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Hoshin Kanri – the Japanese way of piloting

An exploratory study of a Japanese strategic management system

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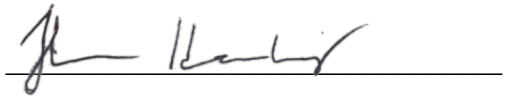

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Abstract

Strategy is a highly topical subject among managers and since the world is constantly changing it is also an important subject for companies' competitive advantage and survival. At the same time experts in the field of strategic management describe western techniques as complex and ineffective while the Japanese techniques have been seen as unambiguous and characterized by focus on quality, productivity and teamwork. This calls for greater knowledge in the Japanese management systems. Hoshin Kanri is a collection of Japanese best strategic management practices and therefore an interesting target for our study. Thus, on the one hand this study investigates the theory of Hoshin Kanri in order to give structure to it and provide a way for practitioner into the management system. On the other hand this study investigates Hoshin Kanri in order to reveal how Japanese subsidiaries based in Sweden have implemented this strategic management system. This is firstly done by reviewing the existing literature on the subject and secondly by a collective case study with in-depth interviews conducted with managers at Japanese owned subsidiaries based in Sweden. There are some limitations in this study. One is that the results of the study do not include all Japanese subsidiaries in Sweden as not all companies participated in the study. Moreover, the study is limited by one individuals' knowledge and perception of Hoshin Kanri in each of the three companies. The study contributes to the existing literature on the topic of Hoshin Kanri by; (1) structuring the literature and the existing models under one of two categories, namely cyclical or sequential; (2) providing a model that aims at making it more understandable and attractive for practitioner to apply; (3) initiating the mapping of the spread of Hoshin Kanri among Japanese subsidiaries in Sweden and (4) providing a Swedish model for the application of HK in Japanese subsidiaries.

Abbreviations

APT – Annual planning table
BFP – Business fundamentals planning
CCS – Civil Communication Section
CRIP – Catch, reflect improve, pass on
HK – Hoshin Kanri
HQ – Headquarter
JUSE – Japanese Union of Scientist and Engineers
MBO – Management by objectives,
PDCA – Plan, do, check, act.
SMEs – Small and medium sized enterprises
SQC – Statistical Quality Control
TQM – Total Quality Management
VFOs – Vital few objectives (can also be called Hoshins, Vital few actions, Vital few programmes)
WWII – Second World War

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1 Introduction

On the morning of the 6th of August 1945 the first atomic bomb, Little Boy was dropped and the world witnessed a devastation they never had seen before. Three days later, on the 9th of August, the same scenario was repeated when the second atomic bomb, Fat Man was dropped. This was the beginning of the Japanese capitulation in the Second World War (Karlsson, 2011). After their surrender, the Japanese people not only had to rebuild their country, they also had to resign themselves to be guided and controlled by the Allied forces. The aim of the occupying forces was not to terrorize the Japanese but to help them rebuild their country and at the same time hinder the military to be rebuild (Babich, 2007). The Allied needed the Japanese to cooperate and in order to achieve this they had to make their intentions public. They decided to start broadcasting radio but the problem was that no one had a radio. The Allied and the Japanese therefore started to produce radios, but since the occupying forces did everything possible to prevent the military of Japan to be rebuild, all wartime managers were banned from any position of responsibility. This resulted in a production that was anything but good. To come to grips with this, the Civil Communication Section (CCS) in the Allied forces were appointed to take responsibility for the radio production and also to start to train the Japanese managers and engineers in management techniques (Babich, 2007).

20 years later, in 1965 Bridgestone Tire conducted an analysis of the different techniques that had been used by the winners of the Deming Prize. The Deming prize highlighted organizations or companies that had been successful in adopting the new techniques taught after WWII and also been able to, in an effective way, develop them (JUSE, 2015). The analysis led to that different techniques were put together under the name Hoshin Kanri (HK). About ten years later HK was spread and accepted throughout Japan, add another ten year to the life of HK and it has begun to spread to the US through American subsidiaries in Japan (Babich, 2007). HK, together with other planning processes and quality programs, laid the foundation for the start of Japans journey from a loser of the WWII to one of the world's richest countries and a member of G7 (Law, 2009).

So, why is Japans development after WWII of any interest to us today? To start with, Japan did find a way that led them from being a country literally in shards, to a country that placed third on the World Bank's (2016) ranking over biggest GDP 2014. Moreover, the story about Japan is interesting because it demonstrates the importance of good management systems and leadership. Moreover, Japans development illustrates the impact that quality control could have on development and growth. In fact, Drucker (1971) states that the Western world can learn a lot from Japanese management; decision by consensus, focusing on the problem, increasing effectiveness, willingness to change and the concept of lifetime training. Further, Witcher and Butterworth (2001) mean that Japans great contribution to modern management is the emphasis on the importance of having an understanding of the overall picture in order to be able to drive operations in a manageable way. In order for the whole organization to work effectively all its' processes need to be aligned and managed. That is, according to Witcher and Butterworth (2001), the Japanese lesson. Moreover, the scholars argue that the quality movement has brought attention to the importance of judging processes on how performance

is being achieved, instead of only focusing on the actual results of organizational performance. For the past 60 years Japan has, according to the Global Manufacturing Competitiveness Index 2013, been one of the most significant manufacturing powers in the world (Deloitte, 2013). This has much to do with the policies they work by and the techniques they use. Hence, the quality revolution that started in Japan has had a central role in their development and in the techniques and management systems they apply in their organizations (Drucker, What we can learn from Janpanese Management, 1971).

