



**LUND UNIVERSITY**  
School of Economics and Management

# **Master Thesis**

Master's in Management  
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Continuous Improvement Processes, just a trend or a proven success-factor for  
organisations?  
The disparity between operational and office employees

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## **Abstract**

**Background and Objectives:** This research explored the possibility of organisations implementing the work of CIP for the right beneficial reason, or if the implementation was done because the subject is a trend. While CIP-methods are getting more and more popular, it remains in many cases unclear which concepts suit best to what organisation. Having a single organisation implementing a numerous variety of concepts suggests that the use of CIP-method is sporadic and is closely linked to popularity and a word-of-mouth style. This area of research is approached with a quantitative data collection strategy. By gathering a significant amount of data from research units from a different nationality, the area of expertise and working experience, it was possible to conclude a sample as generalised as possible. The objectives for this study was to provide possibilities for organisations to take into consideration for improving the work of CIP and see if companies work with CIP-methods because they see a real benefit in using them or if it is being used because of the trend.

**Findings:** With the usage of the qualitative research strategy, and using a questionnaire as the collective data method, it was achievable to acquire much information about employees from different industries, divided from Sweden and Germany. The gathered data were analysed manually and divided into five different categories. These categories were administrative & operational employees, employees working 0-4 years, 5-9 years and 10+, to more clearly being able to analyse, interpret and draw conclusions.

**Implications and Conclusion:** The findings from this research are an indication of how the situation looks like today. We could see a mix of responses from the survey, both pointing to the fact that certain CIP-methods are being used for their respective beneficial use, and certain CIP-methods are being used because it is a trend to work with them. Thus, a definite difference in usage of certain CIP-methods and how it was considered necessary for the organisation between employees working in an operational position and employees working in an administrative position.

**Keywords:** Continuous Improvement Processes, Lean Management, Six Sigma, Kaizen, Shopfloor Management, Trend

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## **List of abbreviations**

Approx. – Approximately

CIP - Continuous Improvement Processes

SFM - Shopfloor Management

LM - Lean Management



## **1. Introduction**

This chapter is an introduction to this master thesis. In here, the background, purpose, and objectives of the study will be described. Furthermore, the research questions will be presented together with limitations and an outline of the structure of this thesis will be provided.

### **1.1 Background**

Continuous improvement processes (CIP) like Lean Management (LM) are prevalent in organisations (Voss, 2005). Their primary purpose is to improve the efficiency and effectiveness of work-processes in a sustained way (Imai, 1986). The focus of these concepts is mostly in encouraging and empowering the frontline/operational personnel to expedite the process improvement themselves (MacDuffie, 1995). A vast amount of different tools/methods has been established until now, and there are always new ones to come. In the scope of this thesis, the focus is on four concepts related to CIP: LM, Six Sigma, Kaizen, and Shopfloor Management (SFM). While the first three are well established and all apparent for more than 20 years, SFM is a somewhat new tool, firstly introduced in 2009 (Peters, 2009).

While the idea of CIP is prevalent, the reasoning behind which concepts suit best to what organisation remains unclear (Gershon, 2017). The numerous application of a variety of concepts within a single organisation suggests that a lot of the usage is sporadic and closely linked to popularity and a word-of-mouth style (Gershon, 2017). Additionally, in the last years, the approach of applying these methods got questioned more and more because they hinder disruptive innovation (Ashkenas, 2012). For future work, it is crucial to determine the real benefit from applying CIP because otherwise, these methods will eventually cause more additional work than they reduce it (Ashkenas, 2013).

### **1.2 Purpose and objectives**

The purpose of this research is to relate the reasonings of implementation and usage of CIP in organisations in Sweden and Germany to the existing theoretical knowledge on the subject in general as well as the defined CIP methods. This will contribute to a better understanding of the reasoning behind the usage of certain CIP-methods. The objective of this research is to gather

data from research units from two different working field to make a comparison in usage and reason of usage.

The objectives of this study are to present different possibilities for improvements that companies might make use of. Furthermore, the study aims to see if CIP-methods are being implemented and used for their real beneficial purpose, or if it is being used because of the trend.

### **1.3 Research Questions**

Looking at our purpose and problem definition, our main aim is to discover how the usage of CIP methods differ between administrative working environments (e.g., management, offices) to operational environments (e.g., factory work, moving goods within a warehouse). This leads us to our primary research question:

- Are the people working with CIP methods using it because they see a real benefit in it, or just simply because it is a trend?

This research leading question will be the basis for this thesis. However, if there are any differences, we aim to investigate how these differences occur and find out what the background behind it is. Therefore, we need to answer two more questions:

- What is the reasoning behind the usage of the decided CIP methods in the respective working environment?
- What are the differences in the relevance and usage of the decided CIP methods in the respective working environment?

### **1.4 Research Limitation**

This study will be limited to only four CIP; LM, Six Sigma, Kaizen and SFM. We limited it to these four because these are the ones that we, through literature and experience, felt are the most common ones. This limitation is necessary because of the limited time and resources for this study. With more time on our hands, we could have included more CIP and conducted a broader and more advanced study.

We chose to limit the sample of this study to only people working in Sweden and Germany. This is also because there is only limited time and resources for this research. The reason why Sweden and Germany were chosen will be described in chapter 2.2.

It is additionally important to note that the participation in this study is not proportional to the structure of all industries or working functions/experience. Thus, the result should always be seen about these specific demographics in chapter 4.1.

## 1.5 Report Outline

To answer the research questions in an easy to comprehend and overview way, this thesis has been structured as presented in Table 1:

*Table 1 Thesis outline*

<b>Chapter</b>	<b>Content</b>
Introduction	<ul style="list-style-type: none"> <li>• Introduce the reader to the topic</li> <li>• Presenting the background, purpose, objectives, and problem</li> <li>• Definition of the research questions</li> </ul>
Methodology	<ul style="list-style-type: none"> <li>• Describing how the work within this thesis has been done</li> <li>• Reflection upon reliability and validity of the results</li> </ul>
Theoretical Framework	<ul style="list-style-type: none"> <li>• Presenting the relevant theoretical foundation on which the analysis will be based on</li> <li>• Introducing CIP and the chosen methods</li> </ul>
Empirical Data	<ul style="list-style-type: none"> <li>• The depiction of the content, time frame and demographics</li> <li>• A descriptive presentation of gathered data</li> </ul>
Interpretation / Discussion	<ul style="list-style-type: none"> <li>• Discussion of empirical data</li> <li>• Comparison of empirical data with the theoretical framework</li> <li>• Proposal for improvement for the future</li> </ul>
Conclusion	<ul style="list-style-type: none"> <li>• Answer and elaborate upon research questions</li> <li>• Suggestion for future research</li> </ul>

## 2. Methodology

The methodology chapter contains our chosen methodological approach, the circle of participants, our data collection, the content and timeframe and how we analysed the gathered data. Reliability, validity and objectivity considering the chosen methodology will also be described in the scope of this chapter.

### 2.1 Methodological Approach

It is not easy to understand the complexity of the concepts of CIP. The term is getting more and more trendy, and all over organisations the phrase: “We work with Lean” is being heard (Shaughnessy, 2013). With this study, we intend to find out if the concept of continual improvement processes is just a trend or a proven success-factor for organisations.

Research methods are usually divided into two different parts that treat data on different approaches: qualitative and quantitative methods. Through these methods, researchers can use collected data to get new data. (Denscombe, 2009)

The difference in a qualitative- and a quantitative study strategy are explained by Holme et al. (1997). A qualitative study intends to collect any data from a sample made by a few research units to be able to conduct a more detailed and in-depth study to obtain some unique or some specific information. The quantitative research method is the opposite. It is a method to collect data from a broad sample of research units, with the intent of gathering general data with a limited number of variables. In this study, we intend to have a quantitative study strategy with questionnaires as the primary form of data collection tool because this research intends to compare the perceptions of employees from different backgrounds. To do so, and to prevent outlier influencing the result, a quantitative rather than a qualitative study is necessary. According to Larsen (2009), data collection is an intermediate phase of the investigation process. It is about collecting the data to obtain relevant material that is intended for the basis of the analytical work carried out in the later phase of the study. We decided that gathering a more significant quantity of data compared to more in-depth interviews (qualitative research) would suit this type of research better.

For a considered quantitative study to work, what it is that is going to be studied should be measurable and then the results should be presented numerically. For the observations to be as

precise as they possibly can, the measurements must be made as objectively as possible. Under the application of quantitative methods, only one-way communication occurs, where the survey takes place the researcher's terms. (Olsson and Sörensen, 2011)

In the quantitative methodology, there usually is only short-term contact with the subject in question. Considering that the researcher is objective, and he/she takes a standing "outside" research-area, it creates a distance between researchers and the research area. The methodology in the quantitative research is structured with issues that have been formulated uniquely in advance. The results are based on many study objects and a limited number of variables. (Olsson and Sörensen, 2011)

### **2.2 Sample**

We are doing a quantitative study, in which we aim to gather a significant amount of data from research units from different nationalities, the area of expertise and working experience. We chose to send out the questionnaire to people working in Sweden and Germany. The reason behind why these two countries were chosen is that the concept of CIP has grown so large over the past 15 years, to the extent that every automotive supplier in the countries has some lean production system in place and are among the most innovative countries (The LMJ, 2018). Thus, national boundaries should not present a significant issue within this research.

