pakdil and Leonard (2014, p. 734) further found that a so called “balanced culture” is the type of organizational culture associated with the most efficient Lean processes. This type of organizational culture is characterized by an emphasis on flexibility and spontaneity as well as control and stability and has both an internal and an external focus. The authors acknowledge that this undoubtedly seems contradictory and challenging, but that it is the type of culture that supports employee involvement, creativity, problem solving, and decentralization, control, standardization, and predictable performance outcomes, as well as efficiency, productivity and continuous quality improvement – all focal features of Lean. As the authors conclude, “It is clear that there is a duality in lean processes between the need for control and the need for innovation. This takes a very balanced and well-managed organizational culture to prevent one part from overwhelming the other” (Pakdil & Leonard, 2014, p. 736).

2.2.2.6.2 National culture

In addition to organizational culture, national culture has also been found to be a significant factor when implementing Lean (Wiengarten et al., 2015). More specifically, operating in a collectivistic culture has been found to be significantly beneficial, while an individualistic culture has a negative impact (Wiengarten et al., 2015). This effect is also stronger than the one of organizational culture, meaning that operating in a collectivistic organizational culture does not fully compensate for doing so in an individualistic national culture.

2.2.3 Challenges

2.2.3.1 Misconception

In their literature review over what challenges exist when implementing Lean in service, Radnor and Osborne (2013, p. 6) found these four to be especially important:

- A focus and over reliance on Lean workshops (‘Rapid Improvement Events’),
- A tool-kit based approach to Lean implementation, but without an understanding of the key principles or assumptions
- The impact of public sector culture and structures, and particularly the competing professional and managerial role in relation to Lean implementation
- A lack of understanding of the centrality of the customer (or service user) and of service process to the Lean implementation

Reflected in three out of these four challenges, is a misunderstanding of Lean as a concept as it is more than simply short-term tools. Hines, Found and Harrison (2008 cited in Radnor & Osborne, 2013, p. 272) make the comparison to an iceberg to illustrate that Lean consists of two separate but interactive elements. “Below the water (and hence invisible) are the core enabling elements of strategy and alignment, leadership and
behavior and engagement. Above the waterline and thereby visible, are the technology, tools and techniques, and process management”. This model thud indicates that Lean can only succeed when the invisible strategic and value-based elements are in place as a foundation, which the identified challenges above suggests is not always the case. Even though relatively few studies focuses on this, there is enough evidence in the literature to conclude that an inability to adopt Lean as a philosophy and work with the principles strategically, as a system throughout the entire organization is one of the main challenges for companies working with Lean, both in manufacturing and service (Bhasin, 2015; Burgess & Radnor, 2013; Bicheno & Holweg, 2009; Liker, 2004).

2.2.3.2 Resistance

As already established, it is necessary to engage all layers of an organization in order for Lean to become successful. Getting everybody to embrace Lean can, on the other hand, be easier said than done, as people have a tendency to be resistant toward change of any type (Coghlan, 1993). As Allway and Corbett (2002, p. 52) put it, “The willingness to try new things and accept changes, both in the nature of jobs and in the manner in which they are performed, is critical to transformation but not always an easy adjustment for people to make”. Similarly, a longitudinal study of 500 large companies found that employee resistant was among the most cited problems that management experienced when trying to implement some type of change (Waldersee & Griffiths, 1997). According to Axelsson, Rozemeijer and Wynstra (2005), the main reasons for resistance are often a lack of clarity and uncertainty, pressure, interference with interests and the challenge to learn something new.

2.2.3.3 Suboptimization

To break down operations into a process within a department is known as process kaizen in Lean terminology (Husby, 2010). Too much focus on these sort of departmental improvement may lead to so called suboptimization, which may negatively affect overall performance (Brandão de Souza & Pidd, 2011). Strategic Lean focus thus ought to be to stabilize operations within a department to enable flow between departments, which is known as flow Kaizen in Lean terminology (Husby, 2010).
3 Methodology

The methodological part of this study will introduce the design and strategies used. The research approach as well as research design, data collection techniques, and data analysis method will be discussed and motivated in further detail. The participants of the empirical part of this research study and their company profiles will be presented at the end.

3.1 Research Approach – Abductive

According to Saunders, Lewis & Thornhill (2012) research design of a study is guided by the degree to which the theory is known from the beginning. The research approach determines how the data is collected, the generalizability of the results, and how theory is used. As relatively limited information exist on the topic of Lean in service, the research purpose is explorative in nature and the aim is to elaborate or enrich existing theory rather than test or confirm. The authors have aimed to approach the research with an open and unbiased mind, not too influenced by already existing literature or theory. Rather, the authors began with collecting and analyzing the data looking for themes and patterns first and then examined existing literature. In other words, the data collection and data analysis will guide the theory instead of the other way around. This is often referred to as a “bottom-up” or inductive approach (Saunders et al., 2012, p. 146). Worth noting, however, is that the study aims to answer two research questions: “Is Lean applicable in the context of service?” and “What success factors and challenges are relevant to consider when implementing Lean in the context of service?” As the first question was purely conceived based on existing research, its approach is deductive in nature. In addition the authors were guided by existing research in order to identify an existing research gap. It could thus be argued that our overall approach is abductive, which signifies a combination of inductive and deductive where theory and data collection mutually is influence by one another (Saunders et al., 2012)

3.2 Research design – Qualitative

In order to answer the research questions, a qualitative method based on semi-structured interviews has been chosen. In total, nine interviews have been conducted, with representation from both managerial and employee levels from four different companies operating within the service field. There are several reasons why this approach has been selected. Since Lean is a social, nontangible phenomena that builds on the behavior and interaction of people taking place in a complex business environment, it obviously cannot be easily observed or quantified. As such, the authors believe that speaking to people involved as social actors in Lean implementations and collecting qualitative data best captures their experiences. Conducting a quantitative study would be a less suitable design, it is perceived, since the insights gained would be as deep or rich in nature. Also, since the purpose of this study is not to test but rather to explore, asking open-ended
question is more likely to gain access to the knowledge and insights that the interviewees possess.

### 3.3 Sample selection – Convenience sample

A qualitative interview study goes through two steps of selection: first the organizations to participate need to be decided upon, and then the people to interview (Eriksson-Zetterquist & Ahrne, 2011). The identification of participating organizations was mediated through the help of Dag Lotsander, a former Lean implementer at Toyota and now a Lean consultant with experience from implementing Lean at more than 400 Swedish organizations. The sample is thus in other words a convenience sample. Initially, the authors found Lean Forum, a Swedish independent consultancy that works with learning more about Lean and spreading the knowledge and on there, the authors came across Lotsander and his involvement with Lean. Based on personal communication with him, the four organizations: Arbetsförmedlingen, Försäkringskassan, Migrationsverket and Ving, were identified as belonging to the forefront when it comes to Swedish service organizations that have gotten far on their Lean journeys. The two only real criteria for inclusion was that the company ought to be operating in a service context and has been working with Lean as a concept for at least two years.

In order to identify potential interviewees, Lotsander’s personal network was used, where he provided names of people in direct management positions in the four organizations selected. Once the names had been received, contact with the suggested participants was made via email where the authors received confirmation about their willingness to participate. To add originality and depth to the data, four employees working on the operational level were included. In order for an employee to be considered, a couple of criteria needed to be fulfilled. In order to have insight in regards to how the daily work potentially had changed as a result of Lean being implemented, the employee would have to have been working with the organization for at least several years. They also had to work in a position where they have direct contact with the end-customer. Lastly, the authors wanted to avoid using a snowball selection method by asking the first interviewees in managerial positions for suitable names for the employees working on “the floor.” It was anticipated that this could affect the employees’ willingness to be transparent and critical in their reflections. As such, employees were randomly searched for and identified via LinkedIn.

### 3.4 Data collection – Semi-structured interviews

In total, nine semi-structured interviews were conducted. The interviews were deliberately made as open as possible, with some questions formulated simply to guide the conversations. This was done as the aim was to let the interviewees take command rather than being influenced by the authors. As such, the order and exact questions asked were flexible. For the employees working on the operational level, the questions asked were different because it was not anticipated that they possessed the same Lean expertise as the managers. Nevertheless, their experiences are still perceived as valuable and of
interest. Lastly, an interview with Mr. Lotsander was also included. His unique knowledge from working with Lean for almost 20 years is undoubtedly both unique and incredibly insightful.