Having knowledge on management systems is important because the very definition of management system is: "The structure, processes and resources needed to establish an organization's policy and objectives and to achieve those objectives" (Chartered Quality Institute , 2016a). Hence, management systems provide guidance and control for actions in the organization and are used to achieve business objectives, ensure consistency, set priorities, change behaviors and establish best practice etc. much of what is necessary to do when running a business (Chartered Quality Institute , 2016a). In today's globalized world, which in common parlance nowadays could be replaced with "in today's small world", there is an increasing competition among companies. The competition is not limited to a specific industry but companies today, more or less, compete with every other company in their proximity (Parker, 2005). This is one of the reasons why strategic management is important. It regards making decisions about the organizations' future direction and then putting these decisions to action. Strategic management is a process consisting of two main parts: planning and implementation (Chartered Quality Institute , 2016b). According to Tennant and Roberts (2001a), the western techniques for strategic planning have been complex ones, which often failed, while the Japanese techniques have been seen as unambiguous and characterized by focus on quality, productivity and teamwork.

Hoshin Kanri is one of these Japanese techniques, or management systems, for strategic planning. This management system is particularly interesting because of a several reasons. Firstly, HK as a theory is, as mentioned above, a collection of 'best practices', or techniques for quality control, that have been awarded for their effectiveness. Since today's society moves faster than it did 20 years ago it requires that companies can, in a good way, adapt to new conditions, which increases the importance of a good management that can handle both external and internal changes. Today, every other person in Sweden has a job that will not be needed in 20 years (Fölster & Hultman, 2014), and organizations need to be able to adapt to these kinds of issues. This brings us to our second reason of interest: HK is a good system for handling these types of issues since it is regarded as a flexible system that in a good way can adapt to both internal (Akao, 1991) and external (Tennant & Roberts, 2001b) changes. In the highly competitive market that we find ourselves in today, (Parker, 2005) supply often exceeds demand and that puts the power of choice in the hands of the customer. (Hutchins, 2008) In order for the customer to choose you over another supplier, you not only need to be the best, but you also need to be perceived as the best. When operating in a competitive environment the only proven means by which to achieve competitive advantage, and ultimately survive, is to apply Hoshin Kanri (Hutchins, 2008). This is the third reason why we

believe that Hoshin Kanri is an interesting management system for further investigation, but also a topic that can generate original and innovative research problem and questions.

1.1 The Problem

According to Butterworth & Witcher (2001) it can be assumed that, outside Japan, HK is almost exclusively applied in Japanese-owned subsidiaries. The only exception to this is some American companies that apply this management system after it has been introduced through their subsidiaries that are, or have been, based in Japan (Babich, 2007). When Hoshin Kanri started to spread across the world as a recognized strategic management systems it opened up for local development and adaption. The result of this development is that the overall picture of the theory is incoherent, especially since it, according to our knowledge, does not exist any comprehensive picture of the area. The models that are presented in the literature come from case studies of companies based in different countries. The ambiguous picture of the theory would indicate that Japanese owned subsidiaries have had to adapt to their host country´s culture, tradition and values. A contributing factor to this abstruse picture could also be the absence, in the literature, of directives for implementing HK. This would in turn mean that the stricter, original Japanese version of Hoshin Kanri does not work outside Japan, as it has been adapted to local conditions, different industries and with different implementation processes. Another possible source to the variations of the theory could be that it simply has evolved and developed over time. As said in the introduction, HK was developed during the rebuilding of the Japanese state and since then a lot has happened in the world, in virtually all aspects.

The ambiguous picture of HK leads to uncertainty, which could increase the risk of failing in the implementation process and thus give the organization a competitive disadvantage instead of a competitive advantage. Even worse, it can lead to managers not trying to implement the system because they do not understand it. However, the nuances in the picture of the field is derived from local adoptions and an evolvement of the theory itself, the nuances in themselves are not the problem. The problem is that there is no systematic organization of the variations and no directives of how to implement HK in a certain setting. This makes it hard to know how to proceed when encountered with Hoshin Kanri. The ambiguity about the implementation and the increasing need to compete internationally makes this a highly topical subject. The fact that Sweden is losing competitiveness and positioning in the global ranking of competitiveness (Schwab, 2013; Schück, 2014; Näringsdepartementet, 2015), continues to narrow it down to that it would be interesting to study Hoshin Kanri's implementation in Sweden. Moreover, HK is, according to Tennant and Roberts (2000), one of the best strategical management systems and it gives the management sufficient tools for measurement and evaluation.

1.2 The purpose and the research questions of the research

The purpose of this study is firstly, to gain knowledge about the Hoshin Kanri theory in order to be able to give a structure to the literature and secondly, to investigate how Japanese subsidiaries based in Sweden have implemented Hoshin Kanri. The problem in the field and the purpose of our study leads us to the following research questions:

RQ 1: What are the variations of HK in the literature?
RQ 2: How do Japanese subsidiaries based in Sweden implement HK?
RQ 3: How do the implementation of HK differ between the companies?
RQ 4: If there are variations in the implementation of HK, why do they exist?

1.3 Delimitation of the study

The study is limited to only look at the theory of one specific management system; Hoshin Kanri and the implementation of this system in a specific setting, namely Japanese subsidiaries in Sweden. Hence, another aspect of the setting that delimits this study is the fact that we conduct it within the Swedish boarders. These demarcations are made because of practical reasons since the time frame of the thesis does not allow for a more comprehensive empirical study or to look at an additional management system. We further delimit this study to only look at the implementation and function of HK from a management perspective. We make this delimitation because we believe that it is the managers at the companies that can