We did not want to limit ourselves to which industry we wanted this study to be conducted towards, because we felt that we wanted to reach out to various industries using CIP.

We made a purposive sampling instead of a convenience sampling because we decided that for us to be able to reach the best results, we should strive to obtain information from predetermined target groups. We needed information from workers working in both administrative and operational environment. (Sekaran and Bougie, 2016)

### **2.3 Data collection**

Olsson and Sörensen (2011) find that data collection take place in different ways. The researchers in question may have collected data through some form of established collection method, which is known as *primary data*. Depending on whether the study is quantitative or qualitative can the collection method vary. The second type of data collection is *secondary data*, i.e., data that has already been collected by other researchers in other contexts. Secondary data

can be collected through books, newspapers, annual reports and course literature. Compilations of published scientific articles can also be considered as secondary data.

We decided that the best way to get a more considerable amount of data collected from many research units is to conduct a questionnaire. The questionnaire was created through “Sunet” Survey, which was provided by the IT-department at Lund University. The reasoning behind why using a questionnaire instead of other data collection methods was that we needed approx. 60 answers from people working in different branches. To answer our research questions reliably and validly and make it generalisable, we needed to obtain as much different and diverse data as possible. Having interviews to collect data would consume too much time. Conclusively, the data gathered for this research is primary.

Since the survey was sent to employees working in Germany and Sweden, the survey was conducted in the respective languages. Some of the questions in the questionnaire were language sensitive, e.g., the perceived value of different CIP methods could differ between the two languages.

#### 2.4 Content and time frame

Planning the methodical research starts about three months before its closure. The whole process is defined by our main research questions and the resources available.

Table 2 shows the concrete steps taken.

*Table 2 Content and time frame of the methodology*

<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>
Planning of content and design	Development of methodological instruments	Distribution of the surveys	Closure of survey
Identification of potential participants	Announcement mail	Reminder	Analysis of data collection

The process of creating the survey started with deciding on its content and the design. Since the aim was to acquire as much information on the topic as possible, there did not have to be any

limitations to the potential participants. By using the planned content and design of the study and the survey tool “Sunet”, we could develop and create the questionnaire. The entire survey can be found in Appendix 4.1.

Before sending out the questionnaire, every participant got informed about its aim and scope. This information was provided via an announcement email containing the following questions:

- What is the survey about?
- Who is doing the survey?
- Why is this survey been done?
- What do we aim for with this survey?
- What time and effort are expected from the participants?
- What is the timeframe for answering this questionnaire?

Approx. one week after the announcement mail, the emails got sent out.

By answering, we expected to get direct answers to the following questions:

- How frequently used are LM, Six Sigma, Kaizen, and SFM in different working environments?
- How did the people acquire the necessary know-how of applying the methods?
- How do the people perceive/rate the usage of these methods?
- Are people in general interested in learning more about CIP?

## **2.5 Data analysis**

The data analysis of this thesis will be a quantitative analysis with a focus on numbers and variables, instead of the answers individually because of its clear comparability,

The data gathered will be organised and structured in a way that will help us to break down the answers in different categories. The different categories we decided to break the data into were representative for the different environments that the respondents worked within (operational, administrative/management) and years of working experience within their field (0-4, 5-9, 10+).

The data gathered from this research will be manually analysed with the help of Microsoft Excel. By collecting all the data in Excel, and organising it by the different categories, it will be possible for us to analyse the data and draw conclusions. With the help of statistical formulas



such as “COUNTIF()”, some of the relevant answers will be scored on a numerical interval so that the answers can be ranked.

## **2.6 Verification of data**

Both primary data (answers to the questionnaires) and secondary data (theoretical framework) generated during the research are the basis for the development of the study. Therefore, the data must be checked in advance with the help of indulgence of the data’s reliability and validity. These two measurements of verification are what is used when the reliability of the research needs to be determined. When talking about the degree of trust as high and low current reliability and validity. (Befring, 1994)

We made a pilot testing of the questionnaires, where we to make sure that the reliability of the data collection method was high. We wanted to make sure that every question was structured in a way that they were all following the same pattern and behaviour. With the test pilot, we also wanted to make sure that the questionnaires were made objectively, and so that we did not influence the respondents to answer in a certain way.

The research will be more valuable and more useful, the more generalizable it is. To be able to make sure that the research is generalizable, the sampling design of the research must be developed logically and so has the method of collecting the data (Sekaran and Bougie, 2016). We did our best to make sure this research is as generalizable as possible. We decided to make sure to include respondents from every industry within the chosen countries, to make sure the data would represent the whole population.

Because of time constraints, there was not a possibility to develop the sampling design further to ensure higher generalisability.

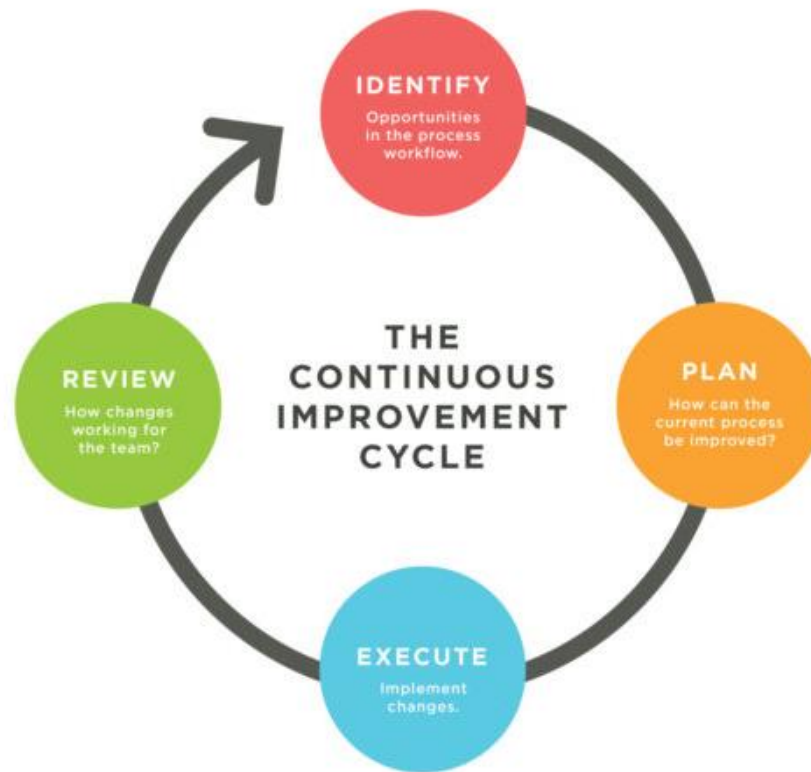
### **3. Theoretical Framework**

This chapter will provide information about the theoretical framework used in this thesis. Different concepts from well-established theories as well as more recent studies will be described and explored. The framework is built around CIP in general and the four chosen CIP-methods. This theoretical framework will stand as a basis for the interpretation in chapter 5.

#### **3.1 Continuous Improvement Processes**

Today, everything is made from a process. Most people associate the word “process” with mass production, i.e., the time Henry Ford revolutionised the world with his process design of delivering cars for the growing American market. During the early twentieth century, Henry Ford redesigned and improved the process of producing the car. This was when the concept of process improvement began, and what we today use as inspiration to achieve higher goals in optimising and improving different processes. (Hamm, 2016)

According to “Leankit” (Anon, 2018), the general CIP is a cycle, showcasing that it is a repetitive procedure. Firstly, the opportunities need to be identified. Subsequently, a plan on how to improve current processes needs to be created. Once this plan is compiled, it can be executed. Finally, there is a need for a review to see how the plan turned out. Figure 1 gives an overview of the described cycle.



*Figure 1 The Continuous Improvement Cycle*

(Anon, 2018)

In history, there have been several situations where people have looked back to what Ford did and tried to do the same (to achieve almost impossible tasks). President Roosevelt wanted America to build 50.000 military planes in a year. People thought for them self; aeroplanes are just a lot of little pieces put together, just as cars, and took the process design that henry ford invented and started to mass produce aeroplanes. (Hamm, 2016)

The Japanese phenomena CIP goes back to 1946 when Japanese scientists and engineers were set to re-engineer and reconstruct the Japanese industry. These young people were sent to the West, to attend business schools, industrial organisations and professional bodies to learn more about the subject of quality control, a subject that was becoming more and more interesting at the time. These people were sent there to listen and learn, ignore the worst practices and remember the more successful ones to adapt it later in Japan. (Owen, 1989)

It is defined by Zolo and Winter (2002) that CIP-methods are a pattern of collectively gathered activities. These activities are developing and modifying the operating routines with the goal of

improving the overall effectiveness. Mauri et al. (2010), explain that even though the concepts of CIP are widely used around the world, organisations still have problems and facing massive challenges with preserving the momentum of the activities in the organisation.