The interviews, which were conducted over the phone, were substantially longer when talking to a manager or the consultant in comparison to the interviews with the employees. This reflects the fact that the study mainly focuses on the formers’ knowledge. Important to mention is also that the interviews for one organization, Ving, was significantly shorter compared to the interviews held with representatives for the others. Their contribution is accordingly also smaller in regards to the amount of data retrieved and included. In Table 1, a summary of the interviews can be found. Each participant was informed that the interview was being recorded for transcribing reasons, but also reassured that they could both remain anonymous if they wished and that any information used would be sent for approval prior to publishing. To give some background of the study, all participants were briefed before any questions were asked. The current debate whether or not Lean is applicable within a service environment was brought as the fundamental motivation to the study and then the research focus of critical success factors and challenges was mentioned. The follow-up questions were unique for each individual interviewee depending on their initial answers. In appendix 1, 2 and 3, the question templates used as a guide during the interviews can be found.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Participants</th>
<th>Role</th>
<th>Communication form</th>
<th>Length</th>
<th>Date</th>
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<tbody>
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<td>Management</td>
<td>Telephone interview</td>
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<td>2016-04-15</td>
</tr>
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<td>Stefan Blom</td>
<td>Management</td>
<td>Telephone interview</td>
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<td>Management</td>
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<td>2016-05-02</td>
</tr>
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<td>Employee</td>
<td>Telephone interview</td>
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<td>2016-04-29</td>
</tr>
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<td>Telephone interview</td>
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</tr>
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<td>Telephone interview</td>
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<td>2016-04-29</td>
</tr>
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<td>Lean Nordic</td>
<td>Dag Lotsander</td>
<td>Consultant</td>
<td>Telephone interview</td>
<td>1.40</td>
<td>2016-04-25</td>
</tr>
</tbody>
</table>

3.5 Data Analysis

All interviews were transcribed very carefully. The next step taken by the authors was to go through the material and identify and highlight statements deemed as relevant for the study’s research questions. To avoid missing something, the interviews were cross-checked between the authors, thus ensuring that each interview had been checked at least three times. Next, the data was reduced as the information identified as relevant was transferred to a separate document. After conducting an extensive and time-consuming analysis, patterns and themes, as well as deviations, began to appear. From the identified things mentioned as success factors and challenges, the authors created seven so called core categories which all the identified factors fell underneath. Once the more specific
factors had been finalized, the authors made sure to count the number of interviewees bringing up each one, only including those who actually ascribed meaning to the factors. Simply mentioning something as absent or in place was thus not enough to be counted. Where inclusion was not obvious, the authors cross-checked between one another to ensure validity. The authors then individually selected what was identified as the most rich, unique or informative quotes to represent and illustrate each factor and then it was voted for which ones to include in the study to narrow down the data further. The chosen quotes were then translated from Swedish to English. The unique perspective aimed to be captured through this approach is shaded dark blue in Image 1, below.

Image 1.

### 3.6 Limitations

Even though the authors perceive conducting an exploratory research study based on semi-structured interviews as the most suitable methodological approach for the research questions of interest, there are still several limitations evident and thereby important to acknowledge. Perhaps most obvious, any results derived from this study are correlative, rather than causal, in nature.

Similarly, the fact that the sample consists of only four organizations negatively impacts the significance, the depth of the results and the degree to which the results can be extended to other service organizations, i.e. the study’s external validity. The fact that all four firms operate in Sweden and that they were selected on a convenience-basis rather than through random sampling, also decreases the generalizability of the data collected as the sample simply may not be representable of the population as a whole.

The interviewees may also be biased in their reporting, both consciously and unconsciously, and they may potentially even be reluctant to share some of the information, as they may consider it a potential source of competitive advantage. The risk for potential biasness is perceived to be highest among the operational employees, as they
due to obvious power differences stemming from hierarchy may feel obligated to evaluate
and talk well about their employers.

Even though an abductive approach has been used and the authors have tried to avoid
building much theoretical knowledge or expectation prior to conducting the interviews,
previous knowledge of Lean may have inflicted bias upon the results in the form of
leading or probing questions. Researcher bias may thus have influenced respondents to
answer in a certain way. Similarly, the data analysis also included a lot of interpretation
on the authors’ behalf, adding further potential for bias. So even though neutrality has
been aimed at, being fully so is impossible.

As the results have been translated from Swedish to English, the richness of the quotes
may have been lost in translation. However, the aim has been to keep the quotes as similar
as possible to the original format.

3.7 Interviewees and companies

Arbetsförmedlingen

Arbetsförmedlingen is an authority with the important task to act as an intermediary
between employers and jobseekers on the Swedish labor market (Arbetsförmedlingen,
2016). The organizations has 15,000 employees. In 2013, Arbetsförmedlingen embarked
on a journey that has been called ”Förtroende Resan”, i.e. the “Trust Journey”. It has not
explicitly been referred to as Lean, however, it holds the same principles.

Jörgen Nilsson has since 2013 worked at the authority with strategy and management
alongside organizational development.

Anders Ihrén has been employed at Arbetsförmedlingen in Gävle for 18 years. He is an
intermediary working with job and development guarantee, i.e. individuals that are long-
term unemployed for different reasons. In the fall 2015, Ihrén applied to work with a side
project that was introduced at the office in Gävle, based on working with continuous
improvement.

Försäkringskassan

Försäkringskassan is an organization operating under the Swedish government with the
assignment to pay out money to individuals in different situations, e.g. sickness benefit,
parental benefit to take care of a child, activity grant and disability attendance. Currently,
the authority has about 13,400 employees (Försäkringskassan, 2016). In 2012,
Försäkringskassan initiated change in the form of Lean with the aim to increase customer
confidence (Universum, 2016).
Stefan Blom has worked at Försäkringskassan since 2011, but became the head of the Lean development council in 2012 with the task to coordinate the Lean transformation. Also, Blom is a member of Lean Forum.

Ante Jovic has been employed at Försäkringskassan in Gothenburg since 2008, working as a personal administrator with a focus on activity grant for individuals in the age 19 to 29.

**Migrationsverket**

Migrationsverket, or the Swedish Migration Agency, is the "... authority that considers applications from people who want to take up permanent residence in Sweden, come for a visit, seek protection from persecution or become Swedish citizens" (Migrationsverket, 2016). Due to the unstable political situation in the world with high increase in migrants, Migrationsverket has during the past few years had to enhance their workforce, leaving them with almost 8000 employees. In 2010, Migrationsverket became the first Swedish authority that began adapting and working according to Lean principles (Lomberg, 2013).

The interviewee holding a management position at Migrationsverket has chosen to be anonymous and is therefore only presented as a prior management representative who was involved in the introduction of Lean at authority.

Pernilla Dovenrud has been employed at Migrationsverket for 13 years. She has earlier worked as a team-leader at customer service but is currently working as an administrator at the work permit department. Also, Dovenrud is one of 29 educated Lean navigators at Migrationsverket, meaning she has the task to help spread the concept of Lean and support people in all layers of the organization working with it.

**Ving**

Ving, part of the Thomas Cook group, is Sweden's leading tour operator selling travel packages with over 700,000 passengers annually. The company has 200 employees in Sweden (Ving, 2016). In 2013, Ving started working with Lean.

Helen Jonsson has worked at Ving since 1999 but started working as a human resource director in 2014. Jonsson is also responsible for the Lean department at her office.

Kristoffer Arne has worked for Ving since 2012, starting of as a tour leader abroad but has now been working as a community manager for two and half years. Arne works as a travel consultant which means that he keeps contact with the customers through phone calls, mail, chat and social media.
Lean Nordic

Dag Lotsander is a senior consultant and the owner of Lean Nordic, a consultancy which helps organizations understand and implement Lean philology and management principles. Lotsander has worked with over 350 organizations. In addition, he has a background in Toyota Motor Europe as a general manager and a senior consultant specifically responsible for introducing Lean to the Swedish departments. In total, Mr. Lotsander has almost 20 years of experience from working with Lean within service.
4 Results

In this section the results from the data analysis using an abductive approach as described in methodology is presented. For research question two, the structure is based upon the core categories identified through the data analysis, with smaller relevant factors presented sequentially. In the case where all groups, managers, employees, and the consultant, have mentioned a factor as important, the structure of including one quote from each group has been used. This both reassures that all groups’ viewpoint is presented and reduces the amount of data. In a situation where all groups have not mentioned a factor as important, the authors have deviated from this structure to instead give space to the group emphasizing it the most.

4.1 Question of Applicability within Service Sector

In regards to the question of Lean’s applicability in the context of service, all respondents - managers, employees and the consultant, express positivity and conviction. For example, two of the managers express that:

“If Lean is the pursuit of excellence in relation to the delivery for customers, I do not really understand why Lean should not be applicable in the context of service?” – Jörgen Nilsson, Management, Arbetsförmedlingen

“It is not completely rare to find scientifical articles that say that Lean does not work or that it only works under extreme conditions. Some reports are written with the hypothesis that Lean probably does not work. Can we prove it? And thereafter the authors reach such a conclusion. If you ask me, I do not think it matters if it is Lean or some other type of quality standard, whatever one does, Lean always succeeds if you take it seriously”. – Stefan Blom, Management, Försäkringskassan

Two of the managers also reference objective measures of the success:

“We were very clear that we would only have one mission. We went from having several to one single goal – increasing the trust among citizens. This you can actually measure. Have we been successful? Yes, we have increased the trust through this effort”. – Stefan Blom, Management, Försäkringskassan

“When we introduced Lean back in 2008, it had large effects on production and minimized the stress for the people in their working environment. It also gave us the opportunity to be creative. The introduction of Lean also provided us with tools to better understand variation. Today we have long waiting times again, which can be explained by the big amount of pressure the organization have received the past year which have not been dimensioned for this. It meant serious stress for the employees. Given the results from the employee-survey that was made in the middle of the [immigration] crises, the results was still unexpectedly good even though it still exists work for improvement. The big challenge due to the crisis is to be persistent in the mode of operation and able to adapt to new situations”. – Management, Migrationsverket

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The employees on the operational level reflect a similar positivity, as illustrated by this quote:

“The culture has changed, it has improved throughout the years. Partly from new prerequisites for me and others who have been here for a while. We do notice that there are completely different opportunities now than before”. – Anders Ihrén, Employee, Arbestförmedlingen

However, while not denying Lean’s potential within service, two managers, one employee, and the consultant nevertheless raise the notion that gaining results may be more difficult than in manufacturing. One manager points out that the nature of service itself makes it difficult:

“If we picture a manufacturing business, where one has that physical product in a way that allows you to follow it from the consumption stage all the way to the consumer or at least until it is produced and ready for delivery… In a service producing version, there it is not a product being produced in the same way and the same person is responsible for more of the parts of this processes of different value rising steps and that makes it perhaps a little bit more difficult within a service organization, to get an overview of the actual process”. – Jörgen Nilsson, Management, Arbetsförmedlingen

The employee on the other hand raises the concern that on the operational level, a common perception is that the effort required to see results is very high:

“But even on a local level they try to push all the good things we do. But on the other hand it can be experienced that positive results come with a price. I think that there are many of my colleagues who experience that it is very forced, and that the green numbers or whatever it should be called come with a price. And you can see that within the organization, there are certain parts of the organization that has a significant level of employee turnaround that can provide an indication”. – Ante Jovic, Employee Försäkringskassan

Similarly, the consultant says:

“Försäkringskassan has also done it in large chunks with great success but it is also a gigantic organization - 14,000 people. It is not easy, but one notices that the agency has become better”. – Dag Lotsander, Consultant

4.2 Success factors

4.2.1 Engaged and Competent Staff

The role of the employees are highlighted in several ways by interviewees. More specifically, factors related to employee engagement and competence have been identified among the participants. In total, all managers, all employees and the consultant one way or another brings engagement up as significant when implementing Lean. The smaller themes related to engagement identified are: personal experience, education and self-management.
4.2.1.1 Personal Experience and Involvement

A common theme among all the managers is that they mention that allowing the employees to build their own personal and positive experiences in relation to Lean is important in order to encourage engagement:

“I think it could be a pretty good way to meet other people and do go-sees. We for example, got to meet other directors and doctors at the university hospital. This was very inspiring as we got to see how they practically applied Lean. This probably gave more than the professors’ theories. That is, to understand how to turn this over to something practical. And I think this is a very good advice to give. To be able to go out there and actually practise it”. - Management, Migrationsverket

“It is to train, not to educate or inform, but to actually train every team to do what they are supposed to do”. – Stefan Blom, Management, Försäkringskassan

The consultant also brings this up as an aspect of the workshops he holds:

“There is a toolbox that consists of a Lean game...you start off the first round and in the beginning it is pretty messy. Then you sit down and do some improvements. Once the first round is done, you do a second one and a third one. For every round you take, it becomes better and better. In the end, it turns out great.....this is also to engage the staff”. – Dag Lotsander, Consultant

Two employees also make similar statements, as illustrated by this quote:

“The most important thing is to get everyone on board in the work for continuous improvements. They did not talk about it early on, as much as they do today, to bring everyone on board. It is very important to feel like you are a part of the changes, then it will be easier to implement them”. – Pernilla Doverud, Employee Migrationsverket

The importance of competent staff is another aspect highlighted by a majority of the participants. Three of four managers, the consultant and three of four employees make statements reflecting that they perceive competence as significant. On a more detailed level, two separate ways in which competence has been mentioned as important have been identified: education and self-management.

4.2.1.2 Education

Two managers and the consultant identified education as an aspect that is of essence as represented by the quotes below expressed by one manager and the consultant:

Another thing that we have worked with tremendously in our transformation is the competence of employees. As mentioned previously, we perceived a skills mismatch so we initiated a lift of competence. An initiative to secure competence among both operational level employees as well as managers and to lift the median level. It is a two year initiative we are making in order to supply competence among all employees, which we are investing approximately 140 million Swedish crowns on”. - Jörgen Nilsson, Management, Arbetsförmedlingen
Three of the employees recognize that education is important in order for Lean to become successful, but gives a different perspective regarding whether or not it is provided, as shown by the following quotes:

“[I] have the perception that the local bosses, who should be important leaders of change that they, perhaps, have not got the proper education that they need in this”. - Pernilla Doverud, Employee, Migrationsverket

4.2.1.3 Self-management

Another factor ultimately related to competence is self-management. It was mentioned by two of the managers and two of the employees as important, as the quotes by one manager and one employee illustrate:

“(T)ou have to allow your employees to control their workday due to the enormous variation that is introduced to the organization since the customers show up unevenly and, especially, are uneven. Their profiles differ”. - Stefan Blom, Management, Försäkringskassan

“As mentioned, we work a lot with autonomy and that permeates everything. This is important, that it revolves around what I want, what I can and that I am aloud to take responsibility, aloud to lead”. – Anders Ihrén, Employee, Arbetsförmedlingen

4.2.2 Philosophical Approach

In total, seven of the nine participants mentioned things related to philosophy as important to achieve results when implementing Lean. Several factors to philosophy and values have been identified as important based on the input from participants: having a philosophical foundation, process orientation, continuous reflection, and having a team-approach. Below, each theme will be presented in more detail.

4.2.2.1 Philosophical Foundation

All managers, the consultant, and two employees specifically mention having a philosophical foundation as necessary in order to see results. For example, two manager’s state:

“I believe that you need some kind of philosophy. That is very important. It is fundamental that you have a package of values that lay as a foundation in the organization: this is what we stand for, this is what we find important in the organization. Something to lean back against when one makes decisions both on individual employee level, on management level or within different hierarchies and so on. They ought to be very clear, such as the value of “customer first,” which is a really clear principle and can have a very directive roll within an organization”. – Jörgen, Nilsson, Management, Arbetsförmedlingen

“The production question is not only in regards to how we do it, but also with quality in consideration and make it under the condition that it shall be a good environment to work in. It is always possible to reach all the goals if you sacrifice the environment in the short-term, but long-term, it is completely meaningless. In our daily steering, we practice a very straightforward...
of priority. If one bumps into problems – working environment is more important than quality, which is more important than economics, and so on”. – Stefan Blom, Management, Försäkringskassan

One of the employees similarly reflects on that Lean is based on a new way of thinking, making the embrace of the concept more difficult for some:

“[L]ean is very connected to the fact that you need to have that way of thinking. A thinking that reflects change. This is maybe something that does not come to people automatically”. – Ante Jovic, Employee Försäkringskassan

The consultant:

“On a scale from one to ten, I would say, based on what I learned at Toyota, the values make up one to seven [of Lean]”

“That process mapping gives result, that this way of thinking regarding consumer value gives result, that you have the value guidance in place, in other words some type of compass in your stomach that shows, if I do not have anyone to ask, I have to be able to lean against the values to be able to choose the path myself… If I do not have those values, it turns out extremely disoriented and then it can turn out to anything.”

“Variation is also much greater [in the service sector]. In other words it is more difficult to standardize. But then it also becomes even more important to have some type of value foundation steering you… Because then you can handle the software if you have a steering of values, which I refer to as a compass in the stomach, answering, ‘How do I do this? What is best for the customer?’ Okay, then I go in that direction”. – Dag Lotsander, Consultant

4.2.2.2 Process Orientation

All four managers mention process focus and the approach of looking at the deliverance of service in its entirety rather than individual steps as an important factor. One manager specifically highlights the interdependence between a process orientation and always striving for continuous improvement:

“By the way, that was a code I did not crack at my previous company either, it was only continuous improvement there as well. But now we have realized that flow is important and slowly but surely in our strategy it went from not only being continuously improving to achieve trust, but we are going to achieve trust by getting a good flow within the organization too, and we will get a good flow if we work with continuous improvement”. – Stefan Blom, Management, Försäkringskassan

The consultant goes one step further and even identifies process orientation as a critical success factor when implementing Lean in service and also highlights that the direction of process analyses has to be both vertical and horizontal:

“One critical success factor is to not only work in the downpipes but that you work in the horizontal gutter as well… If you have the finance department as one vertical downpipe, purchase as one vertical downpipe, distribution as one vertical downpipe and you look at the horizontal gutter running across, then these improvements have to flow through all these functions”. – Dag Lotsander, Consultant
4.2.2.3 Continuous Reflection

The importance of continuous improvement and reflection is emphasized by all managers. Three mention the Plan, Do, Check, Act (PDCA) framework as an important method to generate improvement, illustrated by this quote:

“It is really the most spread form of working with development. Plan, Do, Check, Act... It is a very important and good tool within Lean to think that way and it is a pillar in the creation of a learning organization.” – Jörgen Nilsson, Management, Arbetsförmedlingen

The consultant shares the opinion of PDCA being a mediating method of continuous improvement and also comments on its connection to the philosophical foundation:

“I mean PDCA, this process for improvement is so extremely central in Toyota’s way of working. It contains so extremely much and it is completely guided by values. That means that if you do not go out and find facts, you will not be able to succeed and that is a part of the PDCA structure. Everything is connected”. – Dag Lotsander, Consultant

4.2.2.4 Team Approach

All managers as well as the consultant also talk about teamwork as a focal aspect to achieve positive results when working with Lean. One manager specifically identifies it as a critical success factor:

“We did a survey when we had performed Lean training in 9000 teams out of 13 000 and then we saw that there were three prerequisites that were present, and they were: one, the work has to be performed in functional teams... It was not until we concluded that we have to work team-based where we have common goals and share the burden and the success that it started to work with continuous improvement. So for us that was a success factor”. – Stefan Blom, Management, Försäkringskassan

The consultant emphasizes the importance of working in teams as well and also connects it back to the value foundation of having respect for the human being:

“If there is just one person looking and perceiving that ‘Oh, there is where the problem is,’ to then try to find a solution - then teamwork is missing and there is a lack of respect for knowledge and experience from being able to work together”. – Dag Lotsander, Consultant

4.2.3 Leadership

Leadership is another factor raised as significant in regards to influencing how successful Lean initiatives turn out. In total, seven participants - all four managers, two employees and the consultant, one way or another discuss the role of leaders and attach meaning to their importance.
4.2.3.1 Motivation

More specifically, all managers, one employee, and the consultant highlight leadership as significant in the way that they perceive the leaders as an important source of ignition and motivation for the employees to work Lean on a daily basis is. For example, one of the managers states that:

“[S]trategy will only be as successful as the leaders make it. One has to lead within the structure. This is a leader-driven system. Even though Lean to a significant degree is built upon an approach of employee engagement that will only develop if the leaders motivate it to be that way. So the leadership is creating the employee engagement”. – Stefan Blom, Management, Försäkringskassan

Being asked as to why to reflect upon why after having answered that she does not perceive a clear vision of the Lean initiative being in place on the local level, one of the employees answers:

“I have gotten the idea that they, for example the local managers who are supposed to be important change leaders, that they have perhaps not gotten the training that they might need in this. That could be one reason”. – Pernilla Doverud, Employee Migrationsverket

To the question how, practically, one should go about getting everyone engaged and working Lean, the consultant short and concisely answers:

“That is spelled leadership”. – Dag Lotsander, Consultant

4.2.3.2 Leadership style

All the managers, one employee and the consultant also ascribe meaning to the way leaders lead when implementing Lean. Present, coaching and demanding are words used to describe the type of leadership the participants raise as suitable. For example, one manager says that:

“One has to find a present, coaching type of leadership that challenges and demands at the same time as it supports. It was, I mean the leaders who did so, that is where it worked really well”. – Stefan Blom, Management, Försäkringskassan

The consultant also brings up the idea that the leaders have to have high expectations:

“[T]he leaders have to show interest. They have to demand results. If the leaders do not do that it will fade out. I mean there is a risk that is slides back to as it was before then. But if the leaders have an understanding that they are supposed to ask for results, it can be pretty simple in the beginning. It can be, how many propositions have we generated? How many are you actively working on? And how many have you completed”. – Dag Lotsander, Consultant
4.2.4 Management factors
In total, all managers, three employees and the consultant identify management as an important factor influencing the success of Lean initiatives. On a more detailed level, four smaller themes of ways that management impacts have been identified: strategy, direction, management consistency, and management coordination. These are presented below.

4.2.4.1 Strategy
That Lean is strategically integrated, is the main way that management influences the likeliness for Lean to become successful as mentioned by three managers, one employee and the consultant. As one manager states:

“This is a transformation, it needs to be rooted in how you choose to run your organization... One may reflect upon what is the chicken and the egg here ... If the employee, the person who meets with the customer ... is not involved in developing the processes, then you are facing failure. This is one of the fundamental parts, the person that has knowledge about the processes and sub processes and meets with the customer is the one who holds information on what works and does not, that group needs to be involved, but that is built upon a philosophy composed by management. It can be composed alongside the business entity but it is management that leads that task, it is management that establishes what the philosophy is”. - Jörgen Nilsson, Management, Arbetsförmedlingen

One employee similarly suggests that:

“[I]t needs to be well anchored. It is really important that we have a general director who shows this, and we have that, it is noticeable on our intranet and during organization days”. - Anders Ihrén, Employee Arbetsförmedlingen

And the consultant argues the same thing:

“But it starts with management ... [T]here, a decision is made that we are going to do this. That is the first thing that happens”. - Dag Lotsander, Consultant

4.2.4.2 Direction
Another management-related aspect that is repeatedly mentioned throughout the interviews is the importance of having a clear vision when working with Lean. Two of the managers state that:

“If one does not know where one is going, there is no use in moving at all. Then one does not need continuous improvement”. – Stefan Blom, Management, Försäkringskassan

“Really it is like this: So why are we doing this? And this is a very important question that very, very many pass by way too fast. I mean overall, if one is making changes and transfers from one position to another: Why is one doing this? And this “Why” has to be included in order to be able to get a force behind all of it. Because we are undoubtedly humans of flesh and blood who, like everyone in the organization, all must find their “Why” they are doing this”. – Jörgen Nilsson, Management, Arbetsförmedlingen
4.2.4.3 Management Consistency

That management actually acts in accordance with their expectations of the employees on the operational level - in other words that they practice what they preach, is mentioned as significant by two managers and the consultant. One of the managers states that:

“If you have a head office that says that we are too good to work with this but wants you to do it on the floor, that is the core business, then you have a very significant issue of credibility. Therefore, it is in itself interesting to find out what the support department engages in but also how responsive they are against their core functions in this part. So they are not in their own little glass tower and think they are better than everyone else”. - Management, Migrationsverket

Another manager suggests that management showing commitment and staying true to what they preach also is reflected in how management measures results:

“How do the changes look, am I measuring against the budget or am I measuring in regards to how the flow of the process turned out? If I am thinking that we can continue to measure against the budget, but say that we should go the process path, well then that strategy will die out relatively quick”. – Stefan Blom, Management, Försäkringskassan

The consultant similarly reflects that if management does not practice what they preach, the results will not last for long:

“If the leaders start to sway regarding what they say and what they do themselves? Then, it can crash relatively quickly. I mean parents who tell their children to make their beds and then do not make their own beds, it will not make the children make their beds. It is as simple as that, you have to clean your own way of doing and that is very difficult. I mean it has to be grounded so very carefully in order for this to turn out sustainable”. - Dag Lotsander, Consultant

4.2.4.4 Management Coordination

Two managers and three of four employees mention disconnection between upper management, local leaders, and the employees working on the operational level as an issue:

One manager reflects that they initially underestimated the role of middle management and had to adapt accordingly:

“Another success factor – to give everyone the basic needs to succeed. When we started this training programme, we started off with the co-workers and continued upwards to the directors. However, imagine 10 000 co-workers that works with continuous improvements and most likely have not been given any authority to actually change anything, they only understand how to actually do it, then you will most probably not come up with any improvements, they will only understand how to do it. Therefore, they will not end up with any improvements; they will only come up with suggestions of improvements that need to be forwarded to someone higher up who is not fully trained for this. This person will then get a suggestion and think: Oh well, here they come and want to change things, but we have our standards”. - Stefan Blom, Management, Försäkringskassan
A notion also shared by employees, as illustrated by these two quotes:

“[I]t is very much about that there is someone locally, if you are supposed to achieve a proper anchoring. It is very important that we have a general director who shows this and we do, which we see on the intranet and during business days when he participates. But from that and below, we do not notice as much”. – Anders IHrén, Employee, Arbetsförmedlingen

When asked if she experience that there is a clear vision in place, another employee answers:

“No I do not think so. I perceive that it might be, I think that there is a vision higher up on the upper management level regarding how it is supposed to be but it has not properly reached the managers on department level yet, unfortunately”. - Pernilla Doverud, Employee, Migrationsverket

4.2.5 Implementation Approach
Factors related to how Lean is implemented are mentioned as important by six participants: all four managers, the consultant and one employee. Four smaller themes of important factors related to implementation have been identified. These are: systematic approach, adaptation, organic development and a long-term and sustainable approach.

4.2.5.1 Systematic Implementation
Two managers highlight the importance of the systematic implementation in order for the concept of Lean in service to be successful:

“We had an implementation that we called “All in.” There was no hesitation when making the introduction… Once we had our strategy in place, we decided that the introduction of “All in” goes for everyone. Whether it was continuous improvements with the workers or the process orientation or the control, it included our philosophy and the way we led the organization. We worked with every area in parallel”. – Stefan Blom, Management, Försäkringskassan

“[Y]ou go ahead with the implementation and think that you can polish “a little bit here and there.” Forget it! There is no point to start off with that kind of approach. You need to work with the entire organism. That is, the structure, the culture, the product, the people, the processes and the philosophy. You need to work with everything. You cannot just include some parts of it and think that it will work. Approach the concept with this attitude, it will end up with you saying: Lean does not work. However, that is not Lean. You have not worked Lean. You have done something completely different. That is my opinion at least”. – Jörgen Nilsson, Management, Arbetsförmedlingen

4.2.5.2 Adaptation
Three of the managers, one employee and the consultant note that making Lean to your own, rather than copying and pasting from what others have done is important to experience positive results:
“But that is also something that we definitely have incorporated a lot more now and also something where the Lean philosophy has helped us, or rather it is those tools and those thoughts that has helped us to move forward. But it is not like all we talk about is Lean, but rather we pick the good parts, so to say”. – Helene Jonsson, Management, Ving

