Improving Business Excellence Culture

A Case Study of SKF Gothenburg

Master's thesis in Quality and Operations Management

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Abstract

With the increasing popularity of Business Excellence (BE) and Lean, many companies have engaged in implementing one or several of these concepts. SKF Gothenburg is one such company that aims to achieve a Lean transformation in the context of a long journey with BE efforts. This history provides the company with both advantages and challenges in its journey towards excellence, hereby creating a unique context for BE.

In this qualitative research, a case study of SKF Gothenburg was conducted with an inductive approach. Data was collected through semi-structured interviews with 22 employees, unstructured and semi-structured observations, and review of company documents. Company interviewees spanned a wide range of functions, most of them being functional managers related to the factory management. For improved contextual understanding, interviewees also included some central roles in the SKF Group organization, as well as factory employees with supportive, and more operational roles. Based on the company's needs, and the identified gaps in literature, two research questions were formulated. Through these questions, the challenges with the current Business Excellence culture have been identified, and improvements have been suggested.

Problematic areas were linked to four topics. The first improvement area was the implementation approach and organizational context of the company's Lean implementation through the SKF Production System. Related to this was also the company's approach towards strategy creation and deployment. Furthermore, people related aspects were found to be in need of improvement regarding the state and management of knowledge, motivation, culture, and collaboration. Leadership was the last identified improvement area, where issues with prioritization, leadership style, and ownership were described.

For these areas, improvement suggestions were derived from the current literature in related scientific fields. Suggestions regarding the SPS implementation were related to increasing the understanding, ownership, and improving the clarity of the vision. Hoshin Kanri implementation, as well as improved communication and visibility of the strategy were suggested to improve strategy aspects. To improve people related aspects, better training, increased cross-functional collaboration and knowledge sharing, and improved HR approaches were suggested. Lastly, to address leadership improvements, it was suggested to increase knowledge and use of transformational and lean leadership, to improve focus on proactiveness and continuous improvement, and to increase the time spent with strategic matters.

Through this report, SKF Gothenburg can reach a better understanding regarding issues with its BE culture. These issues, as well as their implications, were well-described based on the collected data. The high variety of the potential areas for improvements identified were addressed with a multifaceted literature review, whereby appropriate solutions or approaches towards developing solutions have been suggested.

Keywords: Business Excellence, EFQM, Employee Engagement, Hoshin Kanri, Intrinsic Motivation, Lean, Organizational Learning, Transformational Leadership

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Most importantly, we would like to thank our families and friends for their eternal support and encouragement, not just in our latest adventure at SKF, but also during our life-long educational journey.

Kevin Dorner and Fredrik Gustafsson, Gothenburg, December 2023

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List of Acronyms

BE	Business Excellence
BEM	Business Excellence Model
CSF	Critical Success Factor
EEA	European Quality Award
EFQM	European Foundation for Quality Management
HR	Human Resources
HRM	Human Resource Management
KPI	Key Performance Indicator
MBQM	Malcolm Baldrige Quality Model
PX	People Experience
QM	Quality Management
SIQ	Swedish Institute for Quality
SPS	SKF Production System
TPS	Toyota Production System

1
Introduction

This chapter introduces the research conducted as part of a master's thesis for the Quality and Operations Management program, conducted at the Industrial and Materials Science department at Chalmers University of Technology, supervised by Peter Hammersberg. The study was performed as a single case study at SKF Gothenburg, aiming to identify potential improvement areas with the company's current state of BE, and to suggest recommendations towards these. First the research and company background are presented, followed by a description of the research's aim. Thereafter, the research questions are presented, followed by a statement of the paper's limitations. Lastly, an overview of the current gap in literature is described, which the research aims to address.

1.1 Background

Organizations strive to improve, some striving further to achieve excellence (Liker & Convis, 2012). Since the turn of the millennium, Business Excellence models (BEMs) have increased in popularity (Dahlgaard et al., 2013), likely in part due to the competitive advantages they offer (Carvalho et al., 2021). There are several different approaches towards becoming excellent, and as emphasized by Dahlgaard-Park and Dahlgaard (2008), striving for excellence is associated with a development journey that is continuously ongoing. Moreover, striving with passion in every aspect, over time (Dahlgaard et al., 2013). Therefore, not defining excellence as a stage or a one-time achievement, further emphasizing on the importance for companies to continuously develop their organization with a long-term perspective (Dahlgaard-Park, 2008; Rizzardo, 2020; Sampaio, 2017).

From the reasonable assumption that organizations strive to improve their capabilities, the journey of improvement can be described as the gap between the current state of the organization, and the improved future state, which the organization is trying to reach. Furthermore, the challenge lies in identifying how these gaps should be closed, as well as in what way this should be done (Rizzardo, 2020). Therefore, it is important the organizations find a balance between improvement and operations (Gremyr et al., 2020). However, finding this balance between strategy, daily operations and development often proves to be challenging for organizations (Giordani da Silveira et al., 2017). Several frameworks and methodologies have been developed to aid organizations towards their improvement, however there is disagreement in research regarding which such approach is best suited for an organization to become excellent. In Europe a common excellence framework used is EFQM, that

was shown to improve results in both short and long term (Boulter & Bendell, 2005). Nonetheless, the most important challenge with excellence is sustaining it throughout time, as highlighted by Eriksson (2004). Some argue that an organization should consider whether it really strives to become excellent or if it is satisfied with being good enough (Liker & Convis, 2012).

One of the improvement methodologies often adopted is Lean, which some appreciate for its practicality through easy to understand tools and methods, which can give the impression of an easy implementation. Nonetheless, it was shown that the most significant challenge is sustaining it (Rizzardo, 2020). Several authors point towards the challenges with successful Lean implementation, arguing that historically the majority of Lean initiatives fail (Ledbetter, 2018; D. Mann, 2017; Rizzardo, 2020). According to Nicholas (2016), successful implementation of Quality Management (QM) and Lean practices is dependent on creating a culture of quality within the organization. Hence, research points towards the importance of developing a company culture which also puts a strong focus on employees and soft factors (Dahlgaard-Park & Dahlgaard, 2007). Research has shown that a company culture is embedded into the organization's behaviors and beliefs, which develop over time (Ledbetter, 2018; Liker & Convis, 2012; D. Mann, 2017). Furthermore, it is described as the decision organizations take in the areas and the approach they have towards systems and concepts they adopted over time. Impacting an organization's culture is more than adopting a training program and communicating an idea, it has to be embedded in the beliefs and values the company possesses, and should be developed over time(Ledbetter, 2018; Liker & Convis, 2012; D. Mann, 2017).

SKF's journey with quality management has followed a familiar journey from inspection, to process control, followed by robust design as well as other proactive approaches. This has shifted focus from single operations, towards a focus on flow and methods, and recently on culture oriented focus on improvement and people. The journey towards proactiveness started with the initial attempts of Total Quality Management (TQM) implementation in early 1990s, during the heydays of the framework. Following, with the rising popularity of the Six Sigma methodology, SKF adopted a strong Six Sigma organization. Thereafter, in the beginning of the 2010's, the company started to shift towards a more holistic approach of Business Excellence.

More recently, the company has shifted its focus towards a Lean transformation, with the development of the SKF Production System (SPS). However, the recent shift towards SPS was widely welcomed by the organization through its clear focus on process description and standardization, while being also more hands on. With a change of CEO in 2021, the company established a new business strategy. This strategy has an increased focus on individual responsibility and empowerment, which creates a favorable context for the master's thesis, through raised awareness regarding the soft aspects required for a cultural change towards improved BE culture. Moreover, the good reception of SPS creates an incentive for this project to encompass the system and try to seek synergies with its implementation.

The need for this project was raised by the Quality Manager of SKF Gothenburg at the time. The motivation for the research was a perceived lack of integration of the QM system with organizational culture, since this appeared to function somewhat parallel to the organization's daily activities.

After initial analysis of the company, based on interviews and observations, it was clear that there is a relatively high level of QM understanding. This is reflected by the well defined quality management system, QM certifications, as well as through the extensive availability and awareness of quality management tools and methodologies. However, it was apparent that there is a perceived gap between the available theoretical knowledge and understanding, and the practice of applying and using tools. Moreover, through the company's intensive focus on Lean transformation, which was initiated through the implementation of SPS, it is questionable whether the company as well as lean values got lost in translation. Moreover, there is a perceived relative lack of proactivity in the attitude of employees. After initial identification of improvement areas, the project focus was further expanded to address the lack of vision and limited strategic thinking, the perceived short-term focus, and possible issues with leadership, motivation, and education. Furthermore, by analyzing the approach towards the Lean transformation, a tendency of high focus on tools and methods was observed, while cultural shift and lean attitudes received less attention.

1.2 Aim

The aim of this report is to increase the understanding of how SKF Gothenburg is approaching its journey towards Business Excellence and to describe the current state from an external perspective. It further aims to identify possible gaps with its SPS implementation and perceived reality of its current state of BE, and to challenge this to identify possible areas of improvement. Furthermore, the aim is to support a proactive attitude towards BE in context of its lean journey and SPS deployment.

Therefore, a broad analysis of the company's potential improvement areas with BE was done, verifying the alignment between the perceived way of working and the reality. Moreover, suggestions were presented regarding how these areas could be addressed and improved; This was done in hope of aiding the company in its journey towards excellence, by achieving a BE culture we would like to suggest guidelines towards addressing possible misalignments and improving the company's work with BE culture, as well as raising quality mindfulness towards becoming an integral part of the culture.

1.3 Research Questions

Based on the identified focus areas, and the initial exploratory research, the research questions were defined as follows:

I. *What are potential improvement areas with the current state of Business Excellence at SKF Gothenburg?*, and

II. *How can the Business Excellence culture at SKF Gothenburg be improved?*.

The first research question aims to present an impartial view of the perceived way that the company is working with BE. This is considered important since there is an observed gap between the reality perceived by the company and the actual state of BE. Through interviews and observations, an objective perception of potential problem areas with the current state of BE can be identified and addressed.

The second research question aims to identify improvements and suggest recommendations on how the company can improve its BE culture and facilitate its journey towards quality mindfulness.

1.4 Limitations

There are several limitations to be addressed in this research, firstly the study covers the perspective of SKF Gothenburg and its three factories. Addressing their journey towards BE, focusing on the SKF production system and its implementation at factory level. However, semi-structured interviews were conducted at SKF group level, for increased contextual support of the thesis. The research further aims to take a holistic approach, therefore focusing on neither in-depth analysis nor detailed description of its processes or functions. Instead, the paper serves to contribute to the perspective at an aggregated level of the company. This wide perspective and approach could generate wide generalizations and therefore not provide the complete or correct representation of all individual functions within SKF Gothenburg. The research covering a large area of expertise and knowledge also inhibits the opportunity to study a specific area in depth.

By choosing a wide scope, and through time limitation, it becomes problematic to validate observations with all functions and at all levels of organizational hierarchy. In the data gathering process, it was decided to exclude areas mostly related to the TQM principle of customer focus, such as product development, logistics, sales, or business development. Furthermore, the observations will create a partial account of the organizational reality and hence can introduce bias towards the perceptions of the selected subset of individuals. Since interviewee selection is primarily focused on individuals with rather good understanding of the research topic, as well as purposive sampling approach, it introduces a bias towards accounts of people who have a higher probability of contributing to the research.

Moreover, through the selection process, a selection bias is likewise introduced by the researchers, which arguably shifts the observed reality towards what is considered relevant or interesting by the researchers instead of its impartial relevance to the research. This draws a valid parallel to survivorship bias. While traditionally survivorship bias is associated with optimistic shifts in conclusions, in case of the research it could be argued that this phenomena introduces bias towards pessimistic accounts. Since researchers seek to identify problem areas and discuss with people who are familiar with issues, these could receive an unfair amplification. Hereby, the observed reality could be perceived as much more pessimistic than a completely impartial view would be, since negative aspects naturally receive more attention than positive ones. Besides the bias introduced through interviewee selection, the focus of research questions on problem areas accentuates this effect. While the interview guides are created with an intention of having impartial questions, through the limited interview time, a focus will inadvertently be on the problematic areas as these were considered more interesting by the authors.

1.5 Motivation

According to Deleryd and Fundin (2020), the new generation of quality should aim towards measuring societal satisfaction in order to ensure sustainable success. Furthermore, current management models need to be further developed to better handle today's fast changing and unpredictable business environments. Fundin et al. (2021) also highlight how QM is considered to have reached a high level of maturity in research and practice, however challenges remain regarding its integration with operations.

Fundin et al. (2018) have identified the main challenges experienced by QM professionals being characterized by creating strategic focus on quality by top management, transferring ownership of quality from the functional organization towards general management, and increasing the agility of companies when adapting to changes. Moreover, there is a call for future research to explore how organizational context influences the application of QM, as well as how the strategic importance of quality could be improved.

This paper partially addressed the call for research by Fundin et al. (2018), who highlighted several propositions for research in the field of Quality Management, based on the challenges identified by QM professionals. *Proposition III* represents the need for understanding how different contexts influence QM implementations. The present study approaches this proposition through the study of the case company's Lean implementation in the context of a long history of working with BE initiatives.

Proposition IV calls for research to investigate how QM can improve organizational learning. This is partially addressed by the current study through description of focus areas for organizational learning, especially in the context of Lean.
The call for research to explore how QM values could be better embedded in organizations was presented in *Proposition VI*, which is partially addressed through the

present research describing how cultural aspects of BE can be achieved.

- Proposition III: Future research should investigate how different contexts influence the outcomes associated with QM implementation
- Proposition IV: Future research should focus on how QM can enhance organizational learning and innovation
- Proposition VI: Future research should explore how QM principal values could be better integrated into organizations

2
Theory

In this section the theory will be presented, firstly presenting previous studies performed at the case company. Secondly, contextual background on the journey of Quality Management is described. Thereafter, business excellence is introduced whereby a comparison of models is also presented. Moreover, critical success factors and challenges are described. Following, a section is introduced covering theory on topics of motivation, employee engagement and involvement. Lastly, Lean theory is presented with a concluding section on leadership and leadership styles.

2.1 Previous Studies at the Case Company

There have been several studies conducted at SKF over the years with a variety of topics. One of these was performed by Jarskär and Stiblert (2016), their study focusing on the challenges connected with implementing and understanding BE efforts for a specific function within the business unit SKF *Actuation System*. They studied the finance function focusing on two aspects of BE, processes and people. Their findings showed that there was insufficient understanding of processes within the studied function, and that there was a lack of standardized work and descriptions of roles and responsibilities. Another finding was the short-term focus on problem solving, rather than focusing on the long-term benefits of solving root causes. Therefore, recommendations addressed increasing the understanding of the business process, and underlined the importance of connecting employee activities towards BE.

Moreover, it was highlighted that the company should increase employee involvement and empowerment, to address motivation and commitment for proactive problem solving. Furthermore, they emphasized an increased understanding of BE in general and improved cross functionality between functions to better utilize the benefits of a holistic approach of BE. Additionally, limiting the span of control, connecting to clearer role descriptions, and ownership of different processes were also mentioned. Therefore, recommending for future studies to increase the scope and covering more than two aspects of BE. Moreover, it was suggested to further increase the scope covering multiple functions or alternatively compare several case companies. Lastly, the authors suggested investigating and studying the manufacturing processes, to deepen the knowledge and understanding for the specific subject and areas related to BE (Jarskär & Stiblert, 2016).

Götbrant and Karlsson (2010) studied how leadership perspectives can describe and improve quality management systems and lead to continuous improvements. Their conclusion was that leaders must act and support initiatives of employee engagement and be supportive of employee involvement for companies to utilize the benefits from QMS. Furthermore, they highlighted the importance of delegating from leadership, when it comes to quality responsibility, throughout the organization. Another study performed by Cedén (2008) highlighted the possible benefits a company can achieve by utilizing a combination of Six Sigma and Lean production, if these initiatives are implemented and understood properly throughout the organization.

Among other studies related to SKF, S. Lagrosen (2002) studied how TQM values are related to cultural differences and impact the view on quality depending on nationality. Furthermore, S. Lagrosen (2003) studied how quality fundamentals of TQM are viewed in different cultural settings. Lastly, S. Lagrosen (2004) studied leadership commitment and important aspects for companies and highlighted the importance of creating a foundation of values to serve as a basis for companies.

2.2 The Journey of Quality Management

Quality was described as having gone through four generations throughout the history of humanity. The first generation until the 16th century is characterized by the survival of the fittest. In an era where producers and consumers were often the same, being represented by sustenance farmers who attempted their best to maximize output. Towards the 18th century, individuals started to specialize into trades either through talent, availability of materials, or simply following family tradition. Here started the clearer distinction between user and producer, whereby craftsmen took pride in providing their clients with the best products possible, often fit to custom needs (Deleryd & Fundin, 2020).

With the industrial revolution in the beginning of the 19th century came serial production with increased need for standardization. This led to the rise of industrial engineering, which through scientific methods targeted at measuring and improving production effectiveness. Through statistical process control, an era of quality control was established, which was characterized by standardization through meeting of specifications. While these approaches significantly improved product quality, it also increased the gap between customer needs and product offering. Sometime following the second world war came the fourth and current generation of quality, whereby the term became synonymous with customer satisfaction. This gave rise to methodologies such as TQM, Lean production, Six Sigma, among others. Herewith, there was an increased focus on defining and understanding operational excellence as a necessary facilitator of the customer experience, which modern business excellence models attempted to define and measure (Deleryd & Fundin, 2020).

While many of the core principles were initially described by Deming, Juran, and others, a major shift in attitudes came later. Crosby is considered to be one of the first to highlight the people-focus and proposing the importance of cultural and

behavioral aspects of the QM process (Saraph et al., 1989). With Japanese training in these quality tools and values, came the Japanese wave of quality management. Herewith, they have further developed these practices and formed the Japanese quality management principles well known today. This led to the western world then turning towards Japanese principles and studying these (Gremyr et al., 2020). However, Dahlgaard-Park (2011) highlights how these new methods were often treated as alternative solutions instead of recognizing their innovativeness. (Cho et al., 2017) describes how QM practices can be distinguished as being of technical or behavioral nature. Technical practices encompass process management, information and its analysis, benchmarking, as well as strategic planning. When it comes to behavioral practices, these are characterized by employee involvement, customer focus, top management commitment, and collaborative supplier management.

Nowadays a new shift in QM can be observed. Hyun Park et al. (2017) underline the transition of quality towards a focus on design, service, and brand. Moreover, he describes the need of QM shifting to address industry 4.0 needs through tighter collaboration with data experts. Quality 4.0 is described by Sony et al. (2020) as representing the quality management in the era of Industry 4.0. This is focused on the use of digital tools in order to better support an organization towards delivering high quality. Furthermore, Psarommatis et al. (2020) highlight how the evolution of Industry 4.0 leading to data-driven innovation better facilitates the implementation of the Zero Defects concept through data availability and advanced techniques such as machine learning.

2.2.1 Arrival of TQM

An important principle which forms the basis of modern QM approaches is TQM. It is described that TQM in its core relies on a set of key values, the implementation of which requires a cultural transformation of an organization (S. Lagrosen, 2003). According to Hellsten and Klefsjö (2000), TQM could be viewed as consisting of three different levels. In the first level it consists of practical tools for quality improvement, next level is connected to techniques or models. This is based on the third level which implies that certain values are used. Therefore, to be successful in quality management different values need to be considered within the organization.

There are different interpretations of TQM values depending on authors, however for this paper the cornerstones of quality as defined by Bergman and Klefsjö (1994) were chosen as the basis. These are described as being customer focus, leadership commitment, full participation and commitment, business process focus, continuous improvement, and focus on measurement and fact-based decision-making. S. Lagrosen (2001) describes that these values can be seen both as the outcomes of a successful TQM implementation as well as the ingredients for implementing the methodology itself. When studying Swedish companies, Y. Lagrosen and Lagrosen (2005) has shown that adoption of TQM values correlates with successful quality management. However, it was highlighted that successful TQM implementation requires an organizational culture which adheres to these values, as supported by further research emphasizing the importance of values and culture.

It is estimated that third or more TQM implementations fail (Candido & Santos, 2011). Roadblocks highlighted for TQM implementation can be summarized as lack of senior management participation, lack of vision and planning, lack of clarity in measurement systems, and lack of involvement from people (Beer, 2003; Nicholas, 2016; Soltani et al., 2005). S. Lagrosen (2001) also describe that TQM failures are also often attributed to improper introduction, and lack of management commitment. TQM in its current usage is considered insufficient for comprehensive customer satisfaction, as it is suggested that beyond customer focus organizations should strive for customer understanding (S. Lagrosen, 2001). Steiber and Alänge (2013) describes that TQM is required to change in order to adapt to a broader context of modern organizations that includes a focus on continuous innovation.