An example of one existing CIP is Six Sigma. Motorola and General Electrics introduced Six Sigma. The emphasis on Six Sigma was to reduce the possibility that defects would happen in first place. Another CIP is Lean Manufacturing. Even though Six Sigma and Lean have the same goal and similarities in approaches on how to reach the goal, Lean focuses on reducing waste and making the value stream flow, unlike Six Sigma that reduces variation throughout the process. (Rastogi, 2018)

It is crucial to find out which of all these CIP methods works best for one specific process improvement within a department. This suggests that there might be differences in the usefulness of specific CIP methods in different working environments. (Williams, 2017)

### 3.1.1 Lean Management

Wilson (2015) explained the most common definition of Lean and the Toyota production systems that it is a set of tools and techniques that when combined will help you to reach the goal of reducing and eliminating the famous seven wastes.

These seven wastes are:

- Transport
- Inventory
- Motion
- Waiting
- Over-Processing
- Overproduction
- Defects

(Bicheno and Holweg, 2009)

These sets of tools that is Lean will help an organisation to identify these wastes and steadily reduce and eliminate them and improve the quality and time of the production and reduce the costs. By reducing waste, the organisation will be more flexible and leaner. (Wilson, 2015; Rastogi, 2018)

The collection of tools that Lean provides are called a Lean system. An organisation will not be able to implement only practices out of the Lean system, without the overall collection of tools is being used. When lean practices are being implemented in an organisation without the entire system, facts show that there is only a limited impact on performance. (Davim, 2018)

There are several tools that the Lean philosophy provides, such as Poka-Yoke (mistake proofing processes), “the five whys”, or Kaizen. These tools and ways of working could be thought of as a similar approach to another CIP (Wilson, 2015). The reason why it is called Lean, Wilson (2015) explains is that in the end, organisations using Lean will have processes that:

- Uses less material
- Used fewer people
- Uses less inventory
- Needing less space
- Needing fewer investments.

### **3.1.2 Kaizen**

The continuous improvement methodology Kaizen derives from the Japanese word “improvement”. This CIP-method is referred to the activities that occur that involves all the employees, from CEO to the production line workers, that continuously improve the organisation. Kaizen applies to many different processes in an organisation, e.g., logistics, purchasing and supply chain (Imai, 1986).

There are many similarities on features in CIP like Lean, Kaizen or Six Sigma, since CIP is functioning as an umbrella that connects all concepts into a thorough, broad picture (Berger, 2017). Additionally, he concluded in his study that the concept of Kaizen is embedded in (and a big part of) the Japanese quality movement.

According to Anders Berger (1997), there are three different principles that Kaizen consists of process orientation, improving and maintaining standards, and people orientation.

What Kaizen focuses on is its small incremental, improvement work of standards in an organisation. Imai (1986) explains in his paper that if there are no standards, there is not a possibility for improvements. The relation between Kaizen and maintaining standards in production or organisation is argued to inseparable, and this relation says to be the foundation that claims that these small, incremental improvement work can lead and result in overall increased and developed performance from the organisation (Berger, 1997).

The small, incremental changes that the philosophy of Kaizen provides will over time result in benefits in organisational productivity and efficiency. Employee and customer satisfaction are also proven to improve with Kaizen. It does not matter which industry the methodology is being implemented in; it provides benefits from manufacturing to services. (Bradbury, 2018)

### **3.1.3 Six Sigma**

The concept of Six Sigma is a methodology with a focus on solving problems. According to studies, Six Sigma is the most effective methodology for problem-solving when the objective is to improve different areas of the business and improving organisational performance. (Gygi et al., 2005)

One of the fundamentals of the continuous improvement process Six Sigma is that the ones that have the best possibility to improve something are the ones that are closest to the process. Meanwhile, leaders and managers in an organisation must provide direction and set an example of motivation and drive to develop the organisation into something better. A process that is both bottom-up and top-down is a (sophisticated) trick that Six Sigma helps provide. (Pande and Holpp, 2002)

To manage a business smartly is to work with the principles of Six Sigma. Using data and facts to analyse a situation and look for solutions to a problem is what Six Sigma stands for to put the customer first. (Pande and Holpp, 2002)

There are different areas that Six Sigma focuses on:

- Reduce defects
- Reducing cycle time
- Improving customer satisfaction

Working with these areas usually results in dramatic cost savings for organisations. Another benefit is that there is a possibility to develop new markets, build reputations for high performance of products and services (Pande and Holpp, 2002).

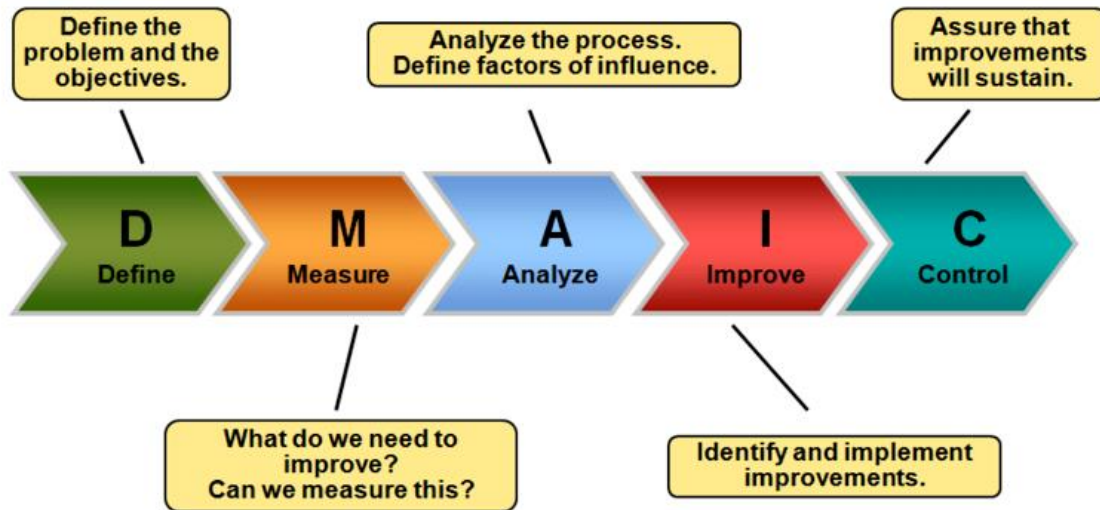
The concept of Six Sigma was to ensure that the quality of service or products was improved by reducing the variation in the entire process (Pande and Holpp, 2002). Six Sigma's most famous methodology DMAIC is a data-driven cycle that focuses on improving business processes by identifying defects and inefficiencies (Henshall, 2017). It consists of five steps:

- Define
- Measure
- Analyse
- Improve
- Control

(De Feo et al., 2005)

Firstly, the problem and objectives shall be defined. Afterwards, it needs to be set what exactly needs to be improved and how it could be measured. Then, by defining specific factors of influence, the process can be analysed and subsequently improved. Finally, there should be a

control unit in place to make sure the done improvements will sustain. The following figure summarises these steps and their meaning. (Rastogi, 2018)



*Figure 2 DMAIC process structure*

(Rastogi, 2018)

LM aims to reduce waste in processes, while Six Sigma focuses on reducing variations in the process. If these two CIP-methods are combined and integrated with each other, the possibility of reaching the full potential of process improvement is high. An integrated approach, Lean Six Sigma, helps the organisation to improve and develop factors that both CIP-method provides, e.g., improve efficiency, optimise resources, increase satisfaction from customers and at the same time improving profits. (Rastogi, 2018)

### 3.1.4 Shopfloor Management

SFM is an in Germany introduced method for continuous improvements. Its central idea is about a very close to production management. Some parts of it contain, e.g.:

- Visualization of Key Performance Indicators (KPI)
- Overview of tasks, processes, and aims of the team

(Peters, 2009)

The element of leadership is the key in this context. The SFM approach of this makes following three demands, based on the following Japanese concepts:



- *Hansei*: Necessity of self-reflection and open mistake culture. Mistakes should be seen positively and as opportunities to improve.
- *Genba, Genbutsu & Genjitsu*: Leading the employees at the place of production. The leaders should be close to the operational employees to communicate and exchange ideas. Additionally, they should take over the role as a coach and mentor.
- *Hoshin Kanri*: This philosophy is subdivided into three major elements:
  - Daily management: Giving clear goals to the employees.
  - Cross-functional management: Coordinate and align the goals of each area.
  - Hoshin management: Align all areas and activities with corporate goals.

(Reitz, 2009)

To live a controlled CIP, a functioning SFM is to be introduced. If this is done correctly, it supports the hierarchical transparency, the integration of information and action as well as a consequence of the action and implementation.