“That is also an important part of the work towards change – to perhaps let what is already working well be. Because they have been pretty good at changing everything, unfortunately. It is good to reflect, what do we actually need to change and what can we maintain the way it is?” – Anders Ihrén, Employee, Arbetsförmedlingen

“You can apply Lean in different ways depending on experiences, internal corporate culture, the fundamental values and things like that. It is not about buying a package, implementing it and change everything. It is rather about knowing what you want, how to use the concept and develop one selves from where you stand. A lot of people have misunderstood this. You should be proud of who you are and adapt from where you begin”. – Dag Lotsander, Consultant

4.2.5.3 Organic Development

One manager not only highlights the importance of doing something unique out of Lean, but also suggest that implementing Lean organically, rather than with the help of consultants, is one way to increase the likeliness of the concept becoming a natural way of working:

“I think that one success factor that I have experienced, perhaps also the organization as a whole in its own way, is that we have done rather much on our own. We have not had so many consultants involved and those sort of things. Rather, we have, especially as there are not a lot of tools or methods developed for the public sector – especially not for head office functions that are international, it has become relevant for us to look at how we can develop things rather than copying and pasting something else. And that way we have managed to trigger the creativity more directly. I think that might be more difficult if it is managed by consultants”. – Management, Migrationsverket

4.2.5.4 Long-term and Sustainable Approach

All managers, two employees and the consultant suggest that it is important to realize that working with Lean is an ongoing journey that takes time:

“[T]he success in establishing trust takes time. It is not something that is accomplished overnight, not with this type of steamboat that we are in, it takes time to turn around”. – Stefan Blom, Management, Försäkringskassan

“[P]lus that you have to realize that this is a long-term effort. It is not possible to believe that you can do this in six months and think that you are done. I cannot claim that we are all the way through yet, and I do not think Försäkringskassan is either. You work with this all the time and I guess it is some type of humbleness in it all. That you work with improvements all the time. But is not a quick fix”. – Management, Migrationsverket

“Rome was not built in one day. Same for Toyota, Toyota was not built in one day. It took many years to develop this concept. It is the same for every organization, everything need to take its time”. – Ante Jovic, Employee Försäkringskassan
“What does long-term mean? Is it one year or is it fifteen years? A whole generation? It is more than fifteen years. Whenever I hear the words “Lean project” I quiver. A project begins and it ends. This can never end”. – Dag Lotsander, Consultant

4.2.6 Culture
Three managers, one employee and the consultant bring up organizational culture as significant. The consultant also mentions national culture as something with potential impact. In order to differentiate between the two, they are presented separately below.

4.2.6.1 Organizational culture
Three of the managers specifically highlight an open and accepting work environment as an important success factor. One of the managers mentions culture as a factor as she believes that having an already value-driven culture in place mediates the introduction of Lean:

“A[ ]s our company is very value-driven and that it has been for a very long time, there is a very strong corporate culture so that this Lean philosophy, because for us Lean signifies the philosophy, I mean for us it is a way of thinking. It fit in very well in our corporate culture”. – Helene Jonsson, Management, Ving

Achieving an open climate - where scapegoating is avoided and employees are encouraged to look for ways to critically evaluate current ways of working in order to find room for improvement, makes Lean more likely to reach its full potential and develop a new organizational culture argues one manager:

“We are trying to grow a culture where you have the courage to try. That is, that you have trust in a person’s competence and that you do not reject or question something in a downgrading way but more in a constructive way. We usually talk about the red lenses and the green lenses. We are trying to use the green lens where we have trust in each other and see each other as competent people who can contribute, instead of using the red lens where you think something negative about a person and think that they are not capable. And about building a culture, this is a determining factor whether or not one is to succeed with it. That is, that you establish a culture where you strive for excellence, and that you strive to increase the value for the costumer and in that, then dare to be think outside of the box”. – Jörgen Nilsson, Management Arbetsförmedlingen

The consultant also states that this type of open climate is necessary in order for a Lean culture to develop:

“That is what the culture is. That is definitely what Lean culture is if I was to narrow it down. That is, to understand the problems that we have, and to remove everything that is reasonable to remove, with reasonable efforts in order for improvements to always occur and then that every person in the organization mentions what they see. And that requires courage. This is a part of the challenge, which is also a part of the values. If you do not have the courage to speak up whenever you see something just because you are afraid to lose your job. Then you are not working in a Lean culture”. – Dag Lotsander, Consultant
One employee comments on the establishment of such a climate and that she perceives it as a confirmation that the company actually is working Lean:

“"I mean, it is very much this that one has taken the time to always be able to discuss how does our routine perform, what can we improve, that one has the permission to take the time to actually do this. It is natural that one at team meetings lifts these questions, it is natural for employees regardless if they are, regardless of what they work with, to lift their suggestions. And that one actually dares to try it”. – Pernilla Doverud, Employee Migrationsverket

4.2.6.2 National Culture

One participant, the consultant, brings up natural culture as a potential success factor of Lean:

“It ought to be more difficult to implement Toyota-way in Japan than in Sweden... There is a lot in place in the Swedish culture to implement Lean. A lot more than what one may think. Because we have so much of this in us. We do not have difficulty sitting together in a group and getting along. Others are not at all, they are used to hearing what the boss says and then one does it". – Dag Lotsander, Consultant

4.2.7 Managing Variation

Two managers and the consultant mention handling variation in a balanced way as one factor influencing the success of Lean implementation within service as especially important since variation in the form of consumer wants and needs are greater than in manufacturing:

“I have to say, we worked very hard with process-orientation and standardization before our Lean journey. Which means, we had standardized too much. We had standardized poorly. Our productivity increased, but the quality decreased. At least if you were to measure the costumers’ experience, if they get their need and their value satisfied. So the trust declined. We have done a journey where we had to change our view on standardized work procedures to a compromised work approach [rather than standardized] that lays in accordance with what production thinks it needs”.
– Stefan Blom, Management, Försäkringskassan

“[T]he biggest difference is that they have significantly more variation in the service sector. It is not as obvious [to work Lean] as it is in the manufacturing units. I mean if you look at an HR function, the finance function is a little bit more standardized with yearly reports that is to be submitted and all of that, but if you look at HR or purchase, it is a lot more differentiated on the individual. And that in Lean language is then called variation. The variation is a lot bigger. It is thereby more difficult to standardize. But then it also become more important to have a steering through standardization”. – Dag Lotsander, Consultant
4.3 Challenges

4.3.1 Misconception of Lean
All managers and the consultant highlight that Lean as a concept is misunderstood, many times perceived as a short-term efficiency and standardization tool rather than a long-term strategy grounded in a philosophy. As one manager states:

“Then we have the people who have their own experience [with Lean] that is negative. They have not done the necessary things thoroughly but have instead, for example, only tried to initiate an improvement initiative within the frames of the current management system and the philosophy that has taken the organization in a negative direction. If one tries to introduce an improvement initiative it will become undermined by both the philosophy and the system and then the participants or the leaders in that organization think that this was really difficult and so it dies out after a couple of years. So the experience becomes very negative and they end up dismissing Lean as something worthless, something negative and that it does not work and so on. More than anything it is that it is not Lean being considered here. It is far from Lean I would say, as Lean includes all these components and it is a philosophy and not an individual tool”. – Jörgen Nilsson, Management, Arbetsförmedlingen

The consultant further shares his perception of how the concept is misunderstood:

“In my world, this all began with the interest of Toyotas internal work. Around the questions related to values and how we think about the costumers and who they are…..questions like that. And then all this somehow all slipped in, in some kind of toolbox, where the idea is that you are supposed to map the processes, you are supposed to do the PDCA – method…everything was related to method and not so much in ways of thinking. And a lot of the books that have come out now, are characterized by “do like this,” not “think like this”. - Dag Lotsander, Consultant

4.3.2 Employee resistance
Three managers and three employees identify resistance among workers as a negative factor. The managers highlight that the resistance often originates from the reluctance to let go of old ways, ultimately influencing to what degree Lean is integrated into the organization:

“[W]e call it “learning how to swim again.” One of my co-workers addressed this process as; well I know how to swim, and now you want to teach me how to swim in a completely different way, and that does not feel completely relevant”. – Management, Migrationsverket

Three employees also mention this as a negative factor, whereof two highlight length of employment as influencing the resistance as illustrated by this quote:

“In the beginning, when changes occurred a little bit more and more, negativity arise because of the fact that co-workers had been working for 30 years in the company. If you were to work in a company for 30 years, then you most probably do not want to change the way you communicate with the costumers”. – Kristoffer Hahne, Employee Ving
4.3.3 Suboptimization

One manager and the consultant voice concerns regarding the risk of suboptimization within an organization if Lean and process visualization only is worked with department-wise. Process mapping is important, but if only applied within departments there is a risk that the organization as a whole may detriment rather than benefit:

“If you only work in the downpipes there is a risk that you suboptimize them”. – Dag Lotsander, Consult

“If we have several separate sorts of errands within the operative activities, for example asylum or immigration of relatives, suboptimization may occur if every sort of errand develops their own sub-process. This is why we introduced a department of quality, which was intended to be responsible for the comprehensive view of the process”. – Management, Migrationsverket

Summary

The table below summarizes the findings in regards to core categories and smaller themes identified from the data collection.

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5 Analysis

This thesis has explored the applicability of Lean within service and what factors influence the likeliness of success. In the following section, the results will be compared to previous research. The chapter is structured with the core categories identified through data analysis in previous section as guidance, with the relevant sub-factors analyzed under each.