When looking at the evolution of TQM in research, it appears that it has only received superficial attention during its boom around the beginning of the 20th century. Based on more recent studies however, it appears that TQM has reached a more mature phase, whereby there is no longer only a focus on methods and tools but rather on core values required for its implementation. Herewith the aim is to reach a quality and BE culture at the organization. Moreover, there is an important difference in western and eastern attitudes, as Japanese HR and management have a strong focus on employee participation towards continuous improvement. However, western companies tend to have a short-term focus on achieving fast results, where mostly only managers participate in improvement activities (Dahlgaard et al., 2019).

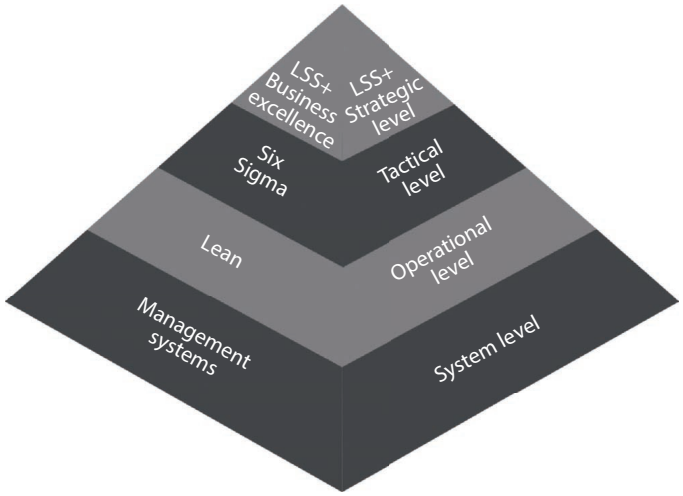
2.2.2 Interaction of Approaches

While the attitude towards QM application and its maturity level has been linked to company size by Mihajlović et al. (2021), it is important to look for common approaches which all organizations could benefit from. Friesen and Johnson (1995) highlighted how important it is for an organization's strategic process to be linked with its quality improvement processes. Furthermore, organizational alignment of employee outlook with direction in the form of a *success paradigm* is crucial for an effective strategy. Watkins (2006) suggests for quality professionals to widen their perspective from their current role with a heavy operational focus towards a more strategic approach. Furthermore, Psarommatis et al. (2020) expresses the need for quality improvement to be coupled from a performance point of view, whereby methodologies like Lean, Six Sigma, TQM, and others should support this.

Andersson et al. (2006) describe how TQM, Six Sigma, and Lean differ in theory, approaches as well as criticisms. However, as these concepts are complementary, an organization can benefit from combining these effectively. For instance, process efficiency and waste are well targeted by Lean, whereas Six Sigma targets variation and design. Furthermore, these two concepts are good roadmaps for reinforcing TQM values in an organization. Moreover, Klefsjö et al. (2001) underline that six sigma should be considered as a methodology within the framework of TQM, due to it supporting all six values of the framework.

A good overview of the interaction and differentiation between several major quality concepts is also presented by Patel (2016), as can be seen in figure 2.1. The authors highlight how business excellence strategies should create an integration of tools and methods towards comprehensively targeting quality goals. On the other hand, quality programs like Lean Six Sigma are often applied due to leadership hoping that training of employees towards delivering a good service will inherently improve the organization's output. However, this approach does not consider in which way the current organizational system is interacting with employee behaviors and attitudes.

Nonetheless, there seems to be no agreement in research regarding the relationship between TQM and business excellence. Some consider the two concepts to be the same, while others see them as being separate. However, several scholars have expressed the need for the concepts to coexist, with the view that excellence models are based on TQM while being more generalizable (Carvalho et al., 2021). The benefits of these models however, were clearly shown in research. For instance, the models of the Swedish Quality Award, the European Quality Award and ISO 9000 were shown to improve the functioning of quality management (Y. Lagrosen & Lagrosen, 2005). Furthermore, recipients of the Swedish Quality Award were shown to outperform their respective branch indices, as well as comparable competitors on most studied indicators (Eriksson, 2003).



Enterprise-Wide Deployment Model Showing Key Concepts and Tools

Key Concept	Tools and Techniques
System level	Management systems
Operational level	Lean
Tactical level	Six Sigma
Strategic level	MBQNA, EFQM, and other business excellence models

Figure 2.1: The Business Excellence Pyramid (Patel, 2016, p. 7)

2.3 Business Excellence

"The pursuit of excellence comes from doing our best with a view of growing and improving in terms of realizing one's potential. [...] It is a never ending journey. Excellence is not a stage, but a way of doing, way of living, a process of becoming" (Dahlgaard-Park, 2008, p. 30).

Carvalho et al. (2021) describe that several principles, tools and initiatives have been developed for improvement of quality, over the past decades. All these have proven useful in increasing organizational performance, with many having persistent use also nowadays. Excellence became popular mostly following the TQM movement. The structured excellence frameworks and QM awards have helped in the development of the Excellence movement since the late 1980s. Nowadays, Excellence has achieved a worldwide spread through numerous excellence models, awards, and less structured approaches.

However, the motivation for many companies engaging in excellence has also been criticized as aiming purely to receive recognition instead of aiming for improvement. According to Dahlgaard et al. (2013), Business Excellence models (BEM) have gained increased popularity since the turn of the millennium, and studies have shown the financial and non-financial benefits for companies implementing these. However, these benefits do not necessarily last long term without active efforts.

As described by Bou-Llusar et al. (2009), as early as 1990, organizations have started using models in support of quality prizes for TQM initiatives. The most prominent models have been the Japanese Deming Prize model, the Malcolm Baldrige National Quality Award (MBNQA) model in the United States of America (USA), and the European Foundation for Quality Management's (EFQM) model for the European Quality Award. EFQM is the most applied model in Europe for TQM (Uygur & Sümerli, 2013). A comprehensive overview of BEMs can be found in (Dahlgaard-Park & Dahlgaard, 2007). The author highlighted that the models generally recognize the importance of soft aspects, as well as the importance of people, however often these aspects get lost in implementation, due to a mechanistic approach. The general success factors for BEMs were described as being people, customer focus, continuous improvement, and leadership which supports and connects the first three factors.

However, lately it appears that the number of awards recognizing excellent organizations without a quality framework supporting their assessment is growing, while the number of companies applying for major excellence awards seems to decline. Nonetheless, it is important for excellence not to be viewed as a state that can be achieved in the short-term, but instead a path that helps organizations achieve the best results in the medium and long term, by using a set of concepts and principles and a focus on continuous improvement (Sampaio, 2017).
The benefits of BEMs were shown by studies in Sweden (Klefsjö & Eriksson, 2004), other countries in the west (Link & Scott, 2006), as well as in the east (R. Mann et al., 2011). Organizations pursuing excellence have gained a large competitive ad-

vantage against competitors (Carvalho et al., 2021). Results of Klefsjö and Eriksson (2004) have shown benefits of the Swedish Institute for Quality (SIQ) model through improvements to the process orientation, customer orientation, and improvement work. Eriksson (2004) has shown that companies participating in the process for SIQ awards showed increased customer orientation, more comprehensive understanding of the business, as well as increased focus on improvements, quality, and processes, among others. These benefits were also in line with the results from Eriksson (2003)'s study on in-company quality awards, which also showed improved participation and engagement of employees as well as a more systematic approach to initiating improvements. Boulter and Bendell (2005) have shown how EFQM implementation leads to improvements in company results in both short and long term.

In their study of historical applicants for the SIQ BE award, Raharjo and Eriksson (2017) have shown that the effect of strategic planning on creating business results was inconclusive, however other studies showed conclusive positive correlation between the two. Furthermore, the authors confirmed other studies' findings, whereby leadership had an impact on strategic planning, human resource development, and management of processes, among others. Human resource development had a significant positive impact on results, which in turn was positively affecting customer satisfaction.

2.3.1 Comparison of BE Models

For the current study, the Business Excellence models of SIQ, EFQM, and MBNQA were considered. These models have been thoroughly covered by research, having received both a significant amount of criticism as well as praise. Criticism for the MBNQA was highlighted by Loomba and Johannessen (1997) in the areas of superficiality, publicity, and lack of fairness. Enquist et al. (2015) have also questioned the validity of the BE models regarding future challenges faced by organizations. The authors concluded that the BE models were rather outdated. Nonetheless, the MBNQA and EFQM were considered as having the best coverage of aspects relevant to the new business landscape, these being *value, creativity, innovation, business ethics and sustainability.*

Furthermore, the EFQM was shown to place highest importance on the environmental and social aspects (Enquist et al., 2015, p. 329). Sampaio (2017) also highlighted that while the EFQM has attempted to address concepts related to agility, BEMs have still seen little development since its early days. Carvalho et al. (2021) also expressed criticism of BEMs through their inability to deal with a business environment which is changing fast, and its questionable ability to address disruptive changes to the market. With a new era of industrialization and industry 4.0, these challenges are expected to worsen. In the context of the changing trends in the industry, there is a changing need for requirements from quality and excellence.
Eriksson et al. (2016) have found that the MBNQA and SIQ had the most extensive coverage of quality-related organizational challenges, which were highlighted by professionals as being most important. Due to the case company's Swedish location, the SIQ model could be the most relevant reference model, with consideration to

the possibility of the company applying for the SIQ excellence award in the future. However, the study of Eriksson et al. (2016) also shows that the EFQM has a rather high coverage of the studied challenges. Furthermore, it can be argued that the challenges highlighted by quality professionals are not necessarily a good overlap with the challenges which the case company is facing. Therefore, it could be more beneficial to consider BE models also with regard to how much emphasis they place on the areas of improvement highlighted by the current study.

A different consideration would be the emphasis on financial and critical business results, which is described as being strongest in the EFQM, with some emphasis also highlighted by the MBNQA, while the SIQ model did not emphasize these aspects (Enquist et al., 2015). Moreover, the authors highlight the lack of the notion of products in the SIQ model, which could make it problematic for a manufacturing company.

Taking these aspects into consideration, it was deemed that the EFQM model would be the most suitable reference for analyzing the case company. The SIQ model, being a national excellence award, has less research regarding the model, while there is also limited information available regarding guidelines for a company planning to apply for this BEM. The MBNQA could likewise be a good contender as a choice of BEM. However, due to the issues described above, and since the model is targeting US companies, it was considered less appropriate for the case company to use as a reference.

The EFQM model is structured in three categories of Direction, Execution, and Results. These categories are further split in criteria. Direction represents the purpose of the organization, and it is split in the two criteria of Purpose, Vision & Strategy, and Organizational Culture & Leadership. Execution is the second category, which represents the approach towards delivering on its purpose. This covers the criteria of Engaging Stakeholders, Creating Sustainable Value, and Driving Performance & Transformation. The last category of Results, covers the current and future outcomes of the company, and covers the criteria of Stakeholder Perceptions, and Strategic & Operational Performance (EFQM, 2022).

2.3.2 Critical Success Factors

Brown (2014) describes that quality management and Business Excellence can be implemented in mainly two ways, mechanistic and organic, the latter one being most commonly associated with sustainability. The organic approach is most notably differentiated through the decision-making being value-based instead of being guided by policies, through leadership being more interactive and visionary instead of focusing on control. Furthermore, quality specific functions receive a reduced focus, by delegating quality responsibility organization-wide through employee engagement with quality. Brown (2013a) also highlights that successful companies address implementation issues through frequent communication and support for principles and strategy of excellence, consistent use of continuous improvement and assessments, linking strategy to key performance indicators (KPIs), visible leadership, and communication in the organization.

Dahlgaard et al. (2013) showed that in order to achieve long-lasting results with Business Excellence implementation, cultivating an appropriate organizational culture is likely the most important in a BE journey, an aspect which is often ignored by organizations. Furthermore, for a successful implementation, companies need to focus their work on three parts, namely the chosen BEM, suitable tools and techniques, as well as suitable core values for creating the desired organizational culture. Eriksson (2004) has also highlighted the challenge with sustaining excellence; To achieve this, research has highlighted the importance of leadership commitment, engagement, human resource management, education, and customer focus.

Lasrado and Kassem (2021) showed in his study of an excellent organization how besides the management support highlighted by other literature, it is also crucial to focus on the people dimension and on involving employees for a successful quality management journey. Carvalho et al. (2021) also found that strong predictors of companies' operational performance were soft aspects of leadership, managing human resources(HR), among others. For an integrated and aligned approach to improvement, it is also important to consider Business Excellence as a wider framework that covers other improvement initiatives of the organization (R. Mann et al., 2011).

Black and Porter (1996) have highlighted factors critical for the success of TQM implementation, as being corporate quality culture, people management, teamwork structures, and communication of improvement information were highlighted, among others. Furthermore, Nicholas (2016) has highlighted the importance of involvement of employees.
Brown (2013b) has also described the success factors for TQM implementation as related to management understanding of the principles and purpose, leadership education, and use of performance indicators related to quality objectives, among others. For sustained implementation, important factors identified were achieving a transformational change, a culture of continuous improvement & learning, focus on balanced measurement, management drive and monitoring of progress, audits & assessments, use of quality frameworks, and continuity of leadership, among others.

K. M. Snyder et al. (2020) have described critique regarding BEMs as being resource intensive with criteria that are too specific and detailed. Possibly a simpler approach with better progress measurement could be the Management Index, developed by the SIQ to provide a tool for management teams in order to support quality improvement processes. This tool helps management better prioritize areas for improvement, with reduced time and complexity compared to traditional BEMs. The authors highlight how BE measurement systems are usually a single point assessment when the company applies to be audited by a BE body. Therefore, there is a need for a simpler approach to BE, which is integrated with the daily activities of organizations, as highlighted by many business leaders. The authors further described K. Snyder et al. (2016)'s framework for integrating a performance measurement system with a cultural analysis to reach the core of the organization through a focus on communication. As described by K. Snyder et al. (2016), for organizations to achieve quality, leaders are required to build open cultures based on a shared identity.

An important consideration is also the current state of a company, as management in stable and turbulent periods can require different approaches. Hence, sustainable Business Excellence approach is likely appropriate, to facilitate a dual management mode that addresses challenges of both stable as well as turbulent times. Such a framework should be a conceptual model on the base assumption of organizations as a living system instead of a mechanical one, whereby it should be an extension of the traditional BEMs. In a constantly changing environment, companies cannot assume that previous strategies will work seamlessly, or that the experience of other companies can be translated to that of others. Therefore, a mechanistic approach to leadership which makes choices purely on a bottom-line basis, where profits are the dominant criterion of success, could face difficulty when assumptions based on an old environment are no longer valid due to turbulence (Dervitsiotis, 2003).

2.3.3 Challenges

While BEMs are attractive frameworks for guiding an excellence journey, there are also several challenges with these. Beer (2003) has expressed the issue with dilution of QM programs through senior leadership's inability to set a sufficiently strong footing for them. This could be due to the difficulty of getting everyone on the same wagon. Following their study of excellent organizations, Brown (2013b) grouped challenges with sustaining excellence efforts, into the categories of strategy, leadership, people, processes, data & information.

Strategy challenges were identified in three areas of developing strategy, communicating it, and achieving people's engagement with the strategy. For developing strategy, successful organizations considered it important to convey the meaning of their strategy in a simple and compact way, in order to make it more accessible. Linking strategy to key pillars (e.g. people, technology, customers) is a common approach of organizations, while it was also mentioned that managers discussing strategic issues with employees on a daily basis is important. When it comes to communication, it is important to communicate the topics which are considered important by employees to avoid overwhelming them with details. Furthermore, to facilitate engagement, companies have linked their strategic targets with individual performance targets, so that everyone sees how they are contributing to the bigger picture. Some organizations also involve a cross-section of employees from the entire organization in the creation of their strategy, in order to ensure a variety of ideas. Lastly, prioritizing strategic goals or focusing on an important few was also deemed important to support engagement through focus, while the balance between strategic and operational plans was also deemed important (Brown, 2013b). To engage employees from operational levels, it is important to show the links between strategy and operations, as described by Brown (2013a).

When it comes to leadership challenges, these consist of the need for support and drive from higher management, establishing the support of middle managers, and the consistency of communication throughout the organization. To address these, the importance of a supportive and passionate leader was expressed by the companies,

besides the need to have regular self-assessments to ensure accountability. It is likewise important to reach a critical mass of leaders supportive of the Business Excellence effort, while middle management commitment to BE was shown to take up to five years. Managerial support was also facilitated by a clear plan for culture change as well as an improved focus on the BE effort organization-wide. To address the consistency of communication, excellent organizations used management by walking around, whereby managers try to increase their visibility to employees and try to improve communication. It is also important to bring the leadership team together regularly, which likewise improves communication and engagement (Brown, 2013b). Brown (2013a) described how regular interaction with employees such as review meetings were a means to ensure communication and management visibility. Furthermore, the author described that senior leadership's focus and drive of continuous improvement is a critical success factor (CSF). This is especially important in large organizations with several sites, in order to ensure that the importance of the BE effort is also transferred to other locations of the organization.

People challenges revolved around engagement of employees and leaders, effective communication and performance management of processes and systems. Most excellent organizations faced challenges with people's involvement as well as ensuring their time commitment to Business Excellence efforts, and ensuring a correct balance between strategic and operational plans. One approach through which the studied organizations addressed these challenges was by fostering an open culture that facilitates collaboration and contribution. These organizations also had career development programs in place, and found that employees most often sought out additional training. Improved introduction training, and ensuring a good foundational knowledge regarding BE organization-wide were likewise seen as important. To avoid employees being taken away from operational duties, shorter but more frequent periods of training were used. Furthermore, the previously described approaches towards more frequent meetings and communication was also deemed important (Brown, 2013b).

Challenges regarding processes were rather limited, with most issues being related to silos. These were addressed by cross-functional continuous improvement teams, as well as increased emphasis on process improvements that spanned multiple processes. Issues related to data and information revolved around the abundance of data that makes it difficult to have a clear overview, a challenge that was addressed through exception based reporting. The importance of capturing implicit knowledge was also highlighted as being important towards ensuring its sustainment. Challenges regarding customers were rather limited, however most excellent organizations expressed the importance of understanding who the customers of the organization are, as well as correctly understanding and addressing their needs (Brown, 2013b).

2.4 People Aspects

Human resource management (HRM) approaches have gone through a transformation regarding its views towards people as a resource. During the first period of industrialization (1900-1945), the main focus was on people as *muscle power*. In the following period (1945-1975), through contributions to research on human motivation, *heart power* was added to the understanding of human resources. The following period (1975-2000) came with an increased focus on knowledge work, therefore concepts such as the learning organization and knowledge management had become popular. Herewith came the appreciation for *brain power* as an important human resource. In the last period (2000-now) the increased importance of sustainability and corporate social responsibility, among others, have led to an increased ethical and spiritual awareness. Thus, the appreciation of humans as spiritual beings was added to our understanding of human resources. Through this transformation in our understanding came also a transformation towards more human-centric management approaches. While in the beginning people were seen as an instrument that an organization utilized to fulfill its needs, this shift has led to the understanding that organizations are also instruments in fulfilling the needs of people and developing them in the process (Dahlgaard-Park, 2012).

2.4.1 Motivation

Human motivation theories can mostly be split into two considerations of human nature, namely that of the human as a biological being and that of the human as a mental or psychological being. The biological view focuses on the psychological needs of nourishment, avoidance of pain, hunger, and natural disasters, as well as the general need for safety. On the other hand, the view on humans as a mental or psychological being, is characterized by the emphasis on needs of belonging, identity, learning, achievement, power, recognition, creativity, and self-actualization, among others (Dahlgaard-Park, 2012).

Depending on the driving force behind completing an action, motivation can be divided into intrinsic, extrinsic, and amotivation. Intrinsic motivation is considered as the internal drive to perform an action, through inherent enjoyment of the activity, a link to values, or an internal sense of purpose. This is usually characterized by the positive feelings of an individual performing an action through their interest in the activity, their curiosity for the effort, as well as individuals seeking new stimuli and challenges to tackle. When external forces are driving will, such as fear of punishment, rewards, pressure through expectations, or need to satisfy a requirement, then the motivation can be considered as extrinsic. Extrinsic motivation is characterized by engagement in an activity, due to this engagement leading to a specific outcome. Amotivation, however, represents the lack of intention to perform an action, which is represented by individuals acting without intent, or not acting. This mostly results from people not valuing an activity, not feeling competent to carry it out, or expecting it to yield an undesirable outcome (Deci & Ryan, 2008; Ryan & Deci, 2000).