There are several areas within an organisation that SFM supports, e.g., when a problem arises, the action is to permanently solve the problem, and not only to remove the symptoms. For these problems to permanently be solved, the processes by which these problems occur must be more stable. What SFM does is to give tools for employers and employees to be able to develop the organisation. Some of these tools can be to identify recommendations for actions, to give employees solution competence and responsibility, to identify, communicate and solve problems quickly, and to give employees and managers quick feedback on how it went. (Wiegand, 2018)

Even though SFM was created to support operational employees, its popularity in, e.g. offices increased in the last years. A shop floor in the administrative field focuses on current projects and their progress, where every employee presents their progress on a board that gets updated on a regular basis (e.g., weekly). (Nad, 2016)

### 3.2 Overview of the chosen CIP methods

Table 3 Overview of the chosen CIP methods

<b>Methodology</b>	<b>Lean Management</b>	<b>Six Sigma</b>	<b>Kaizen</b>	<b>Shopfloor Management</b>
<b>Theory</b>	Reduce waste	Reduce variation	Continuous improving	Developing and managing the shop floor
<b>Application guidelines</b>	Identify value Identify value-stream Flow Pull Perfection	Define Measure Analyse Improve Control	Teamwork Self-discipline Improve morale Quality circles Improvement suggestions	Genba (Real place) Genbutsu (Real thing) Genjitsu (Fact)
<b>Focus</b>	Flow	Problem	Small, incremental changes	Efficiency and productivity
<b>Primary effect</b>	Reduced flow time	Uniform process output	Eliminate waste	Monitor problems onsite -> Remove underlying causes

The table above shows an overview of the four CIP; Lean, Six Sigma, Kaizen and SFM. The concept of CIP is an umbrella of sets and tools that have the same common goal; to continuously improve the organisation in some sense (Berger, 1997). These four CIP methods are all intervened and connected in ways, where some of the methods are parts of others and vice versa. The figure shows that the different CIP-methods have different guidelines for applications, which also shows the different approaches to reaching the goal. Lean has a philosophical

approach to improving the process flow and quality by reducing waste in the process. Six Sigma, on the other hand, has the approach of eliminating the possibility of defects and reducing the variation in the process by using statistical methods. (Rastogi, 2018)

In SFM, there is a principle called “Genchi Genbutsu”, which translates into “Go and See”. Suzuki (2014), explains in his book that SFM is practising the three reals, which is; Genba (Real place), Genbutsu (Real thing), and Genjitsu (Fact).

These three reals refer to:

1. The location in the organisation where the value is created.
2. The real information about problems, rather than what is documented.
3. Utilizing problem-mapping and underlying causes with aid from data.

As said, the goals of these methods are alike, but the approaches of these can differ a bit. The focus on achieving the goal of these four CIP-methods are different from each other, e.g.; Lean focuses on the flow of the value stream (process) whereas Six Sigma focuses on the problem at hand (Rastogi, 2018). Kaizen has a focus on making small, incremental changes in the production (Imai, 1986) and SFM is about making the shop floor as efficient and productive as possible (www.tutorialspoint.com, 2018).

## 4. Empirical data: Identification of current state

To answer our research questions, a survey among operational and administrative workers from various branches has been sent out. The basis for this survey is the literature research on the current state of CIP, including its most relevant tools and concepts. This chapter will present the results to the questionnaires descriptively.

### 4.1 Demographic statistics

Generally, every working person was applicable for the study. As mentioned in chapter 2.2, the participants are from either Sweden (27 persons, 45%) or Germany (33 persons, 55%) from “45” different companies. Since the attendants were invited to share this survey within their organisations (“snowball-effect”), it is not possible to say how many people exactly received the survey. However, receiving 60 answers by sending out 70 invitation emails (return rate of 86%) is very positive and shows the general importance and interest in the topic now (Fryrear, 2015).

In total, Figure 3 presents the distribution of the participant's industries.

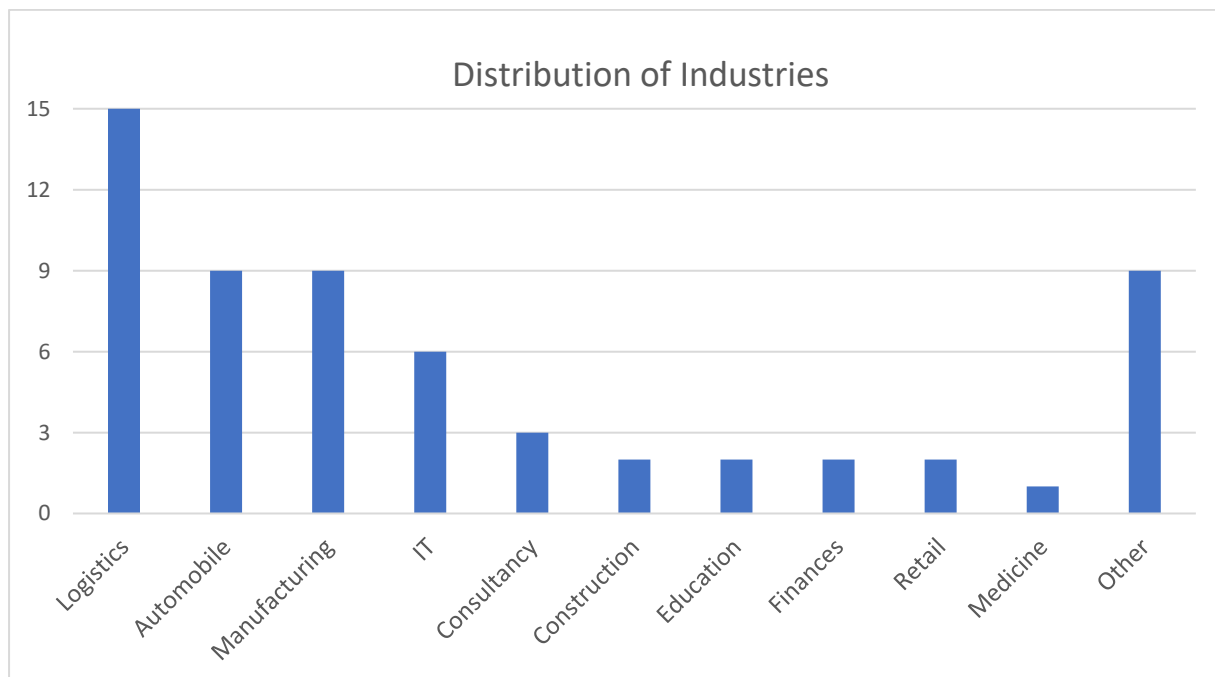


Figure 3 Industry distribution of all participants

The primary industries that took part in this survey were logistics, automobile, manufacturing, and IT, making a total of 65% (39 persons). However, since we wanted to make the research as generalisable as possible, we aimed to include as many other industries as possible to obtain various answers.

Figures 4 and 5 show the distribution of all participants based on their functions and working experience.

Distribution of participants based on functions

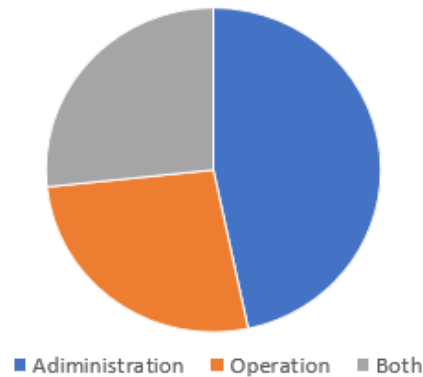


Figure 4 Functions of participants

Distribution of participants based on working experience (in years)

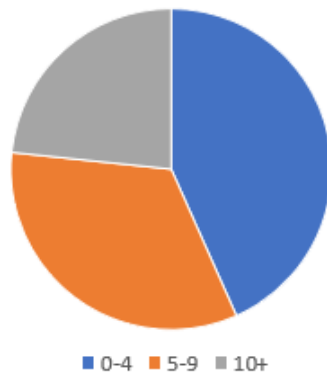


Figure 5 Working experience of participants

Conclusively, most people that took part in this survey are working in an administrative function (ca. 47%) and have less than four years of working experience (ca. 43%). The functions operation and both (administration as well as operation) are represented equally (ca. 27%). A

third (ca. 33%) of the participants have 5-9 years of working experience, while the fewest people have more than ten years of working experience (23%).

#### 4.2 Descriptive representation of results

The following chapter will present the results of the survey. Due to the better comparison, the presentation is subdivided into the function (administration, operational) of the participants. The answers for attendants that work in both areas are not a part of this comparison but is to be found in the appendix.

Figure 6 shows what concepts the operational participants are using.