5.1 Question of Applicability within the Service Sector

In the sample, all interviewees express a conviction that Lean is applicable in service. Many of them, especially the managers, express a notion that Lean is primarily a philosophy, a way of thinking. This is undoubtedly much in agreement with Liker’s (2004) 4P’s model with the philosophy making out the foundation. As such, they do not see why Lean should not be able to be applied within the context of service. Even though there are some hints that operations have in fact become more efficient and quicker, the type of results specifically mentioned amongst the interviewees is mainly related to consumer and customer satisfaction. These sort of intangible improvements are not easy to see or measure, but nevertheless they are an indication that the service is better. On the other hand, several interviewees also acknowledge that there are differences between manufacturing and service, especially highlighting the significant amount of variation and the responsibility held by the individual employee who delivers several steps and also is in direct contact with the costumer in service. This, they argue, is part of what makes it more difficult to apply Lean in service and ultimately, some employees appear to experience too much pressure - as indicated by high rates of employee turnaround. Comparing the results to existing research, they are in line with the findings of Swank (2003) and Piercy and Rich (2009) who investigated the effects associated with the use of Lean within the financial sector and found that Lean implementation was positively linked with more efficient operations, fewer mistakes made and more satisfied customers. The findings can in other words also be said to offer counter evidence against the critique voiced by Repenning and Sterman (2001) and Arfmann and Barbe (2014) which suggest that Lean is not applicable within service.

5.2 Success factors

5.2.1 Engaged and Competent Staff

5.2.1.1 Personal Involvement

According to all managers interviewed along with the consultant and two employees, personal involvement is argued to be important when working with Lean as it is one way to build employee engagement. Personal and practical experience of Lean and its potential, through go-sees and hand-on training, rather than simply being taught Lean
theory, is for example mentioned as important. Such involvement results in a better understanding of the concept, it is argued. The importance of the employees actually being a part of the transformation has been highlighted as well, as one employee argues that it will be easier to implement change if one actually feels as part of it. In accordance, Clark et al. (2013) state that the people who do the work need to be engaged and understand the core principles in order for continuous improvement to occur. Similarly, research suggests that a feeling of ownership is more likely to arise if employees feel part of change (Zarbo, 2012) and that engagement and participation will take place if employees’ opinions are acknowledged (Atkinson & Nicholls, 2012).

5.2.1.2 Education

In addition to engagement, competence is considered to be of great importance during Lean implementation among the interviewees. Two managers and the consultant express the importance for competence development. One manager specifically mentions a big initiative related to education costing 140 million Swedish Crowns that his organization invested in when noticing that competence was lacking. Interestingly, in contrast to the managers and the consultants shared values about competence, three employees perceive that the leaders are not competent enough. It is argued from their perspective that competence is important to be provided especially to the “leaders of change.” Kiss (2012) similarly states that a focus on human resources is needed to increase the efficiency within the human processes of an organization and in their review-study of what critical success factors that exist when implementing Lean in service, Fryer et al (2007) found that training, learning and employee empowerment were among the main ones identified.

5.2.1.3 Self-management

Relating self-management to competence, two managers and two employees mentioned it as important. It is expressed that employees need to be allowed to take control of their own workday and take responsibility, as the variation of service is enormous. One employee specifically mentioned that they work with autonomy, which permeates everything. He continues on by highlighting the importance that it revolves around: what I want, what I can and that I am aloud to take responsibility and to lead. Linking the results to the research, Dunphy and Bryant (1996) share the sample’s opinion about the importance of self-leadership. According to the authors, if the organization has an enthusiastic view towards self-leadership, quicker decisions will be made, loyalty and quality of service will increase, and quicker adaption to work processes can be expected.

5.2.2 Philosophical Approach

One very focal notion that is voiced by all groups in the sample is the fact that Lean is and should be considered a philosophy - a way of thinking. In regards to the functions filled by having a philosophical foundation in place, managers and the consultant suggest that it offers guidance when difficult decisions are to be made in the field, thereby
functioning as something to rest against in ambiguous situations. The consultant also argues that this becomes especially important within the context of service, as variation in the form of consumer wants and needs vary much more than in manufacturing, creating greater dependence on each individual employee. Another manager argues that even though short-term results are possible without a clear and guiding philosophy in place, it is necessary to obtain sustainable results. Turning to literature, the importance of a philosophical foundation is similarly emphasized. As suggested by Hines et al (2008), who argue that it is the “invisible” parts of Lean that is the driving element in order for a truly Lean organization to form, for example. Something that has also been confirmed in several studies (Burgess & Radnor, 2013; Bicheno & Holweg, 2009).

5.2.2.1 Process Focus

All four managers discuss having a process focus as an important factor. Specifically, they argue that doing so offers an overview of all the steps related to the deliverance of a service and that this is necessary in order to be able to achieve maximum improvement as it helps create ‘flow’ within the organization. The consultant also points out that a process focus should not only concern smaller, departmental functions, but also larger cross-departmental ones. By analyzing processes both vertically and horizontally, more significant flow can be achieved. This notion is supported by previous research, as Chen and Cox (2012) have found that Value Stream Mapping is one of the most powerful Lean tools there is, for example. In order to further achieve collaboration between departments, Liker (2004) also tells of Toyota’s approach, where departmental barriers were removed and employees were encouraged to socialize. Fryer et al., (2007) also found in their review study of what critical success factors exist when implementing Lean in service that ‘Process Management’ was a consistently identified factor in the 29 papers examined.

5.2.2.2 Continuous Reflection

Looking at the sample, it is the managers and the consultant, those with more specific knowledge and experience in relation to Lean as a concept, who identify continuous reflection as a crucial aspect for an organization to become Lean. More specifically, three mention the PDCA model as an important tool to foster continuous improvement and help employees identify issues than can be transformed to opportunities of improvement. To continuously reflect upon past results and actions are necessary in order to be able to adapt and improve according to them. These ideas are in accordance with Ross (2014), who identifies the PDCA as a tool that helps make employees problem solvers and Lean a natural way to think and work. Similarly, one review study found that the use of quality data, measurement and reporting was found to be one critical factor, which can be connected back to PDCA and its continuous process of reflection (Fryer et al., 2007).
5.2.2.3 Team Approach

Amongst the interviewees, teamwork is highlighted as important both as a way to learn and exchange ideas and also to share goals, responsibility and to celebrate success related to the problem-identifying process by all managers and the consultant. As the foundation of Lean is based on people and their involvement in working and thinking Lean, the group function is also brought up several times among all interviewee groups as a means to build a feeling of belonging. Linking these findings back to research, Ulhassan, Westerlund, Thor, and Sandahl (2014) found that group functioning and Lean results were significantly and positively linked in the hospitals they investigated, but also warn that the direction of the relationship is ambiguous. In other studies, however, teamwork has been identified as a critical factor when implementing Lean, especially so in the context of public services (Fryer et al., 2007).

5.2.3 Leadership

That leadership is a factor of importance when implementing Lean is emphasized by seven of the respondents; by all four managers, two employees and the consultant. The essence of leadership is expressed both through its motivational function and through the leadership style necessary.

5.2.3.1 Motivation

All managers, one employee, and the consultant relate leadership to motivation; leaders working in a Lean way will inspire employees to do the same. The respondents argue that leadership is important because leaders are the ones who drive change and engage the employees. Atkinson and Nicholsson (2013) similarly state that the function leaders fill in the implementation of Lean is, for instance, to develop inspiring visions and enable people to take action. Additionally, Atkinson (2014) has found that how leaders react and what they pay attention to in critical situations are the two main factors that shape organizational culture, further emphasizing the role of leaders.

5.2.3.2 Leadership Style

As already mentioned, the style of leadership is also expressed as important by all four managers, one employee and the consultant. The participants state that good leadership is characterized by presence, demands, coaching, challenging, and supporting manners; i.e. a more pedagogical approach. Such presence, or participation, can be correlated to what Liker and Hoseus (2008) refer to as Gemba; leaders ought to present where the work is actually performed. In addition, Allen (1997) suggests that Lean leaders should change from controlling to helping, from evaluating to empowering, from directing to coaching and from planning to listening.
5.2.4 Management Factors

5.2.4.1 Strategy

Three managers, one employee and the consultant mention management support as an important factor when implementing Lean. More specifically, they argue that Lean has to be incorporated within the organization’s strategy - working Lean has to be a decision made by the management. Looking at existing literature, management commitment is identified as the one critical success factor for Lean implementation consistent across all different sectors (Fryer et al., 2007). Interestingly, it can be argued that the number one identified factor in the sample was engagement of employees. A potential explanation to this inconsistency between the sample and existing research could be both the importance of people within service, making employees of all levels ascribe especial meaning to their roles in the implementation and also that management (Suarez-Barraza et al., 2012). The number one function expressed, however, is that it is management that takes the initial decision to implement Lean in the first place, according to the managers and consultant.

5.2.4.2 Direction

Two of the managers and employees state that management in the form of direction or vision is necessary in order to know the actual underlying reasoning or cause that the continuous improvement is to be used towards. According to them, working Lean without a clear direction simply leads to the release and waste of employee potential while knowing the reason behind working Lean, offers both motivation and understanding. This connotation is shared with research that has found that “Having aims and objectives that are communicated to the workforce and used to prioritize individual’s actions – a corporate quality culture,” is one critical success factor when implementing Lean in service (Fryer et al., 2007, p. 503).