Self-determination theory is a motivation theory, which recently became popular through books like (Deci et al., 2017; Fowler, 2014), among others. This was first introduced by Ryan and Deci (2000), who studied the drivers and inhibitors of intrinsic motivation. The authors identified three underlying psychological needs, the fulfillment of which enables intrinsic motivation. These are autonomy, relatedness, and competence. The need for the opportunity of choice, as well as control over one's actions is characterized by autonomy. The need for relatedness is represented by needing to care for and being cared for by others. This need is also manifested through the desire for a sense of connection with others, and a sense of individuals contributing to a greater good. The third psychological need of competence is represented by the desire to feel successful and effective at facing challenges, while also having the opportunity of developing oneself (Baard et al., 2004; Ryan & Deci, 2000).

The importance of core values towards human satisfaction was raised by Dahlgaard-Park (2012), who argued that these satisfy the spiritual or ethical needs of people, which is not addressed by the current theoretical frameworks on motivation. The author presented in her research, that the majority of studied Danish companies face issues with practicing the companies' values. The author also found that desire and psychological well-being are drivers of passionate people. Furthermore, people who feel worthy are strongly motivated, hence values are a strong driver or intrinsic motivation (Dahlgaard-Park, 2012). When the psychological needs for intrinsic motivation are not satisfied, most often this results in negative consequences to mental and physical health (Nienaber & Martins, 2020). Multiple other theoretical approaches towards motivation were presented by Dahlgaard-Park (1999).

2.4.2 Employee Engagement

Employee engagement was defined by Shuck and Wollard (2010, p. 103) as "an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes". Engagement can also be considered as the state of an energetic and effective involvement with one's work. This is considered as the positive antithesis of burnout. While in burnout, employees feel stressed and overwhelmed by their work, in an engaged state, the work is rather perceived as challenging. Another interesting antithesis between the two concepts is their psychological effect. Engagement was shown to have a positive effect on life satisfaction, and a negative effect on depression; the reverse has been shown to be the case for burnout (Schaufeli, 2012).

Kahn (1990) has conducted some of the earliest research on employee engagement. However, the term started to become a popular concept in the industry during the early 2000s, being discussed by managers and consultants, among others; Academical interest has become prevalent mainly after 2006, when researchers extended employee engagement to new fields of work engagement, and organizational engagement (Anitha, 2014).

While there is limited research on engagement (Wollard & Shuck, 2011), Schaufeli (2012) has expressed that only 20% of employees are highly engaged, the majority being moderately engaged. According to the authors, the main motivation for engaged employees seems to be the perception of their work as being challenging and fun. A valid question in this context is whether employee engagement is a risk factor for burnout, however, research has shown that employee engagement levels are not related to future burnout levels (Schaufeli, 2012).

While there are conceptual similarities between employee engagement, job satisfaction, job involvement, and organizational commitment, these concepts are still distinct (Shuck et al., 2013). Saks (2006) has shown that job and organization engagement were also statistically different concepts, however there was a moderate correlation between the two. Furthermore, both of these aspects were positively related to job satisfaction, organizational commitment, organizational citizenship behavior, while being negatively correlated with turnover intention.

2.4.2.1 Benefits

Multiple other benefits of employee engagement have been highlighted in research. Nienaber and Martins (2020) describe engaged employees as being available to the work, to others and to themselves. Engaged employees were also shown to outperform satisfied employees, likely due to the activation factor of engagement present through enthusiasm and elation, while satisfaction is often related to contentment (Schaufeli, 2012). Nienaber and Martins (2020) highlighted the reasons for failed strategy implementation as being ineffective communication, lack of interpersonal and leadership skills, as well as disengaged employees. Thus, engagement can be considered an important facilitator of strategy implementation and organizational effectiveness.

Employee engagement is linked to lower turnover intention and higher availability to engage in work effort (Shuck et al., 2011), enhanced job performance, organizational citizenship behavior, productivity, and affective commitment, among others. Furthermore, employee engagement is linked to reduced incidence of accidents at the workplace as well as a generally safer workplace (Wollard & Shuck, 2011). Ariani (2013) also found a positive relationship between engagement and organizational citizenship behavior, while a negative relation with counterproductive work behavior was found.

Among the effects of work engagement, besides job performance, improved health and workplace well-being have also been reported. It has been linked with higher organizational commitment, lower absenteeism, and lower turnover intention. Moreover, they typically have higher initiative compared to their counterparts, and a strong motivation to learn and develop. When it comes to performance impact, engaged employees are less prone to errors, accidents and injuries, are more innovative in their work, deliver better service to customers, and typically have highly rated effectiveness and performance by their supervisors (Schaufeli, 2012).

2.4.2.2 Supporting Factors

While factors enabling engagement differ with organizations, important aspects highlighted by Schaufeli (2012) were development opportunities, performance feedback, autonomy, task variation, transformational leadership, and a socially supportive work environment. So-called active jobs, which require employees to learn and develop their skills are also linked with high engagement. Furthermore, the authors have shown that employees with more complex roles that have higher autonomy, such as managers, had higher engagement scores than those working in lower skilled jobs with low autonomy, such as blue collar workers.

Wollard and Shuck (2011) described the factors contributing to employee engagement as *individual antecedents* and *organizational antecedents*. When it comes to the individual factors, the authors have shown these to be employee involvement in meaningful work context, perception of the environment as one that is safe physically, emotionally, and culturally, as well as the connection of an employee's work to organizational goals. When it comes to organizational antecedents, it was shown that the satisfaction of basic human needs is important. Furthermore, management was highlighted as an important aspect, by creating a supportive environment, executing the organizational vision on a local level, as well as the role of management expectations. Organizational culture was also described as a facilitator, whereby this should be supportive, authentic, and positive.

Schaufeli (2012) also highlighted the importance of job rotations, which create new challenges for employees, stimulating learning and professional development, thereby improving motivation. Furthermore, since engagement is a transient behavior, leadership has a powerful role in fostering it. Especially in the case of transformational leadership, which is highly effective for enabling engagement. Gialuisi and Coetzer (2013) supports that varied work roles and growth opportunities also supports employee retention. According to Schaufeli (2012), professional development opportunity is also related to the extent of career development, since systematic improvements in employability of personnel leads to better opportunities for employees to take on new roles, and allows for a higher variety of responsibilities. Albrecht et al. (2015) suggest encouraging and enabling employees to craft their jobs; Herewith, individuals could choose activities of their job, negotiate different job content, and assign meaning to their work.

The importance of opportunities for learning, and systematic competence development for engagement were also supported by Wollard and Shuck (2011). Silva (2016) highlights that managers should create strategies for training and development of leaders to increase the understanding of employee engagement, as well as its importance. According to Shuck and Wollard (2010), organizations should create learning and development programs for all levels of the organization, with a focus on self-awareness, and alignment with the organization's vision, mission and values. Schaufeli (2012) further elaborates that training programs aiming to improve engagement should focus on enabling the feeling of self-efficacy in employees, which improves engagement and performance, leading to a positive reinforcement loop.

According to Albrecht et al. (2015), by measuring engagement and comparing groups, tailored approaches can be developed to address improvement areas. Possible intervention approaches could include transformational leadership training, where leaders could learn how to individually optimize the balance between job demands and personal resources; Personal resources represent an individual's sense of successfully controlling and influencing their environment. This concept of positive self-evaluation is related to resilience and is shown to be improved through training and development. For performance management, the authors recommend creating performance and development goals, continuous feedback and recognition, employee development management, and creating a climate of trust and empowerment. Shuck and Wollard (2010) emphasized that it should be clearly communicated that performance assessment has a constructive intent. Furthermore, managers should be provided with the opportunity to take the time and improve, while the organization should provide resources and training necessary for this improvement.

Engagement can be measured using instruments such as the Utrecht Work Engagement Scale (Schaufeli et al., 2002), the Intellectual, Social, Affective Engagement Scale (ISA) measurement scale (Soane et al., 2012), or indirect measures such as Gallup's Q^{12} (Harter & Schmidt, 2008). Wollard and Shuck (2011) also suggest that engagement could be used as a proxy indicator of intrinsic motivation, which could also be addressed in the review meetings with employees. Herewith both engagement and intrinsic motivation could be improved.

Shuck and Wollard (2010) described that selection processes can be developed to create candidate profiles with the consultation of key stakeholders, in order to identify the traits, knowledge and skills needed by a successful candidate. The selection process could also place increased focus on traits such as collaborative development of goals, an approach towards developing people, interest in high performance communication, and being a change agent, among others. Furthermore, the authors suggest for managers to be trained towards their role before taking on their responsibilities, as research has shown that often managers step into influential positions without sufficient preparation. Albrecht et al. (2015) describe that when new hires join the organization, they typically have a high level of excitement, combined with uncertainty-related anxiety. Therefore, the organization should aim to address these by reducing the anxiety and transforming the starting excitement into a high level of engagement.

The importance of the work environment was described by Shuck and Wollard (2010), who expressed that people interact with their environments to create engagement or disengagement. In a later study, Shuck et al. (2011) found that the factors correlated with engagement were employee's fit with their job, affective commitment, and psychological climate. Working environment and team, and coworker relationships were also shown to be correlated with employee engagement by Anitha (2014). Furthermore, Andrew and Sofian (2012) have expressed the importance of co-employee support. These aspects are also supported by Nienaber and Martins (2020), who have shown that organizational strategy and implementation, organizational commitment

and team commitment contribute to employee engagement.

Employees' collective perception of HR use of high-performance practices is shown to have a positive effect on commitment and organizational citizenship behavior, while having a negative effect on absenteeism and turnover intention. This underlines the importance of targeting the aggregate impression of employees regarding HR efforts, since employees are influenced by perceptions of their peers. To address this, besides the implementation of high-performance HR practices, it is recommended for initiatives to be implemented in a consistent and uniform manner throughout the organization. Moreover, these initiatives should be well communicated, to facilitate visibility and understanding of these efforts among employees (Kehoe & Wright, 2013).

Saks (2006) suggested that engagement should be viewed as a broad, organization-wide and culture-centric strategy that requires continuous involvement of the entire organization, and consistently clear communication. Furthermore, organizations should focus on employees' perception of the support they receive. Anitha (2014) also supports this, expressing that the performance of individuals depends on all organizational policies and practices, hence an integrative approach towards strategic human resource management is recommended, taking into account all patterns of HR activities. According to Albrecht et al. (2015), HR needs to move beyond engagement surveys, and create strategies that target employee behavior to enable engagement. Furthermore, engagement should be strategically included and supported in the activities of selection, socialization, performance management, training and development processes and systems.

Employees are shown to seek meaning through their work, hence when organizations do not fulfill this desire through providing meaning, employees are more likely to quit (Anitha, 2014). Nienaber and Martins (2020) suggested companies to structurally enable intrinsic motivation drivers such that psychological presence is improved. Moreover, the authors suggest adopting a participative management style, in order to increase dependence on employee collaboration. Jenkins and Delbridge (2013) express that achieving engaged employees is likely very difficult in practice, due to the organization's external and internal contextual factors, which should be considered; However, it is clear that employees have a positive response in organizations where individual commitment is valued, and where the people aspects are placed in the center of the organization.

2.4.2.3 Psychological Presence

A principle closely related to employee engagement is psychological presence. Kahn (1992) describes psychological presence as the state achieved through engaged behavior, in which employees can freely express themselves, question assumptions and innovate. Psychologically present employees are likely to reflect and make suggestions for improvement. According to Nienaber and Martins (2020), this implies a participative management style which considers inputs of employees and embraces empowerment of employees to autonomously act in the interests of themselves and the organization.

Psychological presence is enabled by employees experiencing meaningfulness, safety and availability. Meaningfulness represents the perception of the benefit from an individual contributing to an activity, which is facilitated through the type of one's task, role, and work interactions. Psychological safety entails the opportunity for an individual to show their true self and to act according to their true self without fear of repercussion to their image, status or career. Lastly, availability represents an individual's willingness to contribute to work, based on their available resources. Therefore, this aspect is affected by the physical and emotional energy, as well as other external factors (Kahn, 1992).

2.4.3 Involvement

Employee involvement represents the philosophy regarding how employees' contribution to continuous improvement is facilitated (Bakotić & Rogošić, 2017). Involvement was highlighted as an important factor in employee engagement, as well as successful BE implementation. However, improved involvement of employees in tasks has several other benefits as well. Bakotić and Rogošić (2017) have suggested that implementation of concepts such as process and systems approach to management, continuous improvement, and fact-based decision-making are positively influenced by employee involvement through training, empowerment, and rewards. Furthermore, the authors found that employee involvement had a positive impact on productivity, integration and alignment of processes, while also increasing the clarity of roles and responsibilities. Likewise, involvement improves the responsiveness and growth of individuals, through which the organization can become more efficient, as well as more successful.

To facilitate involvement, several aspects were highlighted as beneficial. Since skilled employees are more productive and have a higher level of involvement, training could likely improve involvement. To improve competitive advantage, training should be seen more broadly than competence development. Training should include continuous learning, which necessitates employees to understand the context of their work, and in which way this contributes to the company's goal. Communication is another contributor to employee involvement. When informing employees about the company's mission, aims, and culture, communication plays an important role. Employee involvement can likewise be improved through employee recognition, which is shown to increase motivation. Recognition can be seen as a form of communication which validates the importance of employees striving towards the organization's goals (Bakotić & Rogošić, 2017).

Empowerment is also highlighted as an important facilitator of employee involvement. Empowerment can be described as a tool that aims to aid organizations in creating an environment where all employees can be involved in satisfying customers through their respective aptitudes. Through empowerment, employees have an increased ownership of their work, with increased decision-making, which in turn increases their responsibility for their results. This is enabled by facilitating employees to control their work and decision-making in an autonomous manner. Benefits of empowerment

are increased awareness of business needs, improved job satisfaction, and increased ownership, among others (Bakotić & Rogošić, 2017).

2.4.4 Learning

Learning is a key aspect to a company's competitiveness, as highlighted by Schein et al. (1992) who expressed organizations' need to adapt to an ever increasing pace of change. Moreover, Nonaka (1994) was discussing the importance of companies to focus on converting tacit to explicit knowledge. According to J. Argyris et al. (1978), the interaction of tacit and explicit knowledge lead to the creation of organizational knowledge.

When it comes to attitudes towards learning, these can be split into two general approaches in which the western and eastern countries differ. When comparing eastern and western views on learning, Dahlgaard-Park (2006a) concludes that both focus on balanced development of people's physical, intellectual, emotional, and spiritual competences. The identified critical factors for achieving these were intrinsic motivation and enjoyment of learning, a balance between conceptual and practical learning, and continuous and immediate correction of mistakes, among others. Furthermore, the author highlights the importance of having a correct learning environment that facilitates not only the learning but also the development of one's character in the process. However, most people understand learning purely as a process of obtaining information unfortunately. This makes it difficult to discuss concepts like *learning organizations* or *life-long learning*, as such an inhibitive approach to learning would deem them as unimportant. More detailed categorization and description regarding approaches of acquiring knowledge can be found in (Dahlgaard-Park, 1999).

An ancient approach to learning is the Socratic method, which Hess (2014) emphasizes as being crucial for facilitating learning. This represents the reflective approach towards questioning assumptions to uncover fallacies. The Socratic approach of critical inquiry and debate to learning has proven to be a valuable approach throughout time. A relevant consideration to learning are also the *System 1* and *System 2* thinking, which were presented by Kahneman (2011). He describes *System 1* as the fast and instinctive approach to thinking, while *System 2* is the slow and logical approach. Hess (2014) emphasizes that cognition is continuously composed of both rational and emotional aspects, thus it is important to keep in mind that a certain emotional influence on decisions is unavoidable. To control this emotional influence on decision-making, it is recommended to slow down one's emotions, when *System 2* thinking is preferred. Therefore, engaging *System 2* thinking requires a certain state of mindfulness.

Furthermore, as being open to feedback makes a better learner, Hess (2014, p. 62) emphasizes the importance of *System 2* conversations, which are described as "deliberate, nonjudgmental, nondefensive, open-minded exchange". These conversations are important for challenging beliefs, and are only possible in an environment of mutual trust and psychological safety. Since one's beliefs and assumptions can be

inhibitive to learning, it is important to attempt to understand these, in order to enable their validation. This critical thinking towards assumptions is very important for a high performance learning organization, which can only be achieved through *System 2* reflective thinking in an environment where one feels safe to be vulnerable.

To become an expert, one needs deliberate practice while receiving feedback from a coach. It is important to create an environment of positive emotions, since these improve not only the cognitive capacity of people but also their ability to evaluate. Fear is considered the largest inhibitor to learning, which could partially explain the inherent resistance to learning or change. Since often the brain has an inherently fearful response to learning, it is important to shift this response into a positive one. Therefore, the learning environment should foster this shift in response, while also avoiding other potential sources of fear, such as fear of repercussions due to failure. As failure is a natural part of learning, this should be celebrated as an indicator of learning (Hess, 2014).

Moreover, when creating a high-performance learning environment, it is important to remember that employee engagement is crucial. To create an environment fostering employee engagement, it is important for this to be addressing the inherent human need for intrinsic motivation, by focusing on how the fulfillment of the psychological needs are addressed. However, it is likewise important to consider the context of an organization, therefore, when creating a learning system, this should be consistent with the organization's values and culture, while also taking into consideration the currently present processes and structures (Hess, 2014).

Dahlgaard-Park (1999) presented a Japanese training package on motivation, which has proven successful in different Danish professional settings. Most notably, in her study of Robert Bosch, the top management was so satisfied with the program that the decision was taken to implement it organization-wide with the aim of changing organizational culture towards improved attitude regarding continuous improvement, as well as other aspects of TQM. The course involved theoretical and practical elements regarding the disciplines of psychology, human motivation, team behavior, and leadership, among others. She has shown that the Japanese training package which was originally developed in the context of Japanese culture was also applicable in a Scandinavian setting, both context as well as method wise. However, the author highlights that there are some major differences between Scandinavian and western culture regarding learning and education, therefore it is preferred for any training package to be adapted to the target audience. Furthermore, one should also keep in mind other cultural differences which could be present, as has been highlighted by the research of Hofstede (2011) on cultural dimensions.

As described by Dahlgaard-Park (1999), Japanese management's key to success lies in its focus on soft aspects. Furthermore, the human aspect is crucial for successful implementation of TQM. However, she also highlights that there are few practical methods for addressing these, unlike the range of statistical tools available to address the process and systems side of TQM.

Dahlgaard-Park (1999) describes the necessary building blocks for creating a learning organization as being systems thinking, personal mastery, mental models, shared vision, and team learning. These aspects are interdependent, and should therefore be considered as a comprehensive system instead of individual factors that create a learning organization. A helpful approach towards this could possibly be strategic cross-functional rotations, that Nonaka (1994) describes as facilitating the big-picture understanding of the organization. The authors also highlight the importance of institutionalizing reflection in action to support mindfulness towards learning.

The importance of soft skills and emotional intelligence towards a learning organization is described by Dahlgaard-Park (1999). These are presented as having the five components of self-awareness, self-regulation, motivation, empathy, and social skill. Schein et al. (1992) highlight the importance of psychological safety in order to facilitate change, and hence to also allow learning in turn. Nonaka (1994) also emphasizes that mutual trust is crucial for creation and transfer of knowledge. Dahlgaard-Park (2006b) suggests leaders to show the way in learning, by exposing themselves to something new, and having a constant drive for continuous self-improvement. These aspects regarding creation of a learning environment are reflective of the psychological needs described through the motivation theory of self-determination.

Deutero learning, or triple loop learning, is another important focus area when creating organizational learning. This is described by J. Argyris et al. (1978) as learning about the context in which proto learning occurs. While proto learning represents acquiring direct knowledge, deutero learning represents the knowledge acquired regarding the environment and the learning context. Deutero learning also builds on double loop learning, which is described as learning resulting in modification of assumptions and approaches towards the theory-in-use, as described by C. Argyris (1991). This process is described as being impossible without having open conversation and being able to acknowledge mistakes in order to learn from them.