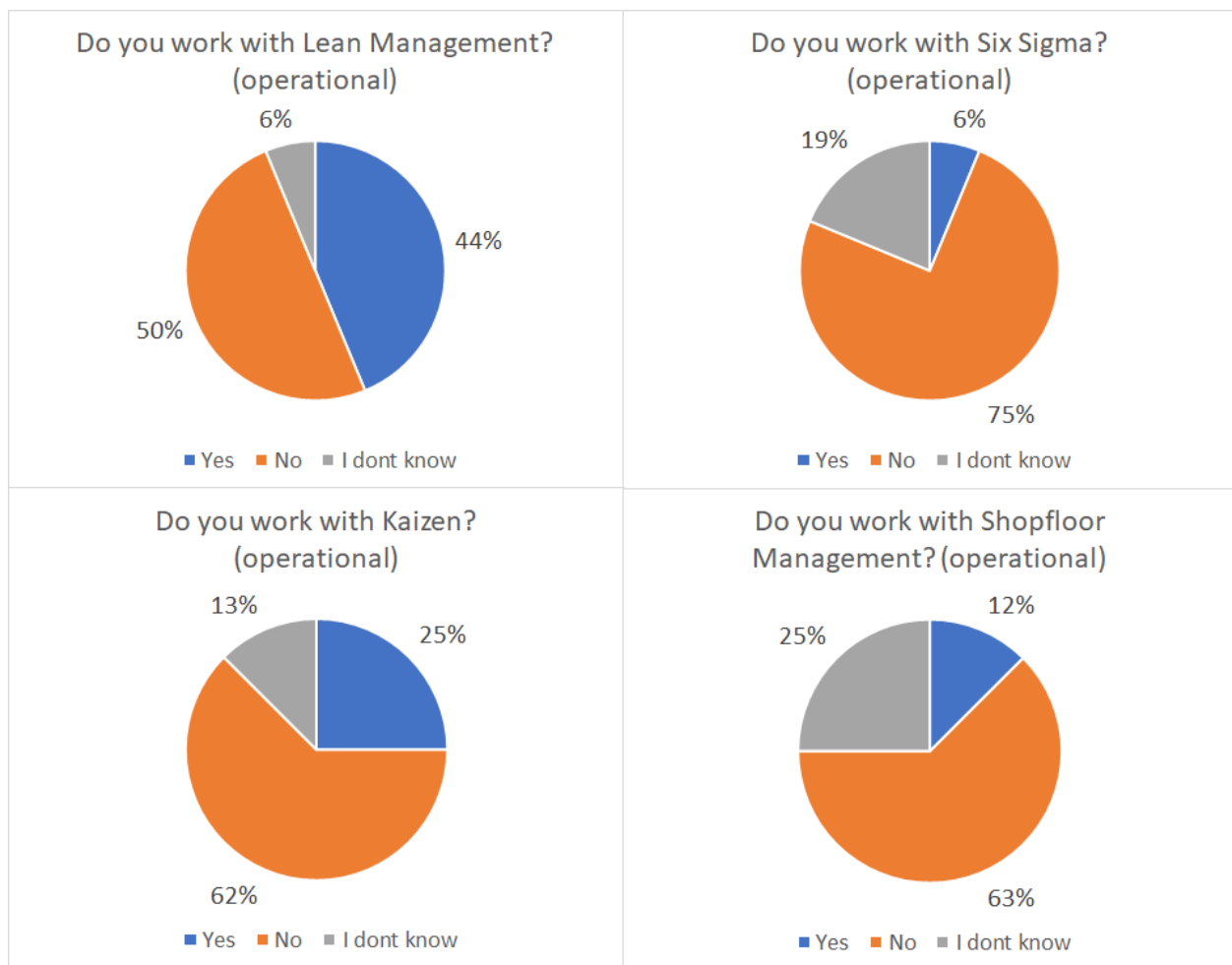


Figure 6 Usage of the concepts (Operational)

According to this, LM seems to be the most known and used concept (6% do not know, 44% using it). Every fourth operational participant is using Kaizen in his workplace. When it comes

#### 4 Empirical data: Identification of current state

to Six Sigma and SFM, the uncertainty increases (19%-25% “don’t know”) and the usage decreases (6%-12%). In average, ca. 22% are using these CIP tools/methods, ca. 63% are not using them, and ca. 16% are unsure about it. Conclusively, the usage of these CIP tools/methods is not very common in the operational field.

The following table shows the main reasons to why these methods were integrated (Operational):

*Table 4 Reason of CIP integration (Operational)*

<b>Method/Tool</b>	<b>Reason for integration</b>
Lean Management	<ul style="list-style-type: none"> <li>• Wanted to find a solution for stop times and economic losses</li> <li>• Efficiency, which makes it possible to do more work without hiring more employees</li> <li>• Process optimisation</li> <li>• Sustained implementation of CIP</li> <li>• Improved usage of employee know-how</li> </ul>
Six Sigma	<ul style="list-style-type: none"> <li>• Improve processes</li> </ul>
Kaizen	<ul style="list-style-type: none"> <li>• Improvement of the added value</li> <li>• Efficiency of organisation</li> <li>• Boost morale and productivity</li> </ul>
Shopfloor Management	<ul style="list-style-type: none"> <li>• To include all employees in the change process</li> <li>• Daily information to employees</li> <li>• Speeding up the implementation processes</li> <li>• Good overview</li> <li>• Comparison of production figures</li> </ul>

The answers to this questions from the operational employees are quite broad and further away from their general ideas described in our theoretical framework. Since very few operational

employees were working with Six Sigma, there are not many data about why it got integrated there according to them.

The following figure presents the results for the participants in an administrative function.

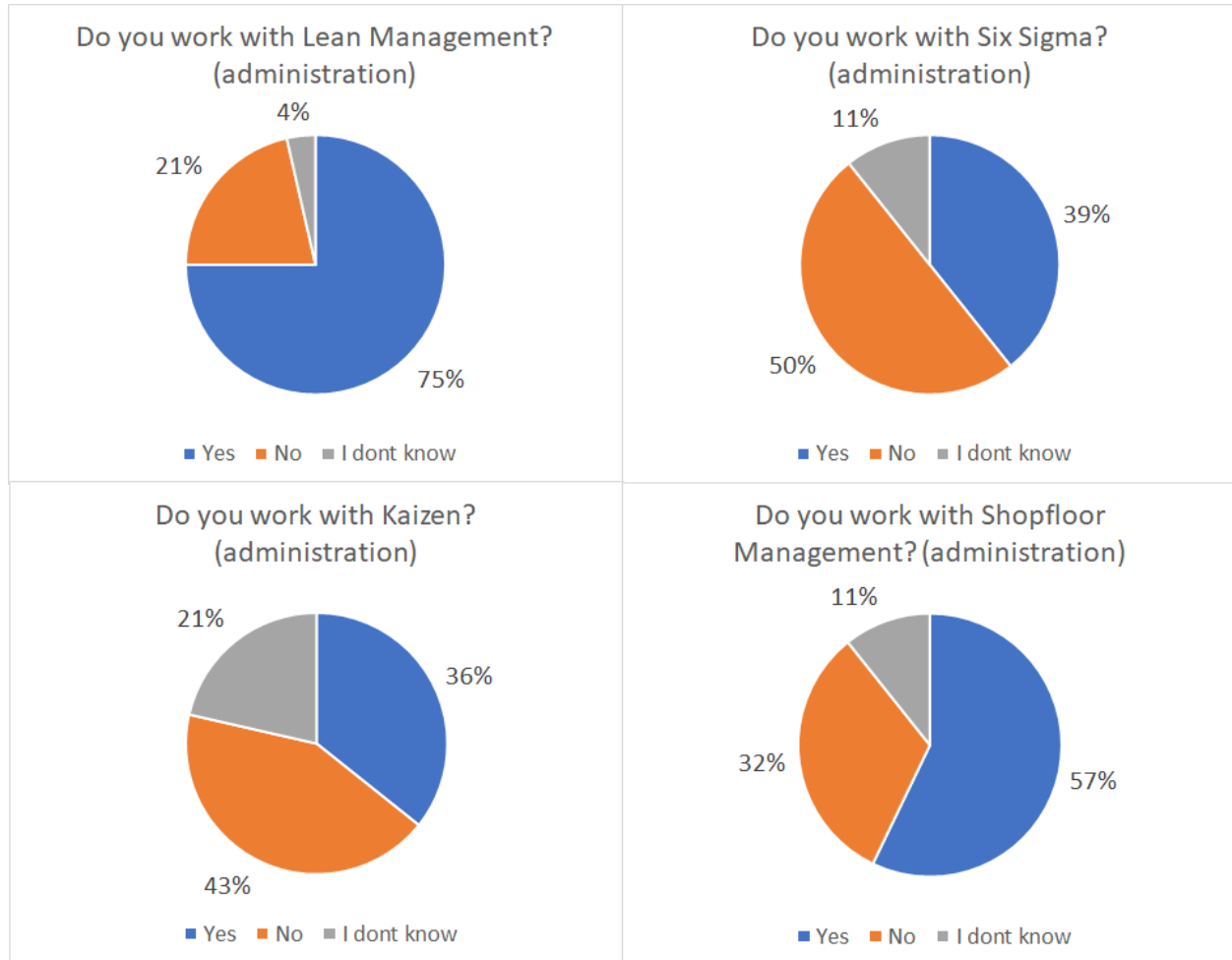


Figure 7 Usage of the concepts (Administration)

Especially Lean Management (75%) and Shopfloor Management (57%) appear to be quite common. The increase of the usage of Kaizen is just merely higher than in operational areas (+11%). In average, ca. 52% are using these CIP tools/methods, ca. 37% are not using them, and ca. 12% are unsure about it. Generally, in administrative functions, all CIP methods are being used more frequently (from 22% to 52%).