5.2.4.3 Management Consistency

One factor related to management that two of the managers and the consultant voice as very important is that managers, in all levels, are consistent in regards to what they ask for and what they do. Being consistent offers credibility and inspiration for employees to follow their lead. By not acting consistently, however, by measuring results against numbers or time when the goals are qualitative in nature, for example, will not achieve sustainable results, according to the managers and consultant. These concerns are reflected in the writings of Mann (2015, p. 237), who identifies consistent leadership as “the crucial ingredient in Lean operations”. Atkinson (2014) has also found that what managers pay attention to and how they react when there is a crucial incident, are the two main factors influencing how organizational culture is built.

5.2.4.4 Management Coordination

Two managers and all employees highlight disconnection within management as an issue. While they all perceive Lean to be positively anchored strategically from upper
management, they mention the local leaders and management as lacking in one way or another, ultimately becoming inhibitors of Lean implementation. One employee even suggests that these middle management leaders should receive more training, to help equip them to be the change leaders that Lean requires them to be. The especial importance of middle managers is supported in the literature as well, as Manville et al., (2012, p. 7) reached the conclusion that “[T]he importance if developing learning capabilities in the middle management team and the empowering of them. A greater role should be given to middle management in performance improvement and strategy formulation”.

5.2.5 Implementation Approach

5.2.5.1 Systematic Implementation

In the sample, two managers specifically mention that implementing Lean initiatives systematically, with everyone, all functions and all departments involved and with an overbearing vision and strategy in place, as being necessary in order for an organization to truly become Lean and see results from the implementation. Looking at the literature, this is a widely accepted idea, with multiple studies providing empirical support (Atkinson, 2014; Allen, 2000; Clark et al., 2013). More specifically, Bhasin (2012) and Clark et al. (2013) found a systematic implementation approach linked to both positive and sustainable results in their respective studies involving interviews and surveys with managers and case studies of hospitals. To use some type of “partial” implementation approach is, on the other hand, perceived to go against the very thing of being Lean and strongly advised against (Atkinson, 2014).

5.2.5.2 Adaptation

Another implementation aspect mentioned several times among three of the managers, one employee and the consultant is that Lean is not some type of standardized package. In order for Lean to be successful, they argue that each company needs to evaluate its current situation and then incorporate Lean in a suitable way. In the literature, Bhasin (2015) shares the same position of the matter, specifically pointing out that not even Toyota should be used as any type of blueprint – success comes when you make it your own. Furthermore, Clark et al. (2013) argues that making Lean “your own” mediates successful implementation as it helps employees to identify with the new ways of working.

5.2.5.3 Organic Development

A factor related to the notion of adaptation, is to take an approach of implementing Lean internally, with little to no help from outsiders such as consultants. One manager mentions this as a success factor as she perceived it to have helped her company build engagement and commitment as the employees were involved and had a say in
developing the strategy. Empirically, O’Brien and Boat (2009) offers support, as they found that a hospital implementing Lean in a “Grassroot” kind of way with nurses being involved in the development of strategy were exceptionally successful in being able to incorporate Lean into the very way of thinking and working within the organization.

5.2.5.4 Long-term and Sustainable Approach

All managers, two employees and the consultant emphasize the importance of considering Lean as a long-term, continuous journey that never ends, mentioning 10, 15 and rather a generation as the amount of time an organization will have to expect to spend in order to truly become Lean. Some of the managers raise concern that once the organization starts seeing results, this becomes more difficult. The managers takeaway message is thus to remain humble and always work actively to keep an open mind and be open to change. While Kotter and Heskett (1992) suggest that it takes less time, around four to six years, for smaller organizations to start becoming Lean, Toyota, often used as the benchmarking example of an organization that has come far on their Lean journey, has been able to change their organizational culture and experience their positive results over a period of 30 years (Ohno, 1988). In addition, the very foundation of Lean, the philosophy of continuous improvement, represents the idea that things can always get better (Liker, 2004).

5.2.6 Culture

5.2.6.1 Organizational Culture

As the empirical findings have shown, three managers, one employee and the consultant found that corporate culture is of important value when implementing Lean. One stated that their organizational culture was already well established as value-driven before their Lean initiative and was therefore a contributing factor to their successful implementation as it matched the concept of Lean. Similarly, Bhasin (2015) proposes that organizational culture is a key factor that will determine whether the pursuit of a Lean initiative will collapse or not. According to him, in order to build a Lean culture, one must restructure the fundamental culture of the company. However, as illustrated by one of the organizations in our sample and as suggested by one of the managers, this may not be necessary if the original culture already is aligned with the philosophy of Lean.

One leader, one employee and the consultant also bring up organizational culture as important by emphasizing the value of an open climate where employees dare to raise suggestions and point out areas where they see room for improvement without being penalized for doing so. Such an environment is necessary in order for real continuous improvements to take place according to the interviewees. Linking this notion to existing research, Bhasin (2015, p. 27) argues that “Both empirically and in the author’s own experience fundamental to almost every collapse of Lean initiative is the primary concern of corporate culture and change management” and goes on to explain that the reason why
is because Lean implementation is reliant on employees’ behavior and organizational culture influences just that. Marksberry et al., (2011) and Howell (2014) similarly emphasize that a transparent climate where employees are able to make mistakes and come with suggestions without becoming scapegoats is necessary for a notion of a learning organization to become reality.

5.2.6.2 National Culture

According to the consultant, the Swedish national culture reflects collectivism as he argues that it comes natural for Swedish people to get along in a group, which, according to him brings great potential to implement lean in Sweden. Similarly, Wiengarten et al. (2015) means that a collectivistic culture is a success factor while he continues on by stating that an individualistic culture could potentially have a negative impact.

5.2.7 Managing Variation

Two managers and the consultant highlight the fact that variation is so high within the context of service creates a unique need to be able to find a balance between adaptation and standardization. While they argue that some form of standardization is still needed, they simultaneously also acknowledge that adaptation to the consumers’ needs is necessary. One manager specifically labels this a “compromised” way of working, rather than standardized. Looking at the literature, it is suggested that the service sector is characterized by heterogeneity (Lewis, 1989). However, little has been found in regards how to practically approach this reality. As support that this notion is valid, however, Padil and Leonard (2014) found a positive linkage between organizations having a so called “balanced” organizational culture, with simultaneous focus on both flexibility and control, and the degree of efficiency of Lean processes.

5.3 Challenges

5.3.1 Misconception of Lean

That Lean as a concept is misunderstood is a concern raised by all managers. They argue that Lean often is perceived as a short-term tool instead of a long-term strategy. The idea that existing critique regarding Lean’s applicability within service many times may be unwarranted as the companies labeled as Lean failures in reality have not truly implemented Lean in its entirety due to a misunderstanding of the concept, is also mentioned. The consultant similarly argues that more emphasis should be put on how to think, rather than how to do, which currently is not the case in the field. In accordance, Radnor and Osborne (2013) identified an overreliance on quick results and tools, while neglecting the underlying core principles as two challenges when implementing Lean service. Hines et al., (2008), similarly present a metaphor of an iceberg and argues that it
is the things below the water: strategy and alignment, leadership, behavior and engagement that are the core elements of Lean.

5.3.2 Employee resistance
Employee resistance has been identified as a factor having a negative impact when implementing Lean amongst three managers and three employees. As it is highlighted that employees are the ones who practically implement and execute continuous improvement which Lean is built upon, having employees who do not genuinely embrace and believe in Lean as a work method thus becomes problematic. Two interviewees also express the idea that resistance often arise as employees are asked to change their traditional ways of thinking and working to adopt something new and unknown. These concerns are also found in the literature, where both Allway and Corbett (2002) and Atkinson and Nicholls (2013) argue that adaptation is critical for any type of organizational transformation, but often is not easy due to several reason, with the challenge of having to learn something new being one of them.

5.3.3 Suboptimization
One manager and the consultant highlight suboptimization as a challenge during the implementation process. Both respondents argue that one faces the risk for suboptimization if every department works independently with the process of increasing the quality, which will result in different levels of competence and success in each department. Similarly, Brandão de Souza and Michael Pidd (2011) argue that successful results will be at risk due to suboptimization, which is a result of too much focus on individual departmental improvements.
6 Conclusion

The purpose of this study is to investigate the applicability of Lean in service and, more specifically, to explore what factors and challenges are perceived to influence the likeliness of success, defined as sustained positive change. The two research questions of interest are: Is Lean applicable in the context of service and What success factors and challenges are relevant to consider when implementing Lean in the context of service?

As an answer to the first research question, the collected empirical material suggests that Lean indeed is applicable in service as reflected by both objective and subjective measurements of improvement. Further worth noting, is that the improvements highlighted mainly are related to qualitative measurements in the form of customer and employee satisfaction. However, the analysis also implies that achieving positive results from working with Lean in service may not be as effortless or obvious as within manufacturing. Especially from the employees working on an operational level, concern regarding how the positive results are achieved is voiced. It is indicated that it is the employees on this level who at times end up with an increased level of responsibility and workload, which in itself is not necessarily in line with Lean philosophy, as staff within truly Lean organizations work smarter, not more. This may be a critical reflection of the degree to which Lean as a strategy has become rooted in the participating organizations. In summary, however, the general voiced perception representative of the sample is that Lean is a philosophically-based strategy and that it is applicable within service.