2.5 Lean

The origin and development of the concept of Lean production were first mentioned in the book written by Womack et al. (1990). The publication was a result of a research program started at the Massachusetts Institute of Technology in the USA, in 1979. The incentive has been to research the differences between western and eastern car manufacturers. After several years of studying, the program concluded a substantial difference between Toyota and western car manufacturers in terms of production efficiency and quality. To adapt to these circumstances, several companies have tried to adopt Lean to their organizations, which has resulted in both successful and unsuccessful attempts (Ledbetter, 2018; Liker & Convis, 2012; Petersson & Ahlsén, 2009).

According to Ledbetter (2018) and Rizzardo (2020), Lean can be described as the ability to utilize resources effectively and efficiently throughout the organization.

To align the company towards a common purpose and create a common goal, with the customer in focus, within all the company's processes. The aim is to achieve the highest quality with respect to the lowest cost and the shortest lead times, and continuously improving the processes over time. This implies having tools, methods and defined processes to identify and reduce waste continuously throughout the organization. Furthermore, Liker and Convis (2012) and D. Mann (2017) emphasize that organizations need to utilize their capabilities most effectively and efficiently while continuously improving their business, to reduce waste in their process.

Prior to Lean becoming a general concept and being adopted by several organizations in different sectors worldwide, its origins began much earlier with the industrial revolution. Henry Ford's famous ideas around production were considered revolutionary at its time with the moving assembly line. He envisioned a flow around the factory where the assembly line was supplied with material at the right time and the right quantity. These ideas later became the foundation of what is now more widely known as the Toyota Production System (TPS) (Petersson & Ahlsén, 2009). According to D. Mann (2017), one of the reasons companies choose Lean is because it is perceived as easily understood, therefore applicable and easily implemented in the initial steps. Moreover, Rizzardo (2020) further develops on the applicability of Lean, that the implementation has to be adjusted to the current circumstance and to the company context. Despite the fact that lean principles are deeply rooted in the manufacturing principles, the underlying concept of lean thinking is something that is frequently overlooked when applying lean concepts. Therefore, transitioning from the beginning steps of the implementation, requires a different mindset and attitude in the way people think (Rizzardo, 2020). Another study that highlights the relationship between lean practices and operational excellence was done by Fok-Yew (2018). It examined the soft and hard aspects of Lean to identify the possible relationships with operational excellence. It showed that these variables are important for determining and explaining possible achievements of operational excellence. Furthermore, Nicholas (2016) highlights that QM and Lean practices, as well as their success, is dependent on a culture of quality.

2.5.1 Tools and Methods

According to Liker and Convis (2012), Lean implementation has a tendency to be tools and methods oriented. The tools and methods in Lean are appreciated for their applicability and one of the reasons why several organizations choose to adopt Lean in the first place. As a result of this, Ledbetter (2018) and Rizzardo (2020) describe that initiatives have a tendency of being too tool oriented, which the authors are critical towards. This approach of a Lean implementation could result in missing the underlying purpose of why the tools are used, in which situations, and how these should be applied. Similarly, Jeffrey and Michael (2008) are critical about Lean implementation becoming a short-term implementation solemnly focusing on reducing cost. Furthermore, Liker and Convis (2012) further argue that the short-term focus from top executives diminish the long-term benefits that a Lean implementation could have, and harms organizations' culture, and the trust

of its employees. There are several tools that are associated with Lean, and they aim to build a culture of continuous improvements, reducing waste in the processes (Liker & Convis, 2012). One of the most referred to are the seven wastes, which are overproduction, waiting, transport, extra processing, inventory, motion, and defects (Ledbetter, 2018). According to Rizzardo (2020), some organizations add the eighth waste, employee underutilization. Not being able to utilize people's talent, creativity, skills, and their ability to further develop which could be considered as the potentially worst waste.

Another tool that is commonly referred to is the 5S. In Japanese, they represent *seiri*, *seiton*, *seiso*, *seiketsu*, and *shitsuke*. These translate to sort, set in order, shine, standardize and sustain (Ledbetter, 2018). 5S is considered a basic tool, and therefore often one of the first tools to be implemented at organizations. It gives a systematic approach to reduce waste and keep a workplace safe, clean and organized. The first three steps of 5S serve the purpose of standardizing, and the latter two serve the purpose of maintaining and improving. A concern that authors raise is the view of 5S as a housekeeping tool, only focused on the cleaning aspects of 5S (Ledbetter, 2018; Liker & Convis, 2012; Rizzardo, 2020). According to the authors, this view has led to several failed implementations and drawbacks when implementing 5S. Therefore, Rizzardo (2020) emphasizes the importance of viewing it as introducing discipline and an agreed best practice, which will benefit the overall process utilization. Furthermore, several authors stress the importance of educating and training personnel in reasons behind why 5S is implemented, as an increased understanding improves the likelihood of success (Ledbetter, 2018; Liker & Convis, 2012; Rizzardo, 2020). It is expressed that some organizations have extended the scope of the 5S, adopting a 6th S or even a 7th S, standing for safety, and employee satisfaction (Rizzardo, 2020).

Kaizen is a tool used to develop a culture of continuous improvement throughout the organization (Liker & Convis, 2012). It facilitates aligning and creating the best practice, to current knowledge, or the best process currently possible. Every process can be improved into achieving a higher end result; This emphasizes the importance of understanding that processes are in constant development (D. Mann, 2017). Furthermore, Rizzardo (2020) supports this view on kaizens, it is not supposed to be viewed as a defined and final state, it should be viewed as the best current state that the organization currently has, until the next state is developed. Lastly, if this thinking and principle behind it is lacking, there is a high risk of not sustaining an initiative over time.

Daily Management, or the daily meetings that it refers to, are supposed to reflect the strategic goals set by the Hoshin Kanri process, and address the daily activities. D. Mann (2017) emphasizes that these meetings are not intended to become a one-way communication for leaders, instead the intended purpose is to introduce a structured and disciplined approach. Furthermore, enforce accountability and drive continuous improvements in the daily operations. Especially the first-tier meetings have the purpose of building participation and a bottom-up approach, therefore it is important that organizations practice inclusion in these meetings and practice the discipline of

letting people get heard and feel respected throughout the organization. Moreover, Liker and Convis (2012) emphasize the importance of developing people and fostering a culture of continuous improvements at the daily meetings, as much as it is a process of reviewing the actual state versus the target state. The meetings are about the softer values of employee engagement and motivation. Lastly, Liker and Convis (2012) argue that 5S, *Daily Management* and Kaizen all contribute to developing a culture of continuous improvements and in developing the organization. Furthermore, the authors emphasize that focus should not be only on the tools. It is rather the leadership, and their approach towards them. This is also supported by Ledbetter (2018) and Rizzardo (2020), who argue that a tool focus when implementing Lean, will most likely lead to less satisfactory results, and unsuccessful implementation. Instead, the focus should be on developing people's understanding of why tools are used, so that they can learn when to adopt them, and when to use them. Thereby, reducing the risk of less satisfactory results and sub-optimization of lean incentives, resulting in some areas being more developed than others.

2.5.2 Critical Success Factors

Several organizations have identified the possible advantages of Lean, yet there seems to be an issue of understanding how to implement, and sustain the method (D. Mann, 2017). Aga et al. (2016) describe CSFs as an important subject to study, especially in management related literature. Netland (2016) identified a combination of the most important CSFs to overcome when implementing TQM, Six Sigma, TPM or Lean. This is based on consensus from four major studies regarding CSFs, these were management commitment and involvement, training and education and employee participation and empowerment. Furthermore, D. Mann (2017) highlights that without active support of leadership, Lean initiatives are likely to fail in the long-term, regardless of the short-term benefits. This is not to be mistaken for the conclusion that Lean implementations could have potential short-term benefits when implemented with that in mind (Liker & Convis, 2012).

However, it is still unclear why Lean initiatives fail, when CSFs and potential barriers have been identified. Several organizations in different sectors have attempted implementing Lean, and Ledbetter (2018) estimates that at least 90% have resulted in what could be considered a failure. Rizzardo (2020)'s more conservative estimate is a failure rate of over 70%, while D. Mann (2017)'s study showed that the majority of cases resulted in failure. One possible aspect is highlighted by Dennis (2007), acknowledging people as the most valuable resource that an organization has. Therefore, Toyota invests extensively in developing its employees, to develop a culture, and verify that it is sustained. This is considered costly and time-consuming, yet important. Moreover, the human resource department has the responsibility and serves as a vital and important function with the organization (Liker & Convis, 2012). This is further supported by Löfving et al. (2021), who describe the linkage between Lean production and operational core, and how important it is to involve and engage blue-collar workers for achieving a successful implementation.

2.5.3 Hoshin Kanri (Policy Deployment)

Hoshin Kanri or policy deployment, refers to *hoshin* translating to *compass* or *pointing the direction*, and *kanri* translating to *management* or *control* (Jeffrey & Michael, 2008; Ledbetter, 2018; Nicholas, 2016; Rizzardo, 2020; Tennant & Roberts, 2001). It was developed back in the 1960s in relation to the concepts of TQM (Nicholas, 2016). Hoshin Kanri serves the purpose of aligning vision, goals and plans to facilitate continuous improvements and learning throughout the organization (Liker & Convis, 2012; Nicholas, 2016). Moreover, according to Giordani da Silveira et al. (2017) several western organizations seem to have missed the underlying principles behind Hoshin Kanri. Therefore, arguing that western organization's culture is more focused on selecting and having the right measurements, in contrast to the Japanese culture which is focused on developing the necessary capabilities required for change.

The process of Hoshin Kanri is often related to something that Toyota practices to coordinate actions and objectives throughout the organization. Other organizations have adopted similar forms of Hoshin Kanri, to have a structured way of prioritizing goals and initiatives and to be able to sort out conflicting or competing efforts (Liker & Convis, 2012). Moreover, Hoshin Kanri can be described as a planning tool which aims to align the organizations' overall goals with the individual goals. This is done vertically and horizontally throughout all business units. Furthermore, it is the process of defining goals and targets to develop a plan to reach them (Ledbetter, 2018; Liker & Convis, 2012).

According to Nicholas (2016) factors related to the Hoshin Kanri methodology are found to be associated with successful implementation of QM and LP initiatives. Contributing to higher possibility of sustaining initiatives in the long-term. Giordani da Silveira et al. (2017) identified a number of guidelines for implementing Hoshin Kanri, describing CSFs for successful implementation. The guidelines cover the topics of culture, capabilities, focus, alignment, integration and review.

Hoshin Kanri has similarities to several other strategy tools used by organizations to break down strategic targets and align them throughout the organization (Liker & Convis, 2012). One of the highlighted differences is how the process is done, and whom it involves (Nicholas, 2016). One of the important aspects in Hoshin Kanri is referred to as the *catchball* process. This is done to ensure that before strategic objectives are set and communicated, ideas are formulated and *balled* around within the organization. This is done both up and down the organization and described as an ongoing process over the year that management practices to create a better understanding and facilitate a consensus around a specific topic (Nicholas, 2016). Therefore, it is important to highlight that reaching consensus does not necessarily mean that everyone agrees on a specific topic. Rather it is focusing on creating the feeling and showing respect for one another, that a person feels that it has been heard and that their opinion has been considered (Jeffrey & Michael, 2008; Ledbetter, 2018; Liker & Convis, 2012).

Another aspect used to facilitate a consensus culture is referred to as *Nemawashi*, focusing on creating a consensus upon decisions and to facilitate the overall decision that has been made (Liker & Convis, 2012). Sorting out different views on a subject, and potential disagreements can be raised. Furthermore, rooting the idea and testing it to short out possible bias or conflicting misunderstandings (Ledbetter, 2018). Moreover, it is important to highlight that the *catchball* process and *Nemawashi* are essential parts and deeply rooted in the leadership style, as they are critical for executing and performing these processes as intended (Giordani da Silveira et al., 2017). One of the issues organizations face when they are trying to adopt Hoshin Kanri is that they view it as just another tool for cascading goals and targets down the organization. Therefore, missing the vital point that it is about the people that are using it, and how they utilized it. Therefore, emphasizing on the importance of how it is executed, which increases the possible benefits of it. It is not the Hoshin Kanri itself that facilitates collaboration and alignment towards a common goal, it is the strong culture it creates, that enables it (Liker & Convis, 2012).

Lastly, Nicholas (2016) highlighted that research often overlooks the bridge between QM and LP, referring to two studies presenting empirical data showing relationship between successful implementation of QM and LP practices related to Hoshin Kanri.

2.5.4 Lean Organizational Learning

Hines et al. (2004) elaborate on organizational learning and describe a four stage model of lean thinking, these levels are described from the prescription stage to the contingency lean thinking stage. The model is based on the classification of organizational learning described by McGill and Slocum Jr (1993). It has the purpose of assigning context and evaluating where organizations are in terms of their Lean implementation journey. Furthermore, it can give an estimation on companies' current status based on the Lean maturity matrix.

Companies that have adopted the first level of organizational learning, are referred to as a *knowing organization*, these companies are in their beginning steps of developing and implementing Lean. The first stage is labeled cells and assembly lines, referring to the first transition towards adaptation of certain Lean incentives. Focusing on the manufacturing area of a company. These companies are associated with having a strong focus on application of Lean tools and methods across the organization, especially in the manufacturing area. The organizational focus is towards efficiency and they base their reality on having a rational approach towards organizational development. Companies in this first stage are described as single-loop and in an adaptive state of mind. Meaning that they tend to limit themself towards certain ways of doing things. Moreover, as they are facing challenges with changes that are new to the organization. Therefore, it is important that they are adoptive towards these changes. Lastly, it can be described that companies competing in these conditions are established on markets where the conditions are defined as static or mature (Hines et al., 2004).

The second stage is labeled as the understanding organization, companies that are associated with the stage have developed a set of skills to further evaluate their current state and question their current best practices. Yet highly focused towards best practices in the manufacturing area. Moreover, these organizations have developed a set of core values and management practices, with the purpose of expressing and aligning the company's overall culture. Despite this, they are still not considered as open towards questioning and expanding the organizational learning experience, resulting in being limited, similar to a *box mentality*. Lastly, circumstances describing these companies are, that they apply Lean still restricted to sub-optimization of areas within the manufacturing (Hines et al., 2004).

The third stage are organizations associated with having reached a certain level of Lean thinking and therefore described as a *thinking organization*. Utilizing a set of problem-solving practices, still having a significant focus on the *one best way* referring to the question *what would Toyota do?*. The companies have other characteristics focusing on improvements in quality, cost and delivery, with the perspective that improvements in these areas will generate customer value. However, Kiernan (1993) criticizes this type of focus and argues that it can limit these companies from seeing things in a broader perspective, resulting in poor strategic alignment. Furthermore, they are criticized for having tendencies to develop incremental improvements with sub-optimized process focus (Hines et al., 2004).

The fourth and last stage on the four stage model is described as the *learning organization*. These organizations are characterized by having reached a certain level of Lean understanding. Therefore, seeking to involve learning opportunities in multiple aspects and in a wider spectrum than companies in the earlier stages. One characteristic that they are associated with, is having an increased flexibility and adaptation towards changes and having learnt to evaluate the best way forward. Another aspect is that these companies have developed a sophisticated approach towards cascading and aligning policy deployment, involving a learning experience for everyone involved in a bottom-up approach. Therefore, they are expected to have a higher degree of double-loop learning from *catchballing* processes, aligning and contributing to the overall business objectives. Another important aspect these companies have developed is the ability to *learn how to learn* (Bateson, 1972). Furthermore, learning is developed by taking initiatives and having support in doing so. The organization is more autonomously driven, instead of typical classroom trainings and being told how things should be done. Employees are more capable of choosing from a wide range of practices and tools, and know how to execute and utilize them to achieve progress.

2.5.5 Cultural Shift

A company culture can be defined as the DNA that has been developed and embedded into an organizations' behaviors and beliefs over time (Ledbetter, 2018; Rizzardo, 2020). Changing a culture is not considered as easily done, therefore it requires more than just adopting a training program and communicating an idea (Liker & Convis,

2012). It is a recurring issue mentioned in research, especially in business research (Giordani da Silveira et al., 2017). Ledbetter (2018) further develops this, and argues that a common misunderstanding when it comes to a Lean implementation is how the culture is viewed. Meaning that the pillars defining the culture are rather defined by numerous improvement projects, than actually understanding the meaning behind what a culture change aims to achieve.

Another challenging requirement regarding culture change, is referred to as breaking habits. D. Mann (2017) highlights that by not working with the internal processes, a typical scenario is that people fall back into old habits. Furthermore, he emphasizes that culture change is not a one time event, as changing and setting a culture has to be done continuously throughout the organization. Moreover, it has to be supported by the right mindset and approach in doing so. According to D. Mann (2017), the missing link in Lean implementation is a Lean management system, in combination to a Lean production system. The management system is defined by the current culture there is. Lastly, implementing this is considered to be the easy part, while sustaining it and getting it to work is more difficult (Ledbetter, 2018).

2.6 Leadership

Leadership theory is built on a classification of several leadership styles. Sohmen and Victor (2013) describe three different leadership styles, these being transformational, transactional and laissez-faire. According to Barber and Warn (2005), there are situations where either of these perspectives is to be preferred. Hence, transformational leadership has several attractive qualities when focusing on softer qualities and aspects of leadership (Aga et al., 2016). Furthermore, Sohmen and Victor (2013) highlight the importance of leadership and teamwork, and that one can not simply exist without the other.

2.6.1 Leadership Styles

Transformational leadership style is one of the most appreciated leadership styles, associated with inspiring and leading people to achieve and possibly overachieve on their expected outcome (Aga et al., 2016; Bass & Riggio, 2006). Moreover, it is associated with developing and supporting people in their individual growth. This increases the level of satisfaction and commitment by the group or individuals following. Lastly, Bass and Riggio (2006) describe that these types of leaders have typically been identified in the military sector, yet research points towards this type of leadership style spreading to other sectors.

According to Aga et al. (2016), and Bass and Riggio (2006) there is a consensus regarding the four characteristics of transformational leadership, these being *idealized influence, inspirational motivation, intellectual stimulation,* and *individualized consideration*. Transformational leaders seek to have a strong following and to be charismatic, resulting in influencing their followers. Further, acknowledged for having strong communication abilities, being able to communicate their vision, and provide

meaning and understanding to others. Another aspect is the ability to intellectually challenge and develop people, and contribute to their individual development. Lastly, their ability to act as a coach, mentor or supporter for others.

The transactional leadership style is described to be found in people associated with politics, as their common characteristic is described as exchanging one favor for another (Bass & Riggio, 2006). Promising a certain change for acquiring someone's support or a vote, a reward for increased productivity by receiving a bonus are such examples. The different components of transactional leadership are dependent on contingent reinforcement, these could be both positive and negative aspects. The positive aspects are related to motivation, associated with bonuses or money for delivering on an assigned task. Furthermore, compliments which then refer to compensate for psychological needs, giving someone a compliment or acknowledging someone's attributes. The negative aspects are associated with management-by-expectation. Moreover, corrective matters tend to be less effective than contingent rewards. Corrective transactions could either be active or passive, with active being actively participating in corrective actions and passive meaning not taking action at all or ignoring taking action (Bass & Riggio, 2006).

The laissez-faire leadership style is associated with absence of leadership or lack of sufficient leadership. Furthermore, it can be described as the most ineffective leadership style, as it could be questioned if it should be considered a leadership style at all, as it involves avoidance of leadership. In contrast to the transactional leadership style, decisions are not made, resulting in delays or nothing happening (Bass & Riggio, 2006).

2.6.2 Lean Leadership

Arguably, one of the most important aspects for sustaining implementation is top leadership commitment (Netland, 2016). Leaders build the foundation for creating a culture of continuous improvements (Ledbetter, 2018; Liker & Convis, 2012; D. Mann, 2017). Absence of leadership support and lack of leadership commitment can result in missed opportunities, and difficulties in sustaining implementation over time (Ledbetter, 2018).

When it comes to lean leadership, Rizzardo (2020) describes important characteristics and behaviors, these are, being active and visible throughout the organization. Secondly, being able to communicate vision and the path forward. Thirdly, being able to entitle a humble approach and delegate responsibilities and ownership to subordinates. Lastly, it is important to act and be a role model to inspire people around you. This characteristic is similar to what is described as a transformational leadership style. Lean has developed these criteria based on the attributes that transformational leadership style possesses. Acquiring these characteristics are easier said than done, and it is not only up to the leader themselves to acquire these skills. It is important that leaders are supported and guided in acquiring these skills. Therefore, the ownership lies on companies to actively support leaders in acquiring

these and in educating and training employees to become better leaders (Jeffrey & Michael, 2008; Liker & Convis, 2012).