Table 5 shows the main reasons to why these methods were integrated (administration):



Table 5 Reason of CIP integration (Administration)

Method/Tool	Reason for integration
Lean Management	<ul style="list-style-type: none"> <li>• Its proven success</li> <li>• Discover and eliminate waste</li> <li>• Keeping up and improving the competition</li> <li>• Elimination of wasteful processes (e.g. searching, walking)</li> <li>• Reduce costs</li> <li>• The customer expects CIP tools being applied</li> </ul>
Six Sigma	<ul style="list-style-type: none"> <li>• To discover variations in processes</li> <li>• Low throughput time</li> <li>• Proven success</li> <li>• To identify and solve more complex problems that cannot be solved by LM</li> <li>• Application of DMAIC methods</li> </ul>
Kaizen	<ul style="list-style-type: none"> <li>• Small improvements (e.g., by a waste walk)</li> <li>• Quick and smooth implementation of improvements</li> <li>• Effective processes</li> <li>• Ability to compete</li> <li>• Continuous self-improvement</li> <li>• Involvement of every employee</li> </ul>
Shopfloor Management	<ul style="list-style-type: none"> <li>• Improve quality</li> <li>• Bringing the leadership to the operation</li> <li>• Short term feedback to operational employees</li> <li>• Improvement and encouragement of communication</li> <li>• Avoidance of interminable conversations</li> <li>• To create a well-regulated communication structure</li> <li>• Transparency</li> <li>• Visualisation</li> </ul>

According to this table, there is a difference in the knowledge about these topics. It seems like the administration employees have a great idea of why the CIP methods got implemented, the operational employees were more unsure about why they are being used. The administration employees gave more answers with clear and understandable reasonings for the implementation. The employees working in operational positions gave less thorough answers (e.g., Six Sigma, operational: “improve processes” - very general).

Figure 8 shows the results for the rating of the different methods. To make it easily comparable, the answers for operational employees are highlighted in blue, while the answers for the administration employees are orange. The rating was defined as follows:

- 0: not useful at all
- 1: a little bit useful
- 2: mediocre useful
- 3: useful
- 4: very useful

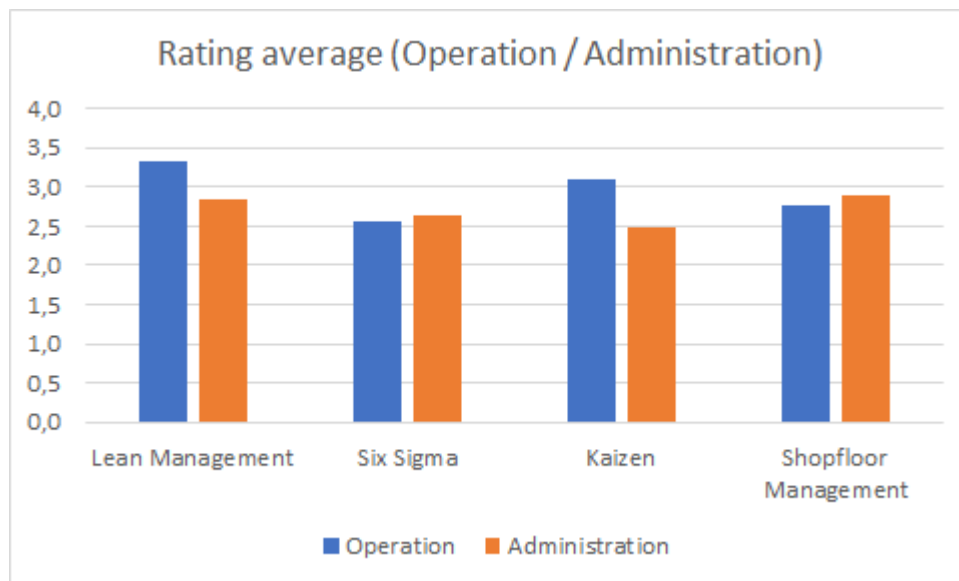


Figure 8 Rating average (Operational / Administration)

From all participants that were using these concepts, the perceived rating is quite high on average (2,94 operational, 2,72 administrative). Especially LM and Kaizen in the operational field are evaluated as being very useful. Six Sigma in operations (2,56) and Kaizen in the administration (2,48) have the lowest score.

As a part of this research, we also aimed to find out how they got the know-how about the CIP methods. Figures 9 and 10 present the results of this question.

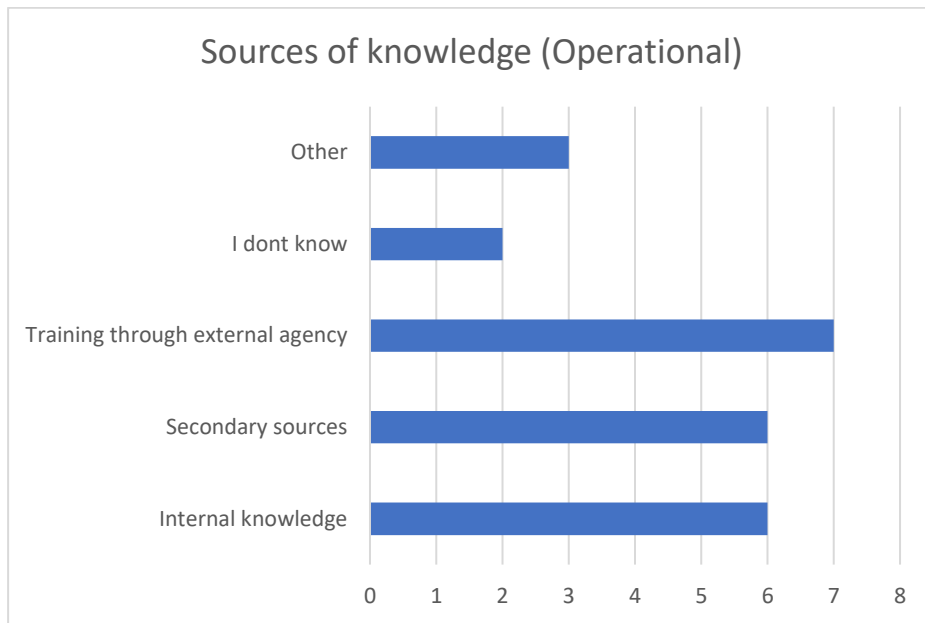


Figure 9 Sources of knowledge (Operational)

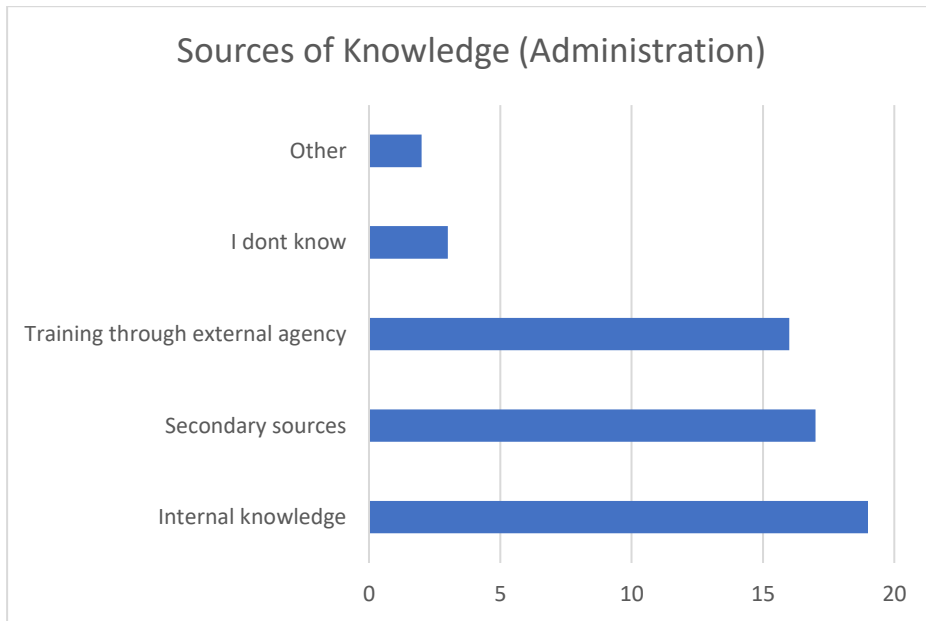


Figure 10 Sources of knowledge (Administration)

The sources of knowledge are somewhat mixed. However, in the administrative field is a small tendency towards using internal resources as a provision of knowledge. 16 out of 28 employees (57%) have been using external companies to introduce CIP-methods.

Some other named sources are:

- Self-paid studies
- Best practice visits

Furthermore, a part of this survey was to find out about the continuous application of the tools/methods. Figure 11 demonstrates the results for operational participants, while Figure 12 shows the results for administrative participants.

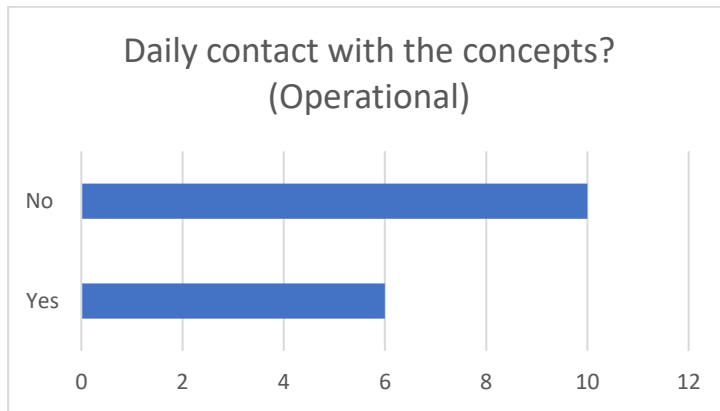


Figure 11 Daily contact with the concepts (Operational)

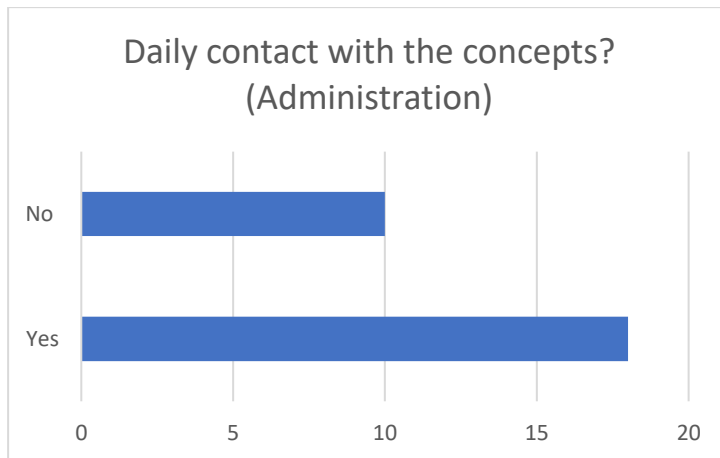


Figure 12 Daily contact with CIP (Administration)

Here we can see a big difference between the two fields. While ca. 64% of the administration employees have daily contact with these concepts, only 38% of the operational employees claim to have daily contact with the concepts.