In regards to research question two, several, multilayered and interrelated success factors could be identified from the collected empirical material. The core categories identified were: competent and engaged staff, management support, having a philosophical approach, Lean leadership, implementation, culture, and management of variation. For challenges, misconception of Lean, staff resistance, and risk of suboptimization were the three found. Through analysis, all factors could be validated as per previous research, but some hold less support than others. More specifically, successful management of variation could not be found to be specifically mentioned as a success factor among existing literature. Nevertheless, it is recognized that consumer variation is greater in service than manufacturing and that this creates a unique need for a balance between autonomy and standardization.

Furthermore, the one aspect highlighted the most among success factors is, by far, human resources. To have engaged and competent staff that understand Lean as a concept and genuinely want to work and think Lean is ultimately the key to achieve real results when implementing Lean according to the sample. It is also suggested that while Lean ought to considered a top-down approach, beginning with support from upper management through the incorporation of Lean into strategy and the presentation of clear objectives, it is with middle management most of the responsibility to incorporate and keep Lean alive in daily operations lays. The especial importance and influence by middle management is voiced by both employees and leaders and is repeatedly appraised as the main reason to why the participating companies have not gotten further or experienced more positive results from their Lean implementations. While this is a topic that existing research support, it is nevertheless not something highlighted to the extent that the voice of concern coming from our sample warrants.
Lastly, it should also be mentioned that the one aspect identified as both a success factor and a challenge is that having a fundamental understanding of Lean as a philosophy more than anything else sets the stage for everything else. Not until the concept of Lean is fully understood in its entirety and complexity, can a true Lean organization start to develop.
7 Discussion

Looking at the findings from a broader perspective, there are several interesting ideas arising. Comparing the results with what has previously been found within manufacturing, for example, it becomes apparent that the success factors and challenges identified are more or less similar - a notion also explicitly voiced by several participants. This suggests that the reason why the results from Lean within service have been mixed simply are due to the fact that many service companies, to which Lean as a concept still is relatively new and unfamiliar, have not fully grasped Lean’s meaning – which the initial manufacturing companies working with Lean similarly failed to do. In other words, the service sector may not necessarily be in need to discover something new or unique, rather the lessons learned within manufacturing ought to be applied within service. Within the sample, the understanding of Lean generally seems deep and rich throughout all layers of employees, which in itself could be a reflection of why the companies also have achieved the success from Lean that they testify about.

Another insight gained on a broader level, is the notion that successful Lean implementation more or less equals the change of the organization’s culture. In other words, a successful Lean implementation means that the company has managed to transform the organizational culture to one characterized by Lean ways of behaving and thinking. When the fundamental values of what it means to be Lean has become part of the very DNA of how an organization naturally operates, it can be said that the company has managed to achieve a Lean culture and successfully implemented Lean. Even if this notion in itself might not offer anything new, the conceptualization of Lean may nevertheless offer insights regarding how to work with the concept. This connotation also implies that there could and should be more linkage between Lean and already existing theory and models related to the change of organizational culture.

7.1 Implications

Undoubtedly, human resources are highlighted as valuable and important in the findings. Potentially even to a greater degree than within manufacturing, as the expectation on the individual employee to be able to both work standardized and autonomous to best meet a wide range of consumer needs is unique and particularly mandating within service. In other words, unique competence requirements exist for employees working in Lean service companies. This holds implications not only in regards to the importance of education and training, but also more indirectly for recruiting. To hire personnel whose competence fit well with what Lean as a strategy demands could both make Lean implementations in new companies easier and also help maintain an already established Lean culture in companies that have come far on their Lean journeys.

Related to the findings that engagement of operational level employees is especially important and that personal involvement and positive experiences can help build this, one specific recommendation is for companies not to only let management participate in study visits at other organizations that have already reaped results from working with Lean, but to extend these to all levels of staff.

Another area of implication is undoubtedly that more time and focus ought to be dedicated to middle management’s role when implementing Lean. The people making out this level
of the organization is ultimately the ones who arguably have great impact in regards to keeping Lean alive and truly integrating it into everyday operations. Lastly, the risk of suboptimization and the emphasis on working with a process focus in order to be able to see the delivery of service from beginning to end has structural implications. How an organization structurally organizes could influence to what degree suboptimization is avoided and flow achieved. In the sample, several of the participating companies have established specific quality departments, for example.

7.2 Future research

In regards to future research, looking into if and how public and private service sectors differ in regards to how Lean can be incorporated successfully is one interesting and still relatively unexplored topic. As suggested by this study, the influence of national culture is another area that warrants more research as well as the role of middle management.

7.3 Strengths and weaknesses

In regards to weaknesses, there are a few. Among others, the fact that the sample is small, not randomly selected, made up of both public and private organizations, and to 75 percent consisting of organizations that offers service in the form of case management makes it both difficult to properly identify a suitable sample population and also limits the generalizability of the findings. As the study in many ways also are characterized by interpretivism, both in regards to participants’ subjective perception of their personal experiences and also through the authors in the analyzation and translation of interviewees’ answers, internal validity is difficult to fully confirm.

Nevertheless, the strengths and potential contributions from the study are several. Even though the sample is small, it still offers insights and knowledge created from extensive personal experience from working with Lean under a significant amount of years. The number of people who personally have experienced the achievement of creating a truly Lean organization is few, thus being able to tap into these individuals’ knowledge is undoubtedly valuable. The fact that the study is also aimed to capture the insight and feedback from employees of several layers of the organizations is relatively unique. As the employees on the operational level indisputably have an exceptional and very influential role when executing Lean, taking part of their opinions and feedback offers interesting and valuable feedback. In other words, the study offers rich and insightful information. Ultimately, it also adds further evidence that Lean is applicable in service, which together with other studies can help contribute to a consensus.
8 References


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9 Appendix 1

Question formulate - Managers

1. Tell us a little bit about yourself.
2. What is your position in the organization?
3. How long have you been working in the organization?
4. What is your background story in regards to Lean?
5. What does Lean mean to you?
6. What is the overall motivation behind the implementation of Lean?
7. How did you spread out and implement Lean in the organizations?
8. What is the difference between Lean in service and Lean in manufacturing?
9. What critical factors can you identify in order for Lean to be successful in service?
10. What are the differences between organizations with successful Lean implementation and those who have failed to implement the concept?
11. What problems and challenges do you perceive have occurred when implementing Lean?
12. Do you perceive that there is support from the entire organization?
13. How do you engage the employees in the implementation process?
14. Do you focus a lot on providing education for the people within the organization in regards to understanding and working Lean?
15. Do you work with Lean on a daily basis? How?
16. What role do you believe managers have when working with Lean?
17. What expectations did you have when implementing Lean?
18. Have your expectations been fulfilled?
19. How do you specifically work in order to achieve long-term results?
20. What lessons learned have you derived from the processes?
21. What would your main advice be to service organizations that still have not started to work with Lean?
22. Is there anything else that you wish to ad?
10 Appendix 2

Question formulate – Employees

1. Tell us a little bit about yourself.
2. Describe your role in the organization.
3. How long have you been working in the organization?
4. How would you define Lean?
5. Have the implementation process changed your way of working? How?
6. Are most of you educated within the concept of Lean? At least to the level where employees know what Lean is, how to think around it and how to work with it?
7. Have you been experiencing resistance amongst your co-workers in regards to the changes Lean may bring?
8. In regards to potential and results, do you believe that Lean is a good way of working?
9. Do you believe that positive changes have happened?
10. Do you believe that the organization has been able to bring everyone on board during this implementation process?
11. In what way has the organization tried to bring everyone on board?
12. Do you believe that everyone sees a clear vision related to continuous improvement and the Lean journey that the organization is working on?
13. In regards to Lean, do you believe that there is other places in the organization that would have room for improvements?
14. Do you experience that there is driving spirits within the organization that feel passion for the concept of Lean?
15. In regards to the misunderstandings around the concept of Lean in service. How do you perceive the employees view?
16. Is there anything else you wish to add?
11 Appendix 3

Question formulate – Consultant

1. Tell us a little bit about yourself.
2. How did you come in contact with the Lean concept?
3. What does Lean mean to you?
4. How do you spread out and implement Lean in the organizations?
5. What is the difference between Lean in service and Lean in manufacturing?
6. What critical factors can you identify in order for Lean to be successful in service?
7. What are the differences between organizations with successful Lean implementation and those who have failed to implement the concept?
8. What problems and challenges do you perceive have occurred when implementing Lean?
9. As Lean is very much associated with standardization and efficiency, do you perceive misunderstanding of the concept from people within the service sector?
10. Do you focus a lot on providing education for the people within the organization in regards to understanding and working Lean?
11. What role do you believe managers have when working with Lean?
12. How do you specifically work in order to achieve long-term results?
13. What lessons learned have you derived from the processes?
14. How do you work with Lean today in comparison to how you worked with the concept ten years ago?
15. What would your main advice be to service organizations that still have not started to work with Lean?
16. Is there anything else that you wish to add?