Companies face several challenges upon change, and one obstacle that companies can face is going through a transformation from a conventional leadership culture to a lean leadership culture. According to D. Mann (2017) these transformations come with certain challenges, and several companies struggle with this transformation. Conventional leaders are often associated with the characteristics of transactional leadership styles. Moreover, associated with such leaders is that have developed and acquired certain skills to become effective in reaching goals or targets. These leaders have a proven track record of getting things done, to whatever cost this might lead to. Yet, a reoccurring issue often is sustaining these over a long period of time. Therefore, according to Liker and Convis (2012), a common question to hear around the company is how conventional leaders become leaders in the first place, even questioning if they are qualified for their current position (Liker & Convis, 2012). Moreover, it is common that *conventional* companies have developed a culture of *shooting the messenger*. Meaning that it is easier to hide from problems and shy away from them, rather than taking ownership and acknowledging their importance and addressing these with the right countermeasures (Liker & Convis, 2012).

In lean leadership, a leader is described or referred to as a teacher, they are required to master the skills of teaching and being able to teach others. They have developed an understanding of discipline, and the importance of it. Furthermore, Ledbetter (2018, p. 15) emphasizes "Lead, and your employees will follow". The definition of a good leader is associated with being transparent in admitting gaps or lack of knowledge. Moreover, being able to delegate responsibility and ownership to subordinates, thereby letting the employees be the driving force of initiatives and increasing their accountability. Furthermore, it is important that these leaders are open towards self-development and in developing subordinates. (Ledbetter, 2018; Liker & Convis, 2012; Rizzardo, 2020).

D. Mann (2017) highlight a potential harming effect that impacts leaders ability to lead within an organization. It is associated with the increased responsibility of leaders today, more commonly occupied with doing more of the work that was previously supported by support functions. Resulting in allocating time and effort in figuring out issues that are not necessarily contributing to the direct value of their activities, minimizing the potential of leaders being able to *lead*. In accordance with this, Rizzardo (2020) describes an interesting point regarding Lean facilitators and coordinators, describing that they have the role of teaching and coaching the leadership, but are missing the term leaders in their titles. Therefore, again emphasize the importance of leadership taking ownership. It is the leader's responsibility to lead and set the direction. Not the facilitators or coordinator, as they are only supposed to guide and support the leaders (D. Mann, 2017).

Liker and Convis (2012) argue that there is a tendency to think that the brilliance of Toyota is in their systematic approach and the development of TPS. Yet, many

have tried to copy and adopt it, without achieving a desirable nor the expected results from it. Therefore, Liker and Convis (2012) argue that one aspect that is frequently overlooked is how much emphasis Toyota put into developing their leaders. Moreover, how much the leaders take ownership of developing and sustaining the business. To further emphasize this, Liker and Convis (2012, p. 35) describe it as "Leaders, and the leadership model that the company cultivates, are the root drivers of Toyota's successful engagement of team members throughout the company. The Toyota Production System is the effect of this engagement, not the cause".

3
Methodology

This chapter covers the methodology, it describes the research strategy, design, process and method. Explaining the approach towards the conducted study and the chosen research methods, semi-structured interviews, observations and written documents. Moreover, the data analysis is presented as well as the approach towards data analysis. Lastly, the chapter addresses the critical quality aspects of reliability, replicability, validity and finally the ethical considerations are discussed.

3.1 Research Strategy

This thesis was performed as a qualitative research and as a single case study of SKF Gothenburg. The research approach was decided to be inductive as it is considered a good approach for diffusing questions of big picture narrative, especially business studies with open-ended research questions. Furthermore, the study included iterative elements to continuously conduct data and perform analysis in parallel, as the project progressed. With the purpose of identifying and scoping the research questions and to identify the knowledge gap within the organization. An adapted approach to grounded theory was predominantly used, both as the method for collection of data and for performing the analysis of data (Bell & Bryman, 2019).

3.2 Research Design

This research was performed with a single case study design, studying the three factories of SKF Gothenburg, in Sweden. Bell and Bryman (2019) argue that case study design is widely appreciated and a preferred choice when conducting business related studies, especially in qualitative research approaches. Furthermore, it was chosen based on the possibility to get an intensive, broad and detailed insight in the case company. Lastly, SKF Gothenburg served the purpose of an instrumental case study, contributing to the highest learning potentials for the authors.

3.2.1 Research Process

The process of this thesis started by performing an extensive literature review, gathering information from research and previous studies conducted at SKF. With the purpose of creating a knowledge base and to address and scope the research question. Furthermore, it served the purpose of deciding on research methods and

data collection methods. The initial literature review served the purpose of identifying potential interview candidates. The approach of the study was conducted iteratively, performing data collection and analysis in parallel, based on grounded theory. Moreover, as the study progressed, further research was studied in parallel to performing the data collection and analysis. A purposive sampling, described as a theoretical sampling approach was decided. To consider the sampling conducted based on the research questions at hand (Bell & Bryman, 2019). This process is described to be especially suitable for conducting an iterative process of data collection and analysis, and serve as a basis when performing grounded theory as a method for data collection and analysis.

A collection of academic journals, research papers, literature and relevant scientific papers was studied. Articles and papers collected from databases were reviewed based on citation and relevance to the specific topic. In search for relevant literature, the authors used keywords and terms related to *Quality Management*, *TQM*, *Business Excellence*, *Quality Management Strategy*, *Lean*, *Lean Production System*, *Lean culture*, *Intrinsic Motivation*, *Self-determination Theory*, *Employee Engagement*, *Employee Involvement*, *Employee Empowerment*, *Organizational Learning*, *Transformational Leadership*, and *Lean Leadership*. These terms were searched to identify articles and relevant research conducted in particular areas related to the research question. Literature was primarily conducted from databases such as *Google Scholar*, *The Chalmers Library*, and *Scopus*. Throughout the study an inductive approach to prepare and identify new sources of information was done, in parallel with preparing and collecting new information which served as the knowledge base and later the empirical findings presented in section four. Lastly, resulting in presentation of recommendation and conclusion of the research questions.

3.3 Research Method

The collection of data was done through semi-structured interviews, semi-structured and unstructured observations, and company documents were reviewed as a basis and to build the empirical foundation of the study. Interviewing is a common form of data gathering in qualitative research; Qualitative interviewing is suitable when seeking rich and detailed accounts as described by Bell and Bryman (2019). Furthermore, semi-structured interviews represent an interviewing approach, whereby more flexibility is allowed in the process of conducting the interview. In this approach, the researchers prepare an interview guide with questions about rather specific topics, however interviewers allow a large degree of freedom in the way that interviewees answer the questions. Moreover, researchers might explore other information paths or topics which have come up during the conversation, however which have not been included in the interview guide beforehand.

3.3.1 Semi-structured Interviews

Interviews were conducted with employees at SKF Gothenburg and employees at SKF Group, the central group organization. Furthermore, interviews with researchers

as external interviewees were conducted for a better general knowledge basis. All interviews were conducted in English, with the possibility of interviewees to switch to their mother tongue, Swedish, whenever preferred. The interviews ranged in length between 45 and 120 minutes, with a median duration of an hour.

It was decided for company interviews not to be recorded, to obtain honest and accurate information from interviewees. Furthermore, the decision not to record interviews was taken to create a natural environment for interviewees to be able to freely express themself without consideration nor hesitation towards freedom of speech. As highlighted by Bell and Bryman (2019), recording of interviews can be inhibitive towards naturalism especially when considering ethnological aspects of a research as respondents can become more self-conscious in their responses. To further facilitate naturalism, it was decided for all interviewee accounts to be anonymized when relating findings in the research. At the beginning of each interview, the interviewees were informed by the authors that the interview will not be recorded, and that all information will be anonymized. The external interviews have been recorded however, for which the researchers sought consent from interviewees prior to the interview. The decision of recording these interviews was made due to the considerably lower impact towards naturalism, as well as an increased density of the interviews through more technically complex interview guides.

Furthermore, to facilitate coherent observations and to avoid loss of information, accounts of interviewees were registered through full field notes by both researchers, to increase validity of obtained accounts in context of the lack of impartial recording of the interviews. While transcribing would have been preferred from a quality point of view, as highlighted by Bell and Bryman (2019), this would have likely been impossible to achieve without recording of the interviews. Furthermore, the extensively time-consuming aspect of transcribing would have also been inhibitive towards the study's data collection extent. At the end of each interview, the notes of both researchers were compared and discussed at the earliest convenient point in time, most often directly after the interview. This was done to align accounts and to discuss further field notes regarding observed non-verbal communication for certain accounts. Moreover, in case of the external interviews, both researchers reviewed the interview recording to complete their field notes.

All interviewees were selected based on purposive sampling. Bell and Bryman (2019) describe purposive sampling as a non-probability based approach to sampling, which has the goal of strategically choosing interviewees who are relevant to the studied research questions. The case company interviewees have been selected based on stratified purposive sampling. Patton (2014) describes that through stratified purposeful sampling, large variations can be captured, as opposed to identifying a common core, however through the analysis, a common core could emerge. The stratification in the interviewee samples was twofold, interviewees were selected based on coverage of multiple functional areas in the case company, and where applicable the same positions were interviewed from several of the factory's plants.
In total, 22 SKF employees have been chosen, from which 18 are employed at SKF

Gothenburg, the case company, while four others were employed to SKF Group. While this paper did not study the SKF Group in detail, employees from the group organization were included in order to improve contextual understanding regarding the topics studied.

SKF Gothenburg interviewees held a variety of functions at the company. Seven of the interviewees had roles in the management of the factory or one of the factory's plants. Four interviewees had roles related to the implementation of the SKF production system, while five had various management roles in support functions. Two of the interviewees had roles related to the daily operations. Among the interviewees from SKF Group, one person was working with quality management, while three others had central roles supporting the SKF production system development and implementation.

External interviewees were selected based on typical case sampling, based on interviewees' relevance to the research topic. Bell and Bryman (2019) describe typical case sampling as the selection of individuals because of their exemplification of an area of interest. The selected interviewees were Su Mi Dahlgaard-Park, Anders Fundin, and Folke Höglund.

Su Mi Dahlgaard-Park is a professor at the department of Service Management and Service Studies, at Lund University. Her research and teaching areas include Organization Theory, Human Resource Management, Learning and Knowledge Management, and Quality and Service Management, among others. She had been selected as an interviewee candidate through her research on Business Excellence, soft aspects of Quality Management, Learning, and Motivation.

Anders Fundin is the Director of Research at the Swedish Institute for Quality, and professor of Quality Technology and Management at Mälardalen University. His research topics include Quality Technology and Management, Operations Management, and Change Management, among others. He was selected as an interviewee candidate through his research on Business Excellence, as well as challenges and development trends of Quality Management.

Folke Höglund is the vice chairman of the west region of Svenska Förbundet för Kvalitet (SFK, Swedish Association for Quality). He has also previously worked as a Quality Manager at the group organization (SKF Group) of the case company (SKF Gothenburg). He was selected as an interviewee candidate based on his work with the SFK, his experience with the issues of SKF in the past, as well as based on suggestions of other interviewees.

3.3.2 Observations

Bell and Bryman (2019) describe unstructured observations, as attempting to observe all aspects of an event. On the other hand, structured observations are described as having the goal of taking into account specific details based on prior expectations.

In this research, semi-structured and unstructured observations were conducted.

Semi-structured observations were made of the *Daily Management* process, whereby the authors attended Level 2 meetings twice, Level 3 meetings twice, and Level 4 meetings on one occasion. Furthermore, unstructured observations were made through four tours of the three manufacturing plants' production. All observations were carried out in an overt role, whereby the observed group was made aware of the authors' presence, as well as the scope of the presence, as outlined by Bell and Bryman (2019). During the semi-structured observations, brief notes were taken, while during the unstructured observations, mental notes were taken; Following both types of observations, the researchers have written up field notes.

3.3.3 Written Documentation

Data was gathered through review of various internal and external documents. As described by Bell and Bryman (2019), documents are valuable sources of information when conducting a case-study. However, the challenges with the quality of data are also highlighted. To assess quality, four criteria were suggested by Bell and Bryman (2019), which are authenticity, credibility, representativeness, and meaning. For all the documents reviewed, authenticity, credibility, and meaning have been considered to not raise issues with the quality of the material. Representativeness however is harder to assess through the potential bias introduced by the creators of the document in question. Nonetheless no significant concerns were raised by the researchers following the review of the documentation.

The documents which have been reviewed were mostly regarding SPS, BE and related aspects. Three reference documents were reviewed, namely the *BE Booklet*, *SPS Booklet*, and *Daily Management Handbook*. Furthermore, two status documents have been reviewed from the end of year 2021, which were the *Factory Master Plan Review*, and *SPS Deployment Status Review*. Other documents and intranet pages have also been reviewed in an informal manner in order to complete any gaps of knowledge or for contextual knowledge of the researchers.

3.4 Data Analysis

Data was collected from interviews, observations, and internal documents, with an iterative approach throughout the study. Hereby, the knowledge base was built and further developed during the study, and guided the researchers into acquiring new information as the study progressed (Bell & Bryman, 2019).

3.4.1 Grounded Theory

The research approach and the data analysis were done similarly to grounded theory, meaning that theory was developed based on knowledge gathered from the research (Bell & Bryman, 2019). With the purpose of contributing with new knowledge and theory as the study progressed. This approach allows to simultaneously collect data

and perform analysis in parallel. Furthermore, it contributed to developing the knowledge base and addressing new possible findings in parallel to performing the analysis. Findings were analyzed within the closed proximity of the interviews, at latest the day after an interview took place.

To analyze and break down the large amount of data gathered, *Affinity Interrelationship Mapping* was performed. Furthermore, open coding was used to group and map out clusters of data, to sort out and identify similarities and relationships from the empirical findings gathered. These findings were later grouped and labeled based on relationship, and similarity identified by the authors. This process served as the main analysis of the data collection and contributed to validating and sorting out potential bias and misleading relationships from the data collection.

The iterative process of collecting and analyzing data was conducted until the researchers perceived indications of the data or theory saturating. Thereafter, recommendations were formulated, based on the empirical findings and the research literature. Bell and Bryman (2019) argue that this approach is especially suited to qualitative studies. Moreover, as it allows the researcher to be aware and identify emerging themes continuously throughout the study. Furthermore, it is recommended and performed when ground theory serves as the data analysis method in qualitative studies.

3.5 Quality of the Research

To assess the quality of any research, several quality criteria can be taken into consideration. According to Bell and Bryman (2019), the most used criteria for assessing quality of business research are reliability, replicability, and validity.

3.5.1 Reliability

Reliability represents whether the results of the study are repeatable. This measure is most often concerned with the validity of the applied measurement methods used to obtain results. Reliability can be classified as internal and external reliability. Internal reliability represents the consistency between observations, for example when there are multiple observers drawing conclusions. On the other hand, external reliability represents the extent to which the study can be replicated across different social settings. This quality measure is rather difficult to satisfy in qualitative research, due to temporal influences of the study's context. However, suggested approaches to ensure external reliability when replicating a study are to try to mimic the initial study as truly as possible (Bell & Bryman, 2019).

This quality measure was mainly addressed through a focus on internal reliability. In order to ensure consistency of observations and interpretations, researchers took field notes independent of each other during the data collection. Following, the researchers reviewed and discussed these notes at the earliest convenient time, in order to address disagreements while the memory of the data collection instance was

still fresh. However, external reliability was not addressed, as through the highly contextual nature of the research the findings are likely highly specific to the selected subset of information studied, as well as to the time point at which the research was conducted.

3.5.2 Replicability

Replicability represents the extent to which a study can be repeated by other researchers. This aspect is facilitated through a clear description of the research process, in order to ensure that the information necessary for replicating the study is available to others. This criteria has been widely criticized in qualitative research due to the inherent subjectivity introduced by the research strategy. However, due to the qualitative research's relative lack of structure and its high reliance on the researchers conducting the study, it is almost impossible to conduct a true replication. While in business research, replication is rarely conducted, it is still a valid quality measure to consider (Bell & Bryman, 2019).

In the case of the current study, replicability was addressed to a very limited extent. While much of the process and methods were clearly described, the reality of business research being highly contextual and time-bound is still present. Furthermore, through the choice of anonymizing interviews, it is virtually impossible for other researchers to interview the same people without breach of anonymity. Furthermore, the researched concepts are very likely to yield significantly different results even in a year's time due to the nature of the topic.

3.5.3 Validity

Validity represents the integrity of a research's conclusions. While there are several measures of validity, for qualitative research, internal and external validity are likely the most applicable. Internal validity represents how well the researchers' observations are representative for the developed conclusions. Some scholars argue that internal validity is one of the strengths of qualitative research, through the extent of time researchers spend in their studied environment or understanding its context. External validity on the other hand represents the extent to which the findings of the research can be generalized across different social settings (Bell & Bryman, 2019).

In the current study, internal validity was addressed through the relatively extensive time spent interviewing and observing the case organization. While the study does not have an ethnographic approach, the ethnographic elements in the research strategy further improved internal validity through the attention to maintain naturalism. Furthermore, through the cyclical elements in the analysis, internal validity was further increased. External validity, however, is rather challenging to satisfy due to the highly contextual nature of the study. As was highlighted by Bell and Bryman (2019), this quality measure is often challenging for qualitative research through the use of case studies and low sample sizes. Unfortunately, this is also the case for the current paper, as the studied sample is likely not sufficiently large to lead to

generalizations in different organizations. Furthermore, the identified conclusions are rather specific to the case company's context, therefore these would likely not be highly applicable to other plants or other companies. Nonetheless, since some of the identified conclusions have also been observed by other comparable case studies, these could be considered as marginally valid empirical pointers to the external validity of the current research.

3.6 Ethical Considerations

Bell and Bryman (2019) emphasize four main ethical principles which are the most important to consider in business research. These principles include avoiding harm to participants, informed consent, avoiding invasion of privacy, and avoiding deception. In the present paper's study, the most important aspect of harm to participants was considered to be the potential indirect harm to career prospects of company interviewees through their views. This was addressed by anonymizing these interviews, and clearly informing interviewees before each interview regarding this aspect. Other potential direct or indirect sources of harm to participants have been considered as being non-significant. When it comes to avoiding invasion of privacy, this was also addressed through anonymity, as well as informed consent. Furthermore, interviewees were allowed to skip questions if they wished to do so. Informed consent was addressed through the description of the purpose of interviews, and the greater context of what the research is aiming to achieve. Furthermore, participants were informed that they have the freedom of choice regarding whether to participate in the study. The last ethical principle, avoiding deception was not addressed with a specific focus, as this principle was deemed less applicable for the present study. There were no deceptive elements present inherent in the design of the study, and potential sources of deception were eliminated through informed consent.

Besides these principles, sustainability was also taken into consideration. The impact of this research on sustainability aspects were considered in the context of the triple bottom line approach described by Gremyr et al. (2020). These three aspects of sustainability are social, environmental, and economic. When it comes to the social aspect, this was considered less applicable to the study, as no clear harm was identified in this regard. However, there is an arguable positive impact on social sustainability with this study, through the improved understanding regarding human aspects for the company. Hereby, better training regarding understanding, as well as potential improvement of aspects such as employee motivation, engagement, and learning, will result in a minor contribution to societal sustainability.

Environmental impacts of the study were considered as being relatively low, as the only direct negative impact would be the commuting of the researchers and energy impact of conducting the research. There is also an arguably small positive impact through improved ways of working leading to potential energy reduction for the case company in the future. Lastly, considering the sustainability regarding profit, the project had a clear short-term negative impact on the profitability of the case company through the additional resource requirements introduced with the

research effort. The most significant impact is likely the hours employees spent with interviews. This time can be seen to a certain degree as being lost doing work that is not directly contributing to business activities. However, it should also be noted that through the research's findings, there is also a potential for financial gain for the company through improved ways of working. Another consideration for a potential impact towards financial sustainability has been defamation, as the case company is a publicly traded for-profit organization. To mediate these effects, statements made in the report were repeatedly reviewed for severity, while the final research report was reviewed by the studied company.
Nonetheless, the extent to which the company will be impacted by either positive or negative aspects is debatable, and some might argue that it is negligible. Nonetheless, the authors hope that the positive effects of the research will be significant enough for them to be visible at the case company, at least in the long term.