To find out about the future interest on the topic, we asked all participants of the survey whether they would like to gain more knowledge about this topic. Figure 13 presents the result for the operational field; Figure 14 presents the result for the administrative field.



Figure 13 Future interest in CIP (Operational)

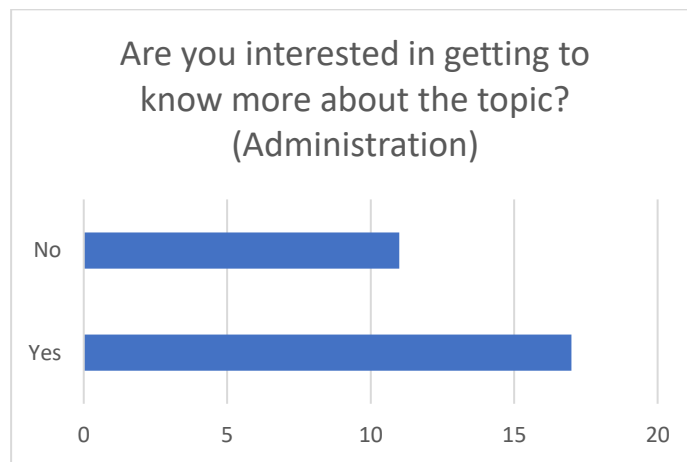


Figure 14 Future interest in CIP (Administration)

The future interest in the topic is quite mixed. 56% of the operational employees and 61% of the administrative employees would like to learn more about the topic. Conclusively, there is not a big difference in answer to that question depends on the working area.

To find out about some criticism or other experiences with these concepts, we asked the participants if there were any tools they had been using in their organisation but were removed subsequently. These were some reasons to terminate the usage:

- Change of leadership
- No target from the management
- High transformational costs

## **5. Interpretation of data and improvement proposals**

The following chapter will discuss the previously collected data as well as scientifically integrate it with the theoretical framework.

### **5.1 Findings for administrative employees**

Since LM is used by 75% of the participants answering the questionnaire working in an administrative position, and LM is about reducing waste in the organisation, there is a definite connection in what administrative workers feel is an essential factor in CIP. Reasons, why the participants implemented LM, were to discover and eliminate waste in the processes, which shows that they implemented the CIP for the same reason that the literature suggests. Some of the answers gathered from the questionnaire stated clearly that they implemented LM in the organisation just because it is a proven CIP-method. That shows that some organisations implement and work with different tools and methods because they have been working and used by others, and not because Lean is the right beneficial CIP-method for them to use.

The second most used CIP-method between the participants in this study is the SFM. In the later years, SFM has become more popular among the administrative employees. Even though SFM was created to support the operational environment, the administrative side has seen the benefit of the activities that SFM provides. As seen in chapter 3.2.4, SFM is a CIP-method that focuses on improving operational floor with different tools. Observing the number of participants answering “Yes” on working with SFM from administrative employees, and looking at Table 5 in chapter 4.3, a conclusion can be drawn that SFM is getting more popular for people working in an administrative position. The reason for that is that SFM, as described in the theoretical framework, will give the possibility to improve and encourage communication in the organisation and involve every employee on the administrative side into the CIP-method. Some of the reasons why SFM was implemented from the administrative side was that they wanted to have short-term feedback to employees and create a well-regulated communication structure.

According to chapter 3.2.2, Kaizen is a continuous improvement methodology where everyone in the organisation is part of the activity, everyone from the CEO to the production line workers. By answering “I do not know” is either a peak towards the organisation that failed with the methodology of involving every employee, or the organisation does not work with Kaizen, and

participants answering “I do not know” should have answered no instead. While the whole concept of CIP-methods is to improve and develop the organisation, the human capital is included and should also be a part of the development. Employees who are stating, “I do not know”, when asked if they are working with any of these CIP-methods, might not be very engaged in improving organisational processes.

Kaizen is the CIP-method that is least used by the employees working in administrative positions, with an average rating that is quite low compared to the other CIP-methods.

Kaizen is a philosophical CIP-method that act like an umbrella, which ties many different bits and pieces of continuous improvement tools together. These tools can be applied in most of the administrative work, e.g., purchasing or logistics. A reason for why Kaizen is the least popular CIP-method between these chosen four might be lack of knowledge or confusion about it. Kaizen is its CIP-method, however, also a part of different CIP-methods, such as Lean and Six Sigma. Kaizen derives from the mindset of continuously improving processes. Since Kaizen provides tools and activities that improve and develop the organisation in ways that other CIP-methods do as well, there is no apparent reason for the results of it, except that there is a lack of knowledge about the subject of Kaizen.

39% of the administrative employees that answered the questionnaire responded that they work with Six Sigma, a figure that is almost as low as employees working with Kaizen but with a higher average rating. Some of the reasons why Six Sigma was implemented in organisations was that they wanted to identify and solve more complex problems that cannot be solved by LM and apply the DMAIC method to the organisation. Even though Six Sigma was mostly implemented by the reasoning the literature suggests as well; there is still some data that points out, that the organisation implemented it because it is a proven method that has worked before. Again, just as mentioned above with Lean, the data shows that in some cases, the methodology is being implemented because it has worked for someone else before, and not because it is the right CIP-method for the organisation, in respect to what the organisation need.

Most of the administrative employees say that they have daily contact with the different CIP-methods. Since the fundamentals of CIP consists of integrating the activities and tools into the



daily work, the data suggests that they have understood the concept and embrace it to utilise its benefits.

### **5.2 Findings for operational employees**

Around 44% of the people from the operational field work with LM, but the majority of the operational employees (63%) do not have daily contact with any CIP. This suggests that there is a possibility that they did not fully identify with the CIP philosophy yet. A reason for this could be that they just started doing it because it is a proven concept. However, they are not entirely convinced of it and “living” it as it is supposed to be.

According to the presented data in chapter 4.3, the overall value of CIP methods for operational areas seems to be rather high. Especially LM and Kaizen seem to be seen as very positive and valuable. However, less than half of the employees are working with LM and only 25% work with Kaizen. This suggests a high potential for these two methods in the operational field.

The reasoning behind using Kaizen was mostly described as a boost of efficiency and productivity and a morale boost for the people. Since Kaizen received a good reputation among employees that are using it, its focus on small, incremental changes seems to be relevant and positively perceived among operational workers. This described boost of morale and motivation is likely triggered by the immediate execution of changes (instant feedback).

Six Sigma is the least used tool for the operational employees (6%). This was a surprising result because its central concept is based on them. The low number might have been caused by the, in relation, little number of answers from operational employees.

Overall, there is an uncertainty about these tools (on average 16% do not know whether they are working with a method or not). As mentioned in the previous chapter, this suggests that the management does not involve the employees enough, because if they worked with a CIP-method, they should know it. If they do not work with it, they should know that too.

The fact that they do not seem to know as much about the reasons behind the implementation of CIP methods as the administrative staff may suggest that they identify less with the

philosophy and are not fully aware of why these tools were implemented in the first place. Being told by management that they must implement and start to work according to a certain CIP-method without being told why points to management that does not involve its employees enough.

The future interest in the topic is also lower than to be expected (56% interested in getting to know more) because when working with these CIP-methods, you want to keep developing and learning more. By stating that one does not want to learn more, it shows that they are not living the CIP philosophy how it is supposed to be according to the literature. Some participants even claimed that there are way too many new methods and tools in way too little time. The staff is not getting sufficient time to get used to one method until it is already “outdated” again. Hence, the employees are already starting to get annoyed by too many tools and methods in too little time.

### **5.3 Comparison of administration and operation**

The most significant difference in the perceived rating of the tools compared to the administrative field is in Lean management and Kaizen as seen in Figure 8. The usage of both tools is being valued higher in the operational area despite both being used less frequently. This suggests that both Lean management and Kaizen are being used more in the administrative positions, but they do not suit the environment. This might be down to many different factors, where administrative employees implemented a CIP-method, that was not suitable and valuable for them.

The differences between the operational and the administrative employees about the daily contacts with the concepts showed results that were the opposite of what was expected. The data shows that most of the people working in the administrative positions have daily contact with the concepts of CIP, while most of the people working in operational positions do not have daily contact with the concepts. This suggests that CIP concepts are being used more in an administrative environment, and people working there are utilising its beneficial potential. Just as the data shows that more people have daily contact with the CIP from the administrative side, the data gathered also points out that more people work with CIP in general from the administrative side, rather than people from the operational.