4

Empirical Findings

In this chapter, the empirical findings from interviews, observation and attained company data will be presented. Moreover, this chapter reflects the employee perspective on the identified focus areas. Lastly, it creates the foundation and knowledge basis to serve the observed gap between the perceived reality by the company and the actual state of BE.

4.1 Company Background on Improvement Efforts

To give the historical context about how SKF and the factories in Gothenburg have progressed with different BE approaches, their timeline of development will be described. The journey started in 1996 with the introduction of *Total Preventive Maintenance*, which later in 2001 developed into *Total Productive Management*. In 2006, *Manufacturing Excellence* was introduced, and later followed by *Business Excellence* in 2010. In 2015, SKF began their SPS journey, introducing and focusing more on practicing the Lean methodology. This further developed with the introduction of SPS *Phase 1* in 2020.

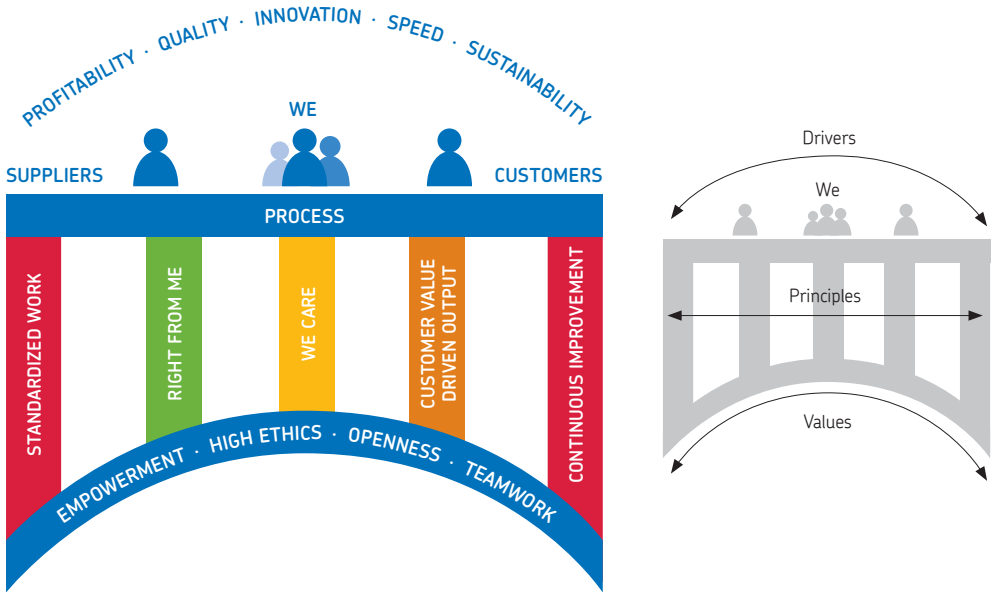


Figure 4.1: The SKF Bridge of Business Excellence (Graux, 2014, sl. 6)

The SKF bridge of excellence, as shown in figure 4.1 is composed of three main categories, these being the principles, drivers, and values. Its purpose is to guide and inspire the organization in their daily activities and operations, and support and guide employees in their decision making. Moreover, with the purpose of increasing the understanding and guiding employees to better understand and respect other decisions taken. The bridge is a symbol and describes the link between SKF's processes, their suppliers and customers. The processes are built on the principles, which are supported by their values and drivers.

Leadership, and the way leadership is interpreted, is a key element described by SKF to secure a successful utilization of the bridge. Instead of having the typical hierarchical top-down approach, SKF emphasizes that SKF business excellence approach requires leadership skills with a bottom-up approach. Leaders that are enabled to draw the strengths and benefits from the roots of the organization, emphasizing on active coaching and supporting of the team members. Moreover, acquiring the skills of balancing the ability to clearly communicate and setting the vision with the ability to delegate responsibility, and engage and empower their teams. Lastly, a leader's team should continuously challenge and strive to improve and strive towards being more effective resulting in being more efficient in their processes. This approach requires leaders that are accessible and have an open approach towards their teams. The thinking model is introduced to increase the understanding of how to utilize the bridge, a guide on how to think and act in different situations. Values, drivers, principles, and methods are supposed to guide SKF into being more effective. The method used and the results achieved by the methods, has the purpose of being more efficient and proceeding with speed.

To further elaborate on the three main categories of the SKF bridge, drivers are the collection of forces that have a more tangible presence in the marketplace. These are reflected in the SKF Group strategic target, these being Profitability, Quality, Innovation, Speed, and Sustainability. The principles, described as guiding their work towards Business Excellence, are *Standardized Work*, *Right For Me*, *We Care*, *Customer Value Driven Output*, and *Continuous Improvement*. The values are considered the heart of SKF, these being *Empowerment*, *High Ethics*, *Openness*, and *Teamwork*. They guide the employees on how they should be perceived as employees which transfers into how SKF is perceived as a company. The five principles guide SKF in choosing the specific methods and procedures leading to improved results. Some are more general and widely adopted throughout the company and others are more specific to certain processes and practices. The way of working and methods are developed based on needs. Results from methods are monitored and used to verify improvements and secure that SKF is moving in the right direction.

The triangle shown in Figure 4.2 is created to increase the understanding of the connections between Business Excellence, quality and Six Sigma. The five principles of BE, based on their drivers and values, guide the direction towards applying the right methods which contribute to securing excellent ways of working with processes and delivering value to their customers. Here, Six sigma represents the structured

data-driven project methodology to address complex deviations. Meanwhile, quality ensures that the voice of the customers and voice of the process are considered. Lastly, the wedge and roller is a demonstration of how SKF is connecting ways of working, ways of improvement and ways of sustaining and standardizing what they do.

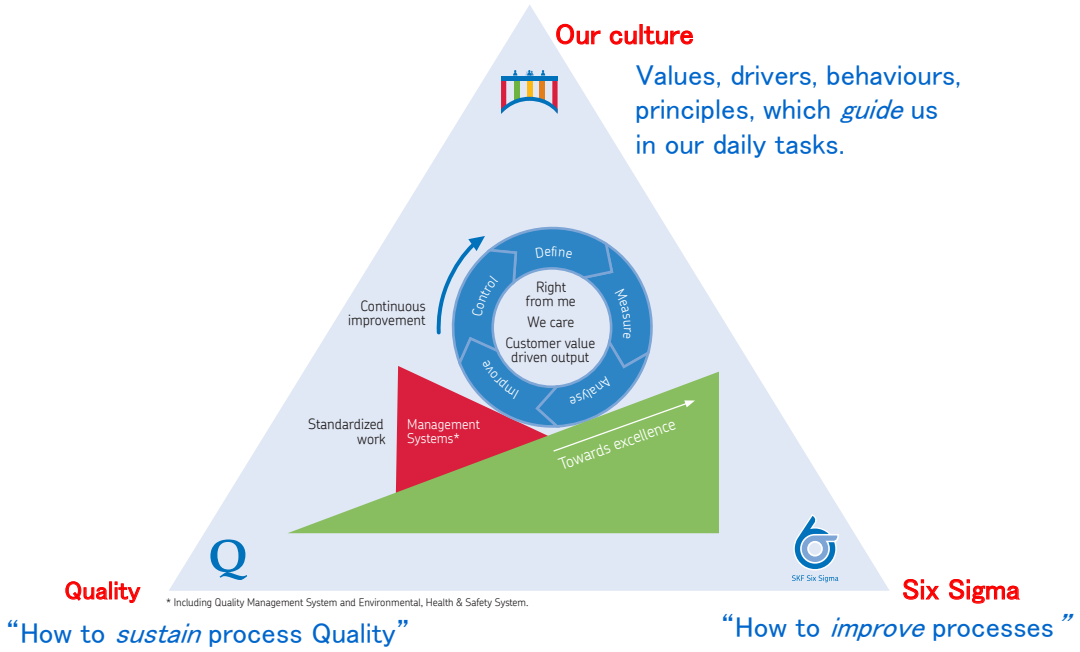


Figure 4.2: The SKF Business Excellence Triangle (Höglund, 2019, sl. 6)

4.2 Employee Perspectives on Business Excellence

When looking at perceptions of interviewees, BE was described as being a part of how SKF had always worked, at least for the past decade. It had been a part of the business in some way, for a long period of time. It was correctly described as introduced to the company first in 2010, and as a development from its predecessor, *Manufacturing Excellence*. In relation to this the lack of sustaining initiatives was brought up as an organization-wide issue. Referring to the rebranding and development of several attempts of introducing BE over the past years. Furthermore, these initiatives were similar in their purpose but introduced with different incentives, yet several interviews saw this as new initiatives. By example, manufacturing excellence was described as being too conceptual and on a too aggregated level for people to identify with. It was further described as being too focused towards the manufacturing and production of SKF. That later resulted in the development of BE, adding the perspective of business to widen the scope and include more than the manufacturing parts of the company.

It was described that previous initiatives had good intentions, but still turned out with less satisfactory results. Therefore, it was argued that several initiatives had

been lost because of misalignment, poor communication and execution. It was further described that people had a hard time translating BE into their daily activities, and realizing how it could contribute to their daily development. Therefore, resulting in misalignment regarding ownership and commitment. Thereby, concerns were raised about BE being too conceptual and abstract and generally a vague concept for people to grasp. Furthermore, it is described as lacking a systematic approach for achieving it. Therefore, they needed something that was more hands-on in its approach, which resulted in the SPS and the SPS implementation.

SPS is perceived to be a more systematic approach for achieving BE compared to its predecessors, being appreciated for its more hands-on focus on tools and methods. Still an issue related to understanding and differentiating BE and SPS was raised. Several people express that BE was not a living system, and nowadays they solemnly focus on SPS. Furthermore, it was mentioned that the pillars of the bridge are not that present nowadays, compared to when it was initially introduced.

The perceived understanding of BE is that it is for everyone and for every function throughout the company, yet the recurring theme is that BE is described as not being a part of white collar functions. Additionally, the focus is driven so much towards the production that the restrictiveness towards working with BE was perceived higher from white-collar functions than from blue-collar functions.
The *SKF Production System* is the current approach of SKF striving for BE. To clarify the Lean understanding gathered from conducting interviews and observations, Lean was described as eliminating and reducing waste throughout the company. The purpose with the SPS implementation is to facilitate a culture change within the company. Furthermore, it was described as the possibility to identify improvements and in creating an improvement culture contributing to flow efficiency by working smarter. Contradicting to that, others view Lean as more generic, only focused on waste and cost and mentioned potential lay-offs as a result of the SPS implementation.

The current approach of SPS is to have a strong manufacturing deployment, and successfully implement it in the production areas. Currently, there is not a strategic focus to have an organization-wide adaptation of SPS, spreading it to other functions outside of the manufacturing. Furthermore, the SPS implementation is described as in its beginning phase of its implementation. The deployment is focused around implementing Lean tools and methods and in its practical execution of it within the factories. Therefore, the current state of the SPS implementation is best described as trying to get the attention, especially from factory management and the SPS champions are working to achieve a buy-in effect from the factory management to start implementing SPS. In the Gothenburg factories, the buy-in has already been achieved from factory management and they are continuously working to push the implementation process further, to develop and achieve the next phases in the implementation process. There are three different phases of the SPS implementation, the first phase is called the transition phase, focused on its execution in one pilot channel and implementing the appropriate tools and methods. The next step is *Phase 2*, the expansion phase; This is when the implementation is spread throughout

the factory, to every operating channel within the factory. Lastly, *Phase 3* is named the acceleration phase; In this phase SPS is supposed to be spread organization-wide, including functions outside of the production and white-collar functions. Furthermore, *Phase 3* was described more as a visionary phase and not clearly defined how it is supposed to be achieved.

The current focus in the Gothenburg factories is to sustain *Phase 1* and in the near future achieve *Phase 2*. Moreover, the warehouse and logistics is still in its beginning steps of their implementation of *Phase 1*. Lastly, it was highlighted by several interviewees that it is important to consider the level of maturity, meaning that the implementation is dependent on the current state of the factory and what level of maturity that factory has achieved when it comes to the implementation of SPS.

Regarding the different phases of SPS, several interviewees described an uncertainty of exactly what the different phases intended. Therefore, the authors received comments that referred to SPS focusing too much on the physical waste rather than the digital waste, and that it is unclear what a lean way of working is. There were also statements that non-production functions see SPS as not for them and that white-collar workers lack understanding of Lean and knowledge of applying Lean in their processes. Therefore, it is important to highlight that the SPS *Phase 3* is not clearly defined, and is still perceived as more of a visionary state. Throughout the interviews, it was difficult to get a clear definition of what *Phase 3* actually wants to be. Even though some interviewees gave a visionary description of what it potentially could be. Regardless of that, it is clear that the purpose of *Phase 3* is to spread it outside of the production into other functions, scaling it towards a company-wide adaptation of SPS. Therefore, it is reasonable why some misunderstandings occurred regarding SPS for white-collar functions.

A recurring theme interviewees described regarding SPS, was the view on it as being extra work or extra effort. Thankfully, in contradiction to this, several interviewers state the importance of considering SPS as neither additional work nor extra effort. It was even expressed that initially it could be considered as extra work, but after achieving quick wins a higher tendency towards a buy-in effect can be expected. The perceived view together with the obtained observations is that SPS receive relatively low priority, and that it is a support function rather than a living approach. Lastly, it was described that the SPS facilitator has the role of inspiring and building up engagement towards achieving the transformations.

Regarding challenges with the SPS deployment, the organization-wide adaptation of SPS was mentioned as the most difficult to overcome. Furthermore, to make people understand that SPS will benefit them in the long-term. Another issue that was mentioned was sustaining *Phase 1*. Moreover, several other reasons were mentioned around a perceived low level of implementation. The current nature of implementation was described as having a *tick in the box* mentality in its approach. Implying that they are doing it for the sake of it, rather than doing it with the

purpose of actually changing employees' mindset or habits. Another supporting statement related to this, is the lack of focus towards creating a deeper understanding in why they are implementing SPS. Describing a lack of understanding why they use certain tools and the purpose behind them. Therefore, training and investments were mentioned as potential facilitators for increasing understanding and to be a driver of a cultural change. It was further mentioned that through an increased understanding in SPS and Lean, an increased engagement and accountability could be expected.

Several interviews mentioned subjects in the context of change management, that disruptive change pushes people into new mindsets and that digitalization is considered a good initiator for shifting people's mindset. It was further highlighted that it is important to have the right people with the right mindset in leadership positions. Leaders need to support people and drive change initiatives, also supporting and facilitating people in doing so. Therefore, the best opportunity to impact leaders' mindset is when a leader is assigned to a new position. Furthermore, the optimal point to persuade leaders into SPS and achieve a buy-in effect.

From a global context, SPS champions are seen as facilitators, and that they should lead, support and guide factories in the transformation. Factories that are committed to SPS could expect a high commitment and support by SPS champions, still the issue was described as achieving the buy-in from factory management. Regarding this, a potential future challenge is the number of factories that the SPS champions support. Referring to the fact that there are not enough champions to support all the group factories if that would be the case. Therefore, identifying that there could be a potential future problem as more factories buy-in to the SPS journey.

Several interviewees referred to the lack of transparency and visualization of information referring to the visual management. This was mentioned as a potential problem solver to several of the daily problems. More generally, observations together with findings point towards an overall issue with communication and visual management and that this area could be improved. Especially in the context of the *Master Plan* and the execution of it. Another subject that was highlighted is how processes are used and utilized throughout the company. Referring to issues with integration between systems, and giving examples of slow systems and problems with attaining the right data. More subtle matters such as reluctance with having defined work or standardized processes in different areas were also mentioned. Therefore, a tendency seems to be more towards mastering the ability to work around the processes rather than agreeing on the current best way. Still, the overall understanding seemed to be that it is potentially good to work in a standardized way and that it can result in contributing to efficiency and effectiveness.

Lastly, Kaizen was mentioned as a tool used for facilitating culture change, even though it was described as focusing on easy wins. Furthermore, it was considered to be push driven and historically too focused on *low hanging fruits*.

4.3 Strategy

The *Master Plan* process is described as the process of defining, deploying and aligning the strategic targets on a yearly basis in the factories. The process was described as being in its beginning phase, following the development plan of the SPS phases. Therefore, expecting a lower level of maturity and knowledge in how to execute it and align it throughout the factories. Furthermore, the process was expected to be executed on a desired level first in *Phase 3*. The *Master Plan* covers the perspective of *Delivery*, *Cost*, *Quality*, *Safety*, and *Environment*, and clustered the objectives in terms of these five areas. One of the reasons and benefits with it was to align the previous divided plans on SPS, project and vision.

Theoretically, the *Master Plan* served to align the strategic focus on continuous improvement, but several concerns were raised regarding the actual reality of that. The ownership and execution of the *Master Plan* process is on the factory management. Several interviewees mentioned challenges and problems with communicating the *Master Plan*. Lastly, none of the interviews claimed that informal discussions on strategy occur on a regular basis. If so, it was discussed at assigned strategy meetings or at *Daily Management* when the *Master Plan* was reviewed.

The purpose with the *Master Plan* process is to clearly communicate the expected targets in a transparent way to achieve buy-in and commitment throughout the factory. One interviewee even described its process as similar to what Toyota does, which contradicted several other interviewees' opinion. Therefore, questioning whom it involved and how much impact employees had in setting the objectives. Furthermore, questioning how the objectives are cascaded up and down the company levels. Some interviewees described it as more of a top-down execution of it, others referred to it as being both top-down and bottom-up. To highlight this, 14 interviewees described the *Master Plan* execution as having a top-down approach, referring to it as being set by management and cascaded down. While, one interviewee argued differently, describing the process as more of a bottom-up approach. Implying that it took in the perspective and considered the perspective of those executing the objectives. Lastly, the authors' observation was more in line with the 14 interviewees, describing more of a top-down execution of the *Master Plan*.

4.4 People

4.4.1 Knowledge

There seems to be a lack of systematically planned career development at the company. It was mentioned that the requirement to have a competence development plan is covered by audits conducted at SKF factories. However, it seems like much of learning is focused on development of job-specific skills through use of a competence matrix. There does not appear to be a clear expectation towards employees' self development, and the responsibility of career development lies mostly with employees themselves. As one of the interviewees described it, "SKF is lucky to have people interested in learning". Moreover, with increased digitalization, it has also become clear that sometimes it is uncertain what competencies are required from people to support this transition. Management understanding regarding innovation-related topics was described as being insufficient. Furthermore, it was also described that there is a gap between the available knowledge and the expected knowledge in several areas, which can only be addressed through training or external hiring. Another interesting aspect mentioned was the frequent unwillingness of production personnel to move to white collar positions, due to the better incentives of their current blue collar jobs.

It was also highlighted that the learning plans for digitalization are currently being developed, hence possibly this issue would be improved. Nonetheless, training has been highlighted as an area of improvement by several interviewees. A potential issue could be that organizational learning seems to be disorganized, and competence development seems to be managed rather insularly with different groups owning different expertise academies. An interviewee mentioned that currently the People Experience (PX) department does not have ownership of organizational learning, and they engage too little in employee development. It was apparent that group PX was working towards improving organizational learning aspects, however, the results remain to be seen. The silo approach to learning is also highlighted by the employee introduction program, which was described as being developed independently by each factory. It is therefore unclear to what extent this covers organization-wide principles such as Business Excellence. A concern raised by some interviewees was that new employees possibly do not receive training regarding the SKF BE principles and the bridge, and they might not get a formal introduction to SPS either. It was suggested that upon hiring managers, there is likely no formal training regarding SKF's expectations from a leader, hence there is no standard norm to good leadership.

When it comes specifically to the SPS training, it seems like SPS workshops are well perceived by employees. This enables a fast buy-in, and creation of a knowledge base. However, much of the SPS training seems to be directed towards managers and the delegation of production workers seems to be limited. Lean leadership training is also questionable based on the leadership styles present at the factory. The SPS central group has expressed that a lean leadership training was started, however this had to be suspended due to the pandemic. Furthermore, there are *Master Plan*

workshops in place, however it appears that currently there is no training regarding Hoshin Kanri, which could be related to the current approach in which master plans are developed and deployed. A different aspect of training was the buddy program, which provided cross-functional exposure for employees to other functions. This was introduced the previous year for the duration of three months, however it has not been continued since then and there were no clear plans for its continuation.

4.4.2 Motivation

From the conducted interviews, it seems like the general understanding regarding motivation is rather low. It was expressed that people are "generally motivated", and that the use of Lean tools has also increased motivation. When asked regarding how to improve motivation, the most common answer received from interviewees was to seek how involved parties can benefit from a specific context, hence looking at direct gain only. Another common description was that in order to have motivated and ambitious employees, it is important to “be hungry to keep improving”.

Involvement is another issue identified. The general involvement of blue-collar employees is problematic. This is present first of all in the SPS implementation, where it was highlighted that production employees should be involved more. Furthermore, the *Master Plan* process has very limited involvement of blue collar employees. It was highlighted that their low interest in the *Master Plan* is likely also due to the attitude of managers who do not talk sufficiently much about the *Master Plan*. By showing the strategic context, the ambition of employees could also be supported.

When it comes to engagement, interviewees have described some ways in which the factory has worked with improving this aspect. However, it appears that there are still many aspects which should be improved in the future. Family days were highlighted as contributing to engagement and motivation. On these days, employees show their loved ones their work environment, to make them more familiar with their work. Furthermore, recognition, and facilitating people to work with areas which matter to them have been described as enablers of employee engagement. With the shift towards proactiveness through the BE journey, it was also noticed that the improvements in quality have worked as inspiration for people to be more engaged.

Interviewees had split opinions regarding the current state of employee engagement. It was described that engagement differs significantly with people, however some have supported that the employee attitude is generally good when the tasks are clear. Others have expressed that employee engagement should be improved, while also describing the difficulty of getting everyone on board with such a large variety of personalities and functions.

When asked regarding SPS engagement, the variety of opinions has increased. Some have expressed that production employees are generally engaged with Lean tools, such as Kaizen. However, others have described that SPS engagement should be improved in order to better focus on showing production employees why this implementation

is beneficial to them. A significant area of improvement for engagement was strategy. It was described that strategic work is less interesting to blue-collar employees than innovation projects. Furthermore, several interviewees have mentioned that these employees are not intrinsically interested in the *Master Plan*, and will hence not look at these strategic goals, unless the topic is treated in a meeting with management. This suggests that production employees likely do not see value in considering aspects, which could be related to the level of their involvement.

4.4.3 Culture

Throughout the company there seems to be a good understanding of the importance of people, however the effects of this understanding are questionable. It was mentioned that the initiatives of *Manufacturing Excellence* and *Business Excellence* have been successful in changing people's attitude. However, multiple people have expressed that a change in mindset is needed, to facilitate Lean thinking. Regarding proactiveness, it was mentioned that the mindset should shift towards finding root causes to problems, to facilitate prevention. Furthermore, a need to shift from a result oriented approach towards a process oriented approach was also highlighted.

This is also apparent in the state of the factory's improvement culture, as it seems like this area needs further development. Through Kaizen, it was noted that there was an improvement towards the continuous improvement culture. A suggested way to facilitate this was by recognizing people and motivating them towards continuous improvement. The importance of this is also supported by the new strategic framework, with the focus on *Develop Yourself, Develop Others, Develop SKF*.

4.4.4 Collaboration

Furthermore, the importance of teamwork and cross-functional collaboration appeared to be well-understood among the interviewees. It was described that cross functional teams lead to faster problem-solving, and better utilization of capabilities. *Daily Management* meetings were also mentioned as having facilitated cross-functional collaboration. The reorganization of the quality and maintenance support functions into a reliability team, was described as a good change, which has led to better knowledge sharing.

Nonetheless, there seem to be issues regarding these. Several interviewees have described silo organization as being problematic. It was expressed that silos persist between functions, while there appear to also be silos between the factory, and group management. Furthermore, it was expressed that silos get more apparent higher up in the organization structure.

4.5 Leadership

A common topic throughout the interviews have been the issues with leadership, which the great majority of interviewees have highlighted as an important issue. The highlighted problems with leadership have covered several areas, therefore these will be grouped below.

4.5.1 Leadership Priorities & Focus

Short-term focus was highlighted by many interviewees as an important issue. One of the interviewees described how sometimes the big picture perspective gets lost through a high focus on short-term goals. Furthermore, others have expressed that through excessive focus on deliveries, the long term perspectives and strategic considerations receive very little attention.

A high focus on costs was also highlighted by several of the interviewees as an issue, who have mentioned that it is often the most important consideration in decision-making. Moreover, an interesting observation by the authors was that support functions often consider themselves as an overhead cost that needs to be justified to production through direct improvements in production performance.

This operational focus is also visible through the Lean implementation, since two interviewees have described that channel managers are often not supportive of SPS through the increased workload and focus on deliveries. Moreover, praise from management is most often focused on deliveries instead of improvement work. When SPS does receive focus, this is often motivated by cost-savings instead of long-term improvements.

Proactiveness is also an aspect which the interviewees considered important to improve. Improvements in technology and automation were described as having helped with shifting the mindset of employees towards proactiveness. Furthermore, an increased focus on near-misses have also been highlighted as beneficial in this development. However, from the majority of interviews it can be inferred that currently the focus is still excessively reactive.

A reactive attitude is also reflected in time allocation. The importance of improving the prioritization with regard to improvement work was mentioned by several interviewees. One of them has highlighted how there is always some time for improvement work in-between daily production activities, however due to the inefficient time management these are not fully utilized. The utility of meetings has also been questioned, with several expressing concern regarding the high number of meetings being planned, without much consideration to the utility of these. Moreover, it was described how recurrent meetings are often maintained without validation to the actual utility of these, therefore many such meetings are possibly no longer bringing the same value to the participants.

An interviewee described how middle managers likely have the hardest time regarding time management, since they have to balance satisfying the needs of higher management as well as their operational activities. Nonetheless, seven interviewees have described inefficient time management as being an issue which leaders face. A symptom expressed was that there is often only time for fixing problems without solving root causes to prevent future issues. It was likewise highlighted that the mindset regarding prioritizations needs to change in order for improvements to receive a focus, and especially for improvements to be implemented in a sustainable manner.

One interviewee highlighted that the poor balance in time allocation is likely caused by managers not delegating responsibilities well, which leads to their excessively operational focus. The managers' perception of their position is likely also connected to this issue, which an interviewee described through "Managers think that they are more important (to the production) than they are in reality. When one of them is missing, life goes on like usual."

An interesting observation from one of the interviewees was that whenever there has been clear focus on continuous improvement, with multiple hours dedicated to the activity, great achievements were visible. Most notably, during SPS workshops on improvement work, when time is set aside to focus on the activity, clear results could be seen.

4.5.2 Leadership Style

A further issue highlighted by interviewees was the way employees lead. While the attitude of managers was expressed as one of the issues, several people have also expressed the difficulty in developing a correct mindset of leaders. Furthermore, finding suitable leaders was also described as a difficulty. Since a great leader needs to have a rather expansive set of aptitudes, it is challenging to find suitable candidates both internally and externally.

The knowledge level of leaders has been highlighted as an issue by three of the interviewees. Furthermore, a person has expressed how there is also a lack of understanding regarding the importance of leadership.

One of the most significant issues with the mindset of leaders has been the previously described short-term focus, which inhibits a high level perspective. This is apparent through the approach of often sub-optimizing processes with a perspective of cutting only minutes from production lead time, while the big picture receives little emphasis. There was also a lack of validation expressed by an interviewee, who mentioned that many of the current processes and systems are present without much questioning regarding their state or purpose. Moreover, it was expressed that employees often take joy and pride in firefighting. By visibly solving a problem that is important to others, it enables them to appear as the hero of the day. As highlighted, in an optimal case there should be no visible fire-fighting since a proactive system would make fire-fighting much less visible.

A further issue highlighted was regarding the lack of leading by example. This was expressed by three interviewees, one of which has also mentioned that this behavior can only be changed by leaders setting a good example. However, when a bad example is set by the managers, this can likewise be mirrored by employees. Interviewees have experienced that managers often replicate bad leadership. Hence, it is very important to avoid replication of poor leadership.

Management support was also highlighted as an area of improvement. It seems like there is little engagement towards BE among managers, and this creates the impression that managers are not fully committed. Interviewees have mentioned that it is especially challenging to get middle management on board with the SPS implementation, and for improved continuous improvement, it was highlighted that more collaboration is needed from channel managers. Furthermore, an issue expressed with their leadership style was that the approach towards implementing change is often more demanding than supportive. However, *Daily Management* meetings have been described as effective in sending good signals to employees. These were well perceived by employees through the managers being close to the production floor. It was also described that a few minutes of daily support towards employees are more important than weekly meetings.

When it comes to top management support for SPS, the opinion was somewhat split. Several interviewees felt like there is a strong support and that it receives sufficient strategic importance. However, others have highlighted that there should be more focus from higher management towards the implementation, while the SPS organization should have a stronger position in the organization.

4.5.3 Goals

Several points have been raised regarding ownership. An issue which was highlighted was the lack of management ownership of driving change. Moreover, the importance of the ownership being spread out to local functions was also expressed. When looking at the SPS implementation, a suggested issue with the sustainability of the initiative was that the ownership lies mostly with management, with other employees having a limited ownership of the SPS implementation. This could also be related to the opinion raised that too little pride is taken in the SPS progress. However, good developments in this area have likewise been expressed, and especially team ownership of KPIs was described as having reached a rather high level.

Interviewees also expressed a lack of accountability, since employees seemed less motivated to maintain management systems when there was a lack of follow-up. Employees tend to focus on what is measured, and what is important to their manager. Hence, to create a proactive culture, it was deemed important for managers to drive the correct mindset, such as requesting root-cause analysis when an issue is solved to prevent recurrence. Furthermore, the consistency of accountability was deemed likewise important, to manage expectations. It was described that increased accountability leads to increased ownership of the results and processes.

Several interviewees have also expressed how currently there is a rather low expectation from employees. Through their own initiatives, there are many individuals who strive to achieve more. However, through systematically higher expectations, it was described that a performance culture could be established, which normalizes an ambitious attitude. Interviewees also expressed how performance measures improving could also facilitate this. Currently, it seems that sometimes employees fear measurements due to fear of bad results. Thus, by increasing transparency of processes, the efficiency could also improve through increased accountability according to interviewees.

5
Discussion

This chapter aims to combine the theoretical framework with the empirical findings, to discuss the identified parallels, which the company could benefit from. Moreover, this chapter aims at addressing the first research question formulated in Section 1.3. The analysis and discussion of the findings are presented in this chapter.

5.1 Business Excellence

From the perspective of SKF's Business Excellence definition and the perceived state of Business Excellence, several interviewees highlighted areas of improvements. The authors of the present study perceived that SKF possesses highly competent, capable, and great employees, based on the conducted interviews and observations; However, it is questionable whether SKF Gothenburg is able to achieve the most out of their employees, and whether the full potential of their capabilities is utilized. This is in line with the eighth waste described by Rizzardo (2020), which is employee underutilization. It seems that the lack of support and ownership of providing the necessary training and education, could be a potential limiting factor for achieving and facilitating a proactive approach towards employee utilization.

Another interesting aspect is the historical tendency of not sustaining initiatives, together with the difficulties in implementing new initiatives. This tendency probably boils down to the perspective of what Netland (2016) identifies as the CSFs, for sustaining and implementing new initiatives. These are management commitment and involvement, training and education, and employee participation and empowerment. It relates to three of the main categories that are identified in this study as potential areas of improvements for SKF.

Netland (2016)'s findings are similar to what Eriksson (2004) describes as important aspects for sustaining excellence, these being leadership commitment, engagement, human resource management, education and customer focus. Furthermore, this relates to what Brown (2014) describes as the organic implementation approach of BE and quality management. Arguably, one of the most important factors is leadership and their support and commitment (Brown, 2014; Eriksson, 2004; Ledbetter, 2018; Liker & Convis, 2012; D. Mann, 2017). Interviews referring to the question of "what is in it for me?" highlights that there is a gap in understanding how to approach motivation regarding incentivization. Therefore, Dahlgaard et al. (2013) emphasizes the important aspect for successful implementation as cultivating an

appropriate organization culture. Lastly, as highlighted by D. Mann (2017), without active support of leadership, initiatives are likely to fail, regardless of the short-term benefits.

To address the shifting focus and lack of consistency that was mentioned by several interviewees, Jeffrey and Michael (2008) is critical about Lean initiatives becoming short-term cost focused. Thus, in line with interviewees fearing potential lay-offs as a consequence of how the SPS is implemented. This implies that they potentially miss a vital definition that Toyota praises, people. Furthermore, it is people who develop the company and should be considered the most valuable resource the company possesses. This is further supported by Dahlgaard-Park (2012) describing that the company has a responsibility to fulfill the needs of its people and in developing them.

It is also important to highlight what Liker and Convis (2012) describes, that Lean is more than just communicating an idea and then adopting a classroom training program. To be successful, there must be supportive actions towards building the foundation and supporting the people doing it. With training, education and development, followed by sustaining, and long-term benefits will come. This is also supported by Shuck and Wollard (2010), describing that organizations should develop learning and development programs in all levels of the organization. Furthermore, as Bakotić and Rogošić (2017) highlights that training should be viewed more broadly than only as competence development.

As of currently, SPS is intended to be organization-wide spread in phase three of the implementation. This is something which the authors are critical towards, as the potential benefits could be utilized earlier, if white-collar and other functions are included earlier in the implementation phases. Moreover, R. Mann et al. (2011) support this aspect by describing the importance of utilizing BE as a wider framework, hereby covering all activities of the company. Similar to the intention of SKF's BE and SPS *Phase 3*. Furthermore, based on the description of Dahlgaard et al. (2013), SKF has chosen its BEM already, and it is in place. The problem seems to be that it is neither utilized nor fully understood across the organization.
The *SKF Production System* and the ongoing SPS implementation have the possibility to achieve the intended efforts that are ongoing. From the authors point of view, it is understandable why SKF chose Lean as their approach forward, towards reaching BE. Assumably, it is related to what D. Mann (2017) mentions regarding the applicability with Lean, where tools and methods are easily understood, therefore easy to begin with.

Another interesting perspective is that *Phase 1* and *2* could be viewed more as implementing a Lean production system. Furthermore, the visionary description of *Phase 3* has several similarities towards what is described by D. Mann (2017) as a Lean management system. One of the issues with this, is the limited scope of SPS *Phase 1* and *2* and their focus towards implementation in the production and the perceived focus on tools as the main driver for culture change. Several authors are critical towards this Lean implementation approach (Jeffrey & Michael, 2008;

Ledbetter, 2018; Liker & Convis, 2012; Rizzardo, 2020). Related to what several interviewees' have described, facing challenges upon implementation and resistance to implementing. This is not to be mistaken for the conclusion that the initiative can contribute with value or improvements. Hence, it is more likely that it will limit the possible outcome and delay the process of achieving the intended future state.

Therefore, as suggested by Rizzardo (2020), the implementation should focus on developing the understanding of principles and the reasoning behind them supported by increased focus on training and education. Furthermore, as Liker and Convis (2012) emphasize, it is not the tools itself that should be in focus, rather how the leadership approach them and utilize them. This is further supported by Lasrado and Kassem (2021) who emphasize that beyond management support, the focus should be on the people dimension and involving employees. This is in line with what has been observed and described from interviewees, that the tool focus will probably lead to less satisfactory results with the implementation which has been shown and mentioned by several interviews. Therefore, it is important to develop the understanding to whom it concerns, so that they can decide on the correct approach and utilize their knowledge to decide when a certain tool is applicable or not. Otherwise, there is a high risk of sub-optimization of areas and that some areas are more developed than others.

Another aspect connected to the understanding behind principles and tools is why they are implemented in the first place. For example, the importance of introducing discipline and a common view on how things are done from implementing 5S, resulting in creating standardized processes. Moreover, Rizzardo (2020) describes the importance of not viewing it as a locked in state that is achieved, instead it should be viewed as a leap forward and a common and agreed way of best practice, which still could be, and should be improved further. This also relates to what Rizzardo (2020) highlights with the importance of not hunting figures, rather understanding that everything can be developed into a better state. Still understanding that agreeing on the current best way of doing things is important for being able to continuously improve the processes. Lastly, if that basic principle is overlooked, there is a high likelihood that improvements will not be sustained over time.

Lastly, another aspect is KPIs and Kaizen becoming a number driven implementation process, with a *tick in the box* mentality. This is something that Ledbetter (2018) is critical towards. He describes that it is a misunderstanding to believe that culture is a number driven improvement project. This approach entails that the focus is exclusively on the number of improvements done, rather than the meaning behind these improvements.

5.2 Strategy

The *Master Plan* process is the SKF approach of cascading strategic objectives throughout the factories. It has several similarities with what Liker and Convis (2012) describe as Hoshin Kanri, another tool for achieving alignment and breaking down strategic targets throughout a company. The difference is according to Liker and Convis (2012), how the process is done. Using *catchball* to ball around ideas and objectives up and down throughout the organization before targets are set at the annual *Master Plan* workshop meeting would be one approach. This would facilitate and increase involvement, by including more people and their perspectives before decisions and targets are set. Furthermore, this could facilitate a consensus culture and increased understanding of what is expected in the upcoming period, resulting in increased participation and exposure to the big picture view.

This is not something that is done at SKF Gothenburg as of today, the *Master Plan* process involving people in the top level or managerial level of the factories. Therefore, missing the important perspectives of those which later have impact towards reaching the target. The authors are critical towards creating this barrier or silo within the *Master Plan* process. Therefore, a recommendation is to involve everyone in this process. While, the plan with SPS *Phase 3* is to involve more people in the *Master Plan* process, which could arguably be considered too late. The reason why it should be done at an earlier phase is to create engagement, ownership and involvement in setting the objectives, which facilitates a better understanding of the big picture and increases the understanding of how one's particular work contributes to the overall goals and objectives of the company. This will further support the feeling of respect and being heard at the company, especially in the operative functions, which is highlighted by Jeffrey and Michael (2008), Ledbetter (2018), and Liker and Convis (2012) as an important aspect in creating and sustaining a culture of excellence.

5.3 People

5.3.1 Knowledge

As described, there appears to be no systematic career development at the case company, in contrast to the outstanding companies highlighted by Brown (2013b). Research has extensively shown the value of a high importance placed on strategic human resource management (Black & Porter, 1996; Eriksson, 2004). Furthermore, structured career development could help with aspects important for excellent approaches regarding employees, such as development opportunities (Schaufeli, 2012), job rotations stimulating learning (Gialuisi & Coetzer, 2013; Schaufeli, 2012; Wollard & Shuck, 2011), and an active career development that requires employees to learn continuously (Schaufeli, 2012). This can be facilitated by a performance culture supported by Albrecht et al. (2015)'s suggestion for creating performance and development goals, and providing continuous feedback and recognition. These approaches also contribute to a positive aggregate impression of employees regarding HR practices in a positive manner (Kehoe & Wright, 2013).

The approach towards organizational learning could likewise be improved, to make it more systematic and proactive. HR could collaborate more with the functional academies to create a shared platform for knowledge development, with central competencies on learning. Furthermore, it would be important to increase the organizational knowledge on leadership, while also ensuring that the BE knowledge is developed in leaders (Brown, 2013b). It is important for HR efforts to be implemented consistently and uniformly throughout the organization, and to communicate effectively regarding these, in order to increase visibility and understanding regarding these initiatives. Moreover, this can make employees feel part of a supportive environment, and hereby enhancing the aggregate perception of development efforts.

It is especially important to align onboarding processes and training, to ensure the consistency of knowledge base for newly hired employees. In this research, a clear indication regarding a shared understanding among employees regarding BE has not been found. Brown (2013b) has highlighted the importance of having improved introduction trainings, since hereby a good foundation of understanding regarding BE can be achieved organization-wide. Furthermore, with a well targeted introduction strategy, new hires' initial anxiety described by Shuck and Wollard (2010) could also be reduced, while aiming to transform their starting excitement into high levels of engagement. Currently it appears that the case company has neither a standardized onboarding process, nor a well-defined one, which allows for higher variance in the knowledge level of new hires.

Brown (2013b) and Schaufeli (2012) also showed the importance of excellent organizations having a culture of learning and continuous development. This can be facilitated through employee development management suggested by Albrecht et al. (2015). Hereby, the case company's current state with no clear expectations to learn and develop could be improved, potentially also alleviating the challenges faced due to lack of competence and lack of big picture understanding. Bakotić and Rogošić (2017) described how training can address continuous learning, with employees learning about the context of their work in order to understand the big picture perspective of their contribution. To address potential issues with time allocation, Brown (2013b) suggests shorter and more frequent training periods.