The reasons why a certain CIP-method was implemented are similar between the operational and the administrative people. Both sides had good reasons to implement it, where they wanted to gain the real benefit from what the CIP-method provided. However, it seems that several participants are working in organisations, having administrative positions, implement and work with a CIP just because it has been proven to work before for other organisations.

There is a genuine interest from both sides to getting to know more about the topic of this study. The majority of the participants answered “Yes” that they wanted to learn more about it, which suggests that the philosophy of continuous improvement is integrated into the organisation.

As shown in chapter 3, the focus on the theory about CIP is to continuously improve different functions of the organisation, e.g., improving the process flow and reducing the possibility of defects in the process. The participants answering the questionnaire could express their thought and concerns within the topic of CIP (see Appendix 4.1, Figure 20) and it is apparent that many comments relate to integrating humans as the core of these concepts. There is a concern for the wrong application of these methods/tools. Earlier literature about CIP does not focus vastly on these factors, so it is apparent that people applying these concepts are shifting the focus onto the human capital of their organisation instead of pure processes.

### **5.4 Improvement proposal**

The fact that the average perceived value of the tools is in average higher in the operational field suggests that it should be most applicable there. However, the closer to the operation, the less frequently those CIP methods and tools are being used. This discloses a significant potential for the operational field. A reason for the less frequent usage might be that the information about these tools is usually initiated and obtained in the administrative field, and it takes much time to integrate them in the operational processes. Nevertheless, this integration should be facilitated more, because it takes more time and resources to implement it in the operational field.

Since participants are answering “I do not know” to the question if they work with one or several of the chosen CIP-methods, that is an indicator that the management has involved the entire organisation in the concept of CIP or the employees are just not educated enough on the subject. A provided possibility for companies to take into consideration when working with different CIP-methods would be to reduce the number of different tools that are being implemented and

involving the employees more in the change process. According to the additional thoughts from the participants (see Appendix 4.2), it is vital to give the employees time to adapt to new methods, tools, and philosophies. This is not something that can change overnight; it urgently needs to be integrated into all employees' mindsets instead.

Companies should focus more on how to implement the methods and tools the right way instead of continuously looking for more new methods. The application of CIP needs to be customised to the given organisation and should not be copied directly from others.

## 6. Conclusions

This last chapter aims to conclude and discuss all findings of the thesis in relation to the stated purpose and objectives. Additional findings during the study, which have not been part of the research questions will also be presented. Supplementary, the research questions and suggestions for further research are provided.

### 6.1 Conclusions associated with the purpose and objectives

In conclusion, the concept of CIP is prevalent and as of now in high demand according to the sample of this research.

As an empirical method, a quantitative study with participants from Sweden and Germany from all industries has been initiated. Thus, a questionnaire with a focus on four methods/tools within CIP was created. The questions aimed to discover how frequently which of the chosen CIP methods are being used and how the participants from their respective working environment evaluate them. Additionally, the survey aimed to investigate the reasons for introducing such methods and their current usage in the organisation (daily contact, sources of knowledge, additional thoughts).

As shown in our improvement proposal (chapter 5.4), there appears to be a high potential within this topic for companies, especially close to operations. There is a tremendous value for CIP methods, but their implementation seems to be rare compared to administrative areas. Plus, due to the vague knowledge of the operational employees about the background of their application, the implementation tends to be half-hearted. The vital part that companies must focus on is not *which* methods they should introduce but rather *how* they do it. If a particular method has been proven successful for other companies, it does not automatically qualify the same concept for their own company. The CIP need to be customised and fit into the very own culture.

### 6.2 Answers to research questions

Within the framework of this thesis, the primary research driving question was:

- Are the people working with CIP methods using it because they see a real benefit in it, or just simply because it is a trend?

We could see a mix of responses from the survey, both pointing to the fact that certain CIP-methods are being used for their respective beneficial use, and certain CIP-methods are being used because it is a trend to work with them. Through analysis of the gathered data, it was shown that people know why they are using specific tools and methods and see the real benefit of using them. Furthermore, it was also seen that people were implementing and using certain CIP-method just because they have been proven to work before, for other organisations. This suggests that some people do not take into consideration the needs and wants of the organisation, but implement a proven thing, for the sake of it.

The second research question was:

- What is the reasoning behind the usage of the decided CIP methods in the respective working environment?

Overall, the reasoning behind why CIP methods are being used is quite broad. In the operational area, the incentives of using it were close to their tasks and processes (e.g., solution for stop times, increasing productivity, including employees in change processes). However, for administrative employees, the answers seemed to be more general and focused on competition (e.g., proven success, competition drive, improvement of quality and effectiveness). The answers from participants in administrative positions seemed to be closer to the theoretical concepts described in the literature. Therefore, we can conclude that the elucidation of operational employees about the implementation of such methods is too low, even though they should have the highest knowledge about it since they are the closest to the processes.

Finally, the last research question implies a comparison between positions close to the operation and the ones further away:

- Are there any differences in the relevancy and usage of CIP methods from work close to the operation to work in administrative environments?

Altogether, the average rating for the CIP concepts was slightly higher in operational environments compared to administrative environments. The usage of CIP methods, however, appears to be higher in administration, even though their value is described as less significant. Overall, the CIP methods received an affirmative answer towards the present situation.

However, when it comes to future interest, it seems like there is not a tremendous enthusiasm about the topic.

### **6.3 Future Research**

Further research on this topic could be to make a more in-depth study of several companies, to compare their way of working with CIP to earlier literature on the subject. Furthermore, this could be a case study to go into practice at companies and see how their definition of “working with CIP” is and if it meets the theoretical aspects of what CIP means. This would be another research of figuring out if companies are working with CIP because it is a trend - but a different approach to the study.

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## Appendix

### Appendix 1 – Survey design



Welcome to the survey on continuous improvement processes (CIP).

Thank you for your interest in participating in this survey.

As a part of our graduate work at Lund University, we investigate the use of continuous improvement processes to optimize business processes. This study aims to explore and evaluate various improvement tools and methods in different areas.

This survey will take up to 10 minutes to respond.

*Figure 15 Survey design, Introduction*

1. In which industry do you work in?

2. In which area do you work in?

- Administrative (e.g., office)
- Operational (e.g., production line)
- Both

3. Since when are you working in said area?

- 0 - 4 years
- 5 - 9 years
- More than 10 years

*Figure 16 Survey design, demographic questions*

4. Do you work with Lean Management?

- Yes
- No
- I don't know

Why was Lean Management implemented?

5. Do you work with Six Sigma?

- Yes
- No
- I don't know

Why was Six Sigma implemented?

6. Do you work with Kaizen?

- Yes
- No
- I don't know

Why was Kaizen implemented?

Figure 17 Survey design, main questions part 1

7. Do you work with Shopfloor Management?

- Yes
- No
- I don't know

Why was Shopfloor Management implemented?

8. Have you worked with Lean Management before, but not anymore?

- Yes
- No
- I don't know

Why did you stop using Lean Management?

9. Have you worked with Six Sigma before, but not anymore?

- Yes
- No
- I don't know

Why did you stop using Six Sigma?

*Figure 18 Survey design, main questions part 2*

10. Have you worked with Kaizen before, but not anymore?

- Yes
- No
- I don't know

Why did you stop using Kaizen?

11. Have you worked with Shopfloor Management before, but not anymore?

- Yes
- No
- I don't know

Why did you stop using Shopfloor Management?

*Figure 19 Survey design, main questions part 3*

12. How did your department acquire the necessary know-how?

Internal knowledge  
 Secondary Sources (e.g. articles, literature, internet)  
 Through an external company  
 I don't know  
 Other

13. In your opinion, how much do the following methods help to improve processes in your area?

	not at all	a little bit	moderately	mostly	a lot	I don't know
Lean Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Six Sigma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
kaizen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shopfloor Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Do you have daily contact with these concepts?

Yes  
 No

15. Are you interested in extending your knowledge about the topic?

Yes  
 No

16. Do you have any additional thoughts you would like to share with us?

Figure 20 Survey design, main questions part 4



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**Appendix 2 - Additional thoughts from the participants**

We asked for any additional thoughts or experiences that the participants would like to share. Some of the most relevant comments were:

- “Exciting topic, however, I did not fully understand it.”
- “There are new ideas within this field every day, while the old ones did not even get fully understood and implemented. Based on my 35 years of operational experience, I would say that precisely this is the problem: We do not give sufficient time to integrate the CIP methods, especially for the people to understand them. How could that possibly be prosperous?”
- “CIP should be based on continuous self-improvement while striving for growth. The resulting improvements of processes should be seen as by-products. The European and American embossed CIP philosophy offers alleged promising methods but neglects the necessary mind shift. The vital part should be more on the development of employees and their empowerment.”
- “Early integration of all employees is vital.”
- “You should never be satisfied, always feel the hunger to educate to find new ways to make the work more effective in the best way possible, but also reasonable.”
- “Without integrating the ones that execute the processes at the end of the change progress, it is impossible to keep new processes sustainably.”