5.3.2 Motivation

As was highlighted, an important issue with motivation is the lack of understanding regarding motivation theory. This is possibly also related to companies generally lacking understanding of people, which Dahlgaard-Park (2012) has highlighted.
Throughout the study, there were very few mentions of aspects related to intrinsic motivation. Hence, the observation of the researchers has been that motivation at the case company is only understood as extrinsic motivation. This misunderstanding regarding motivation increases the difficulty of creating a motivating environment for employees, which would enable their engagement. To address this, better knowledge regarding intrinsic motivation could be developed with leaders. Self-determination theory, as introduced by Ryan and Deci (2000), is one potential approach towards

increasing intrinsic motivation, as presented in this study. The psychological needs of autonomy, relatedness and competence can be tied to several of the highlighted issues, therefore they are also a potential approach towards solving these.

Involvement was also highlighted as a driver of engagement. When reflecting on motivation theory, involvement can be tied to all three needs of self-determination theory. When employees are involved, their sense of autonomy is satisfied through having control over the outcome of an activity. Furthermore, relatedness is addressed through employees' feeling of being taken into consideration, which in turn makes them feel cared for, hence increasing relatedness. The need for competence is also satisfied when people feel like their contribution makes a difference, hence they feel effective at facing the challenge at hand. The importance of involvement is also highlighted by Bakotić and Rogošić (2017) who have described how involvement can lead to improvement of continuous improvement, integration and alignment of processes, increased responsibility for results, increased awareness of business needs, improved job satisfaction, and increased ownership. Employee involvement is facilitated by training, communication, and empowerment (Bakotić & Rogošić, 2017). At the case company, the level of involvement was considered rather low, especially when it comes to blue collar employees.

Strategy is an area which could benefit the most from increased involvement. Through the study, it was highlighted that the *Master Plan* has a very high variance in the degree to which employees are involved with the process. Therefore, a more interactive approach like Hoshin Kanri could be a potential framework for increasing involvement(Ledbetter, 2018; Liker & Convis, 2012). Furthermore, management activities could likewise be delegated throughout the decision chain in order to increase employee empowerment. Lasrado and Kassem (2021) described how involving employees is crucial for a successful quality journey. When increasing involvement regarding strategy, it is important to convey the message in a simple and compact way, which is targeted to the audience of interest; Moreover, it is suggested for managers to discuss strategic issues with employees on a daily basis (Brown, 2013a; Nienaber & Martins, 2020). These approaches could likely help with improving the blue collar engagement with strategy, which was highlighted as an area of improvement.

While the suggested approaches would by themselves improve employee engagement, it is also important for the case company to create a more dedicated focus on improving this aspect. Hence, the company could create an HR framework targeting employee engagement, which could include the described approaches towards increasing involvement and empowerment, while also focusing on other ways to improve employee engagement. Schaufeli (2012) suggests that engagement improving initiatives should focus on enabling the feeling of self-efficacy in employees. Through the case study, it was highlighted that the employee engagement levels vary, and the approaches towards its improvement are rather limited. The importance of employee engagement for BE is clearly supported by research (Black & Porter, 1996; Eriksson, 2004), while it also improves general employee well-being and the aggregate perception of their work environment (Ariani, 2013; Kehoe & Wright, 2013; Schaufeli,

2012; Shuck et al., 2011; Wollard & Shuck, 2011).

5.3.3 Culture

Cultivating an appropriate organizational culture is likely the most important in a BE journey (Dahlgaard et al., 2013). Hence, SKF Gothenburg could improve its focus on the cultural transformation in its journey towards excellence. The findings have highlighted how there should be a more welcoming approach towards BE, which could be facilitated through improved understanding of principles and leadership education (Brown, 2013b). Furthermore, a need for shifting the mindset towards proactiveness was also apparent at the case company, which is likely related to the current state of the continuous improvement culture at the company. While the importance of such a culture is extensively described in research (Black & Porter, 1996; Brown, 2013b), there appears to be less guidance towards how it can be achieved. Important focus areas would be senior leadership's drive for continuous improvement (Brown, 2013a), and a clear plan for facilitating and working towards culture change (Brown, 2013b).

5.3.4 Collaboration

The importance of working together seems to be well understood by SKF, however, it is questionable to what degree this understanding is translated into the way work is conducted. The findings have described how employees still experience silos both within SKF Gothenburg, as well as between the factory and SKF Group. Furthermore, the researchers found that the extent to which cross-functional work is applied, is also limited. The importance of collaboration can be tied to multiple aspects such as increased involvement in decision-making through increased communication, as well as better contextual understanding. While it supports increased variety in work roles and growth opportunities (Gialuisi & Coetzer, 2013), and improved teamwork structures (Black & Porter, 1996), it also facilitates a socially supportive work environment (Schaufeli, 2012). Bringing the leadership team together on a regular basis, which Brown (2013b) supports as highly important, is fortunately already implemented at the case company to a certain extent. However, it is likewise important to create an open culture that facilitates collaboration and contribution while cross-functional improvement teams and increased emphasis on improvements spanning multiple processes can also improve cross-functional collaboration (Brown, 2013b).

5.4 Leadership

As mentioned before, one of the most important aspects according to several authors is management commitment and active support (Brown, 2013a; Eriksson, 2004; Lasrado & Kassem, 2021; Ledbetter, 2018; Liker & Convis, 2012; D. Mann, 2017). If this is not addressed by SKF, it could become a potential issue upon implementing SPS, resulting in decreasing the probability of achieving the Lean implementation or sustaining the SPS initiative long-term.

A tendency that was identified by the authors and further received from interviewees, was the short-term focus. Leaders being occupied with daily activities rather than developing the business and performing development activities. According to Liker and Convis (2012), this could be related to leaders still locked in the conventional mindset. As D. Mann (2017) highlights, focusing on reaching targets and goals, rather than developing and pushing the process forward. Assumingly, leaders have been assigned to their positions because they are good at delivering. Therefore, as highlighted by researchers (Jeffrey & Michael, 2008; Liker & Convis, 2012), SKF needs to address this and take ownership and support these leaders in transitioning towards a transformational or Lean leadership style. Providing them education and training to acquire the necessary skills and mindset that this transformation requires. This is further supported by Shuck and Wollard (2010) describing that leaders require training into their roles. Moreover, this is oftentimes overlooked or ignored by organizations. The way leaders act is considered a critical component to achieve this transformation and to make the journey smoother. Leaders are the ones setting the foundation for creating the intended culture and future culture needed.

The issue with transparency, communication and visualization can be referred to as important leadership criterias, since it is important for leaders to be open towards self-development and in developing subordinates (Ledbetter, 2018; Liker & Convis, 2012; Rizzardo, 2020). Furthermore, being transparent about not being the expert in all fields, letting subordinates take responsibility, and guiding them in their work.

Another aspect that was mentioned was the concern that the SPS implementation resulted in headcount reductions. Therefore, it is of utmost importance that SKF address this matter, and clearly showcase to employees so that they understand what Liker and Convis (2012), and Dennis (2007) emphasize, that people are the most valuable resource a company possesses.

Lastly, the view on SPS as a support function rather than a *living system*, is harming the possible benefits of the implementation. Leaders need to lead and take ownership of the implementation. SPS coordinators and facilitators are the supporters of the implementation, they should continue to support the leaders in this transition. Still, the responsibility is on management and leaders in the factories. Hence, every leader throughout the factories must be supported, and given the opportunity to develop and acquire the right competence and skills towards this transition. Otherwise, there is a high risk of limiting the possibility of successfully implementing and sustaining the initiative.

6

Recommendations

This chapter serves the purpose of concluding the analysis and discussion presented in the previous chapter. Moreover, it serves to address the second research question formulated in Section 1.3. Recommendations for the case company have been developed in order to improve their current level of business excellence culture. These recommendations were based on the research presented in the literature review, and were adapted towards the context of the case company. The intention when creating recommendations has been for them to be highly actionable and specific to the organizational environment.

6.1 Business Excellence

Increased understanding through improved training of BE & SPS

First of all, it is highly recommended to increase the focus on training of lean principles and connect it with the long-term vision. Moreover, increased training and improved overall understanding of the correlation between BE and lean training. By including and expanding the BE context in the lean training, with increased understanding of its connections and intersections and utilizing the bridge and values more frequently. Furthermore, it is recommended to start training of all employees early in the SPS implementation. One of the most important aspects to consider is leadership and understanding lean leadership. It is especially important that leaders acquire the right set of skills and knowledge to be able to set the vision, and support and communicate the mission. Lastly, SPS intends to increase the efficiency and proactivity and result in reduced workload. It is crucial to establish clear routines so that the message is visually conveyed and that people can notice the difference in their day-to-day activities.

Establishing a vision and laying foundations for SPS *Phase 3*

The case company should define a clear idea of what SPS *Phase 3* is and utilize and communicate it actively in progression of the implementation. Secondly, the involvement of white collar employees should not be delayed, but everyone should be included and involved from the beginning and start of *Phase 2*. Lastly, Lean is for everyone and is in everyone's interest, therefore every function should be included.

Improved SPS ownership and accountability throughout the factory

Another recommendation when it comes to SPS is to increase the ownership and accountability throughout the whole factory, not solemnly relying on the SPS facilitators and factory managers' ownership. Furthermore, the company could benefit from a supportive delegation structure by either increasing the number of resources or creating mandate and accountability for better time allocation as well as ownership of time management. Moreover, it could be helpful to establish clear routines and accountability, and to follow-up the progress in driving change. For example, when recertifying 5S in a channel, a root cause analysis of the relapse as well as a clear action plan could be requested. Losing the 5S certification should have clear accountability consequences similar to what is required when external audits are performed. Hence, requesting corrective actions, plans and timeline, and validating that each step is followed-through.

Increased dedication to SPS

To increase overall dedication towards the SPS implementation, a potential approach would be to increase resources of the effort. Furthermore, in some cases it could be beneficial to push for SPS implementation instead of waiting for channel buy-in. Creating clear development plans for how factories can move towards an SPS implementation and establishing knowledge sharing between factories during the process could likewise be beneficial. Lastly, to improve the popularity of the effort, the SPS image and marketing within SKF could be improved.

Improved Lean methods implementation and understanding of principles

Communication and visual management are key pillars towards transferring information quickly and efficiently, therefore a recommendation is to improve the visual management. Moreover, increasing the understanding of lean principles and tools, and the reasoning behind them could be beneficial. These tools are meant to facilitate the Lean transformation, therefore the importance of people utilizing it should be emphasized. Creating an environment that facilitates the usage of different tools could support this. Moreover, creating clear incentives for tools to be utilized by allowing and establishing dedicated time to work on continuous improvements, could boost their use in the initiation phase to develop them towards being part of a living system.

6.2 Strategy

Hoshin Kanri implementation and focus

When it comes to strategy, the highest priority should be to implement and train Hoshin Kanri and *Nemawashi* throughout the organization, with highest focus on leaders. Upstream Hoshin Kanri should be normalized and the discussion regarding strategy should be increased throughout the organization. This bottom-up approach

should be facilitated at all levels of the company in order to increase strategy involvement.

Improved *Master Plan* visibility and ownership

When it comes to visualization of the *Master Plan* and the progress, this should be done more extensively, such that all employees see it on a daily basis. Furthermore, the *Master Plan* ownership should be increased, by tying it to operational goals and objectives. Lastly, *Master Plan* review currently conducted quarterly could be done more often, to create an environment of accountability of the progress and ownership of the execution.

Improved *Daily Management* communication

When it comes to *Daily Management* meetings, it is suggested for messages from higher levels of *Daily Management* meetings to be communicated back down the information chain. Furthermore, it could be helpful to spread the information throughout the organization to increase visibility as well as to facilitate increased involvement.

Consistency in implementation to reduce change fatigue

Lastly, it is recommended to fully commit to the SPS implementation and attempt to tie previous business excellence approaches towards supporting it. Hence, it should be clearly communicated how previous efforts fit into the BE context as well as their synergy towards SPS. Hereby change fatigue could be reduced by better visibility of the continuity of SKF's BE efforts.

6.3 People

Creating a learning environment with Increased collaboration

One suggestion for facilitating this recommendation would be to move the ownership of learning to a central PX function instead of having it solely on local management. This could also facilitate for more coordination and collaboration regarding learning. It could be beneficial to create a common learning strategy and a plan towards its execution. To increase cohesiveness of learning, all Academies with scattered oversight currently, could benefit from more central coordination whereby it could also lead to improved collaboration efforts. Lastly, it could be beneficial to create a company wide onboarding training, and to create some standardization regarding the local onboardings in order to ensure there is sufficient information in place for anyone joining a new function.

Improved employee involvement on all levels

First of all, employee involvement should be focused on the *Master Plan* process, to achieve an implementation more similar to Hoshin Kanri. To facilitate this, *Master*

Plan objectives could be better visualized in *Daily Management* meetings on all levels. Potentially, the involvement in these *Daily Management* meetings could also be improved. However, most importantly management activities and responsibilities need to be better delegated throughout the command chain, which could lead to increased employee engagement.

Increased knowledge level through education

The general big picture understanding should be improved to enable a comprehensive overview of processes and functions. Furthermore, an increased knowledge of the full value chain could further facilitate this. Most importantly, to support the company's Lean transformation, it is critical that all managers starting from channel managers have training in lean principles and lean leadership, in order to ensure that a sufficiently high level of knowledge about lean is maintained throughout the organization.

Improved engagement with training

Firstly, the general understanding regarding employee engagement should be improved at the company. This will facilitate efforts at creating training, among other aspects, engaging. Moreover, improving involvement through better accessibility could also be beneficial towards making trainings more engaging. Lastly, by targeting drivers of intrinsic determination, trainings could be improved by making them more modular in delivery. This would allow for easier scheduling due to the small blocks of time required as well as create a stronger sense of achievement through better progress tracking.

Improved cross-functional collaboration and knowledge sharing

Knowledge sharing improvements should start by creating better platforms for factories to collaborate with each other. Potentially forums could also be created where individuals from different factories could meet and share experiences. Cross-functional collaboration and cross-functional improvement projects should further be facilitated not only to break down silos but also to create an environment of open discussion and collaboration. Re-introduction of job rotations would likely be the best initial step for the studied organization to take.

Increased understanding and utilization of intrinsic motivation

As shown by this research, intrinsic motivation is the biggest driver towards employee engagement. Hence, it is crucial for leaders to understand what drives intrinsic motivation and how to channel it in employees. Therefore, training regarding motivation theory should be included in standard leadership trainings, while also covering it during onboarding. To support this, a stronger knowledge core should be created and maintained centrally at PX. Herewith, learning efforts regarding motivation could be better focused globally.

6.4 Leadership

Improved knowledge of lean leadership

An ideal leadership model should be developed which could then be taught throughout the organization. With the context of the Lean transformation, a lean leadership model focused around transformational leadership could be the most beneficial. Herewith, clearer expectations regarding leadership could be established, leading to the opportunity for everyone to improve in this regard. Leadership improvements could also be supported by better onboarding and periodic trainings, whereby intrinsic motivation of leaders is channeled to facilitate improvement. Moreover, it is important that such a leadership model is in line with company values and strategies, hence there could be an implicit expectation for the support and ownership of SPS efforts throughout the organization. Moreover, with a general focus on BE throughout leadership, employees would have a stronger sense of management support and prioritization.

Organization supporting SPS implementation

The current organizational structure of the studied company could be improved to better reflect Lean values and approaches. Hereby, the management span of control could be further decreased by better delegation of management activities and responsibilities. Furthermore, creating smaller team sizes could potentially also help in this regard.

Improved proactiveness and long-term focus

It is crucial for the importance of long-term focus to receive more attention. A certain accountability could also be implemented to create an expectation towards strategic focus. To implement this, all employees could review their time allocations regarding operational and strategic tasks periodically, to ensure sufficient strategic activities are pursued. Hereby, higher levels of management should allocate a higher proportion of their time towards strategic activities. Moreover, it is important for fire fighting activities to require root cause analysis, whereby preventive actions are motivated to prevent future issues. Such expectations could be introduced with the roll-out of defined work for white collar employees.

Increased focus on improvement work

To ensure that improvement work receives sufficient focus and time, an expectation could be created towards employees scheduling blocks dedicated to improvement activities on a weekly basis. Hereby, a culture of improvement could be facilitated, where leaders are also supporting such a prioritization. Moreover, it could be beneficial to create a culture of personal development, whereby employees are motivated and supported towards improvements in areas not directly related to their jobs. This could further facilitate intrinsic motivation and positive attitudes towards improvement work.

7

Conclusion

In this paper, a qualitative case study of SKF Gothenburg was presented. The aim of the research was to identify issues with the company's current state of Business Excellence, and to seek improvements to these. To achieve this, two research questions were formulated, which will be further addressed below. The research involved conducting a literature review to serve as a knowledge basis. This knowledge was extended with data gathered from 22 employee interviews, three external interviewees, observations, and review of company documentation. This data was then analyzed, which formed the basis for describing the company's current state and formulating potential improvements. The first research question,

I. *What are potential improvement areas with the current state of Business Excellence at SKF Gothenburg?*,

was addressed through findings regarding issues in the areas of the company's historical context, their BE framework, and aspects related to strategy, people, and leadership. Issues with BE were highlighted as the lack of understanding and alignment in the company, as well as commitment. Areas of improvement in strategy were highlighted as related to the process of creating and deploying strategy, as well as communication related to strategy. When it comes to people aspects, several problems were highlighted related to knowledge and its management, understanding and development of motivation, the culture of improvement, and cross-functional collaboration. Areas of improvement related to leadership included aspects related to leadership styles, focus on proactiveness, strategic view, and dedication to improvement. The second research question,

II. *How can the Business Excellence culture at SKF Gothenburg be improved?*,

was addressed through recommendations for each of the identified problem areas, based on the research literature. Recommendations related to BE were related to improving understanding through education, better alignment and communication of vision, and increasing ownership and dedication. Strategy recommendations included use of Hoshin Kanri, as well as better visibility and communication regarding strategy. People aspects could be improved through better approaches to education and continuous learning, improved understanding of motivation and its deployment, as well as increased focus on collaboration. Lastly, leadership issues were addressed by suggesting deployment of lean leadership, improved focus on proactiveness and strategic issues, and commitment to improvement work.

The case company has gone through a long journey of excellence, the results of which can clearly be seen on the generally good state of working with all areas discussed. Nonetheless, what sets excellent companies apart, is sustaining excellence efforts with focus on continuously becoming better. This paper aimed to help in this journey by suggesting improvement areas on which the company could focus next. By partially addressing the call for research by Jarskär and Stiblert (2016), this study has expanded on the scope of analysis and attempted to look at the entire factory, especially with an increased focus on manufacturing. Hereby, this study both supported and nuanced earlier findings, while offering new insight and additional understanding of the case company's BE efforts.

Unfortunately, the issues raised by the earlier study and focusing only on the finance function of the *Actuation System* division, are still very relevant today and were largely covered by the current study as well. In the six years since the study of Jarskär and Stiblert (2016) was completed, *Actuation System* is no longer part of SKF Gothenburg; However, the fact that the challenges the department was facing still have such a high relevance today, points towards an underlying core that appears to not have changed sufficiently much. Furthermore, it also raises questions whether this core is embedded into the Gothenburg factory, whether it is also present in the group organization, and what could be the reason towards the existence of these potentially shared problems. Lastly, it would be interesting to see how this core could be addressed, through better understanding of causes leading to identified effects, and through potential improvements that better address these root causes.

Therefore, the authors suggest future research to study the group organization's journey with BE, in order to identify potential commonalities and differences with the journey of the Gothenburg factory. This could improve understanding regarding the root cause of the issues highlighted, and hence better address these. Furthermore, future studies could increase their focus on the company's customer orientation, potentially studying how they could be involved towards continuous improvement, as highlighted by Eriksson et al. (2016). A better understanding of the company's effort with BE could also be achieved by benchmarking against a BEM like EFQM or SIQ, by benchmarking against other companies, or through a longitudinal study analyzing the BE developments through time to better understand the company's context and its implications.

The authors hope that SKF continues on its improvement journey with the performance and reliability of a roller bearing's rotation, and wish the company to maintain the sturdiness of a self-aligning bearing in the process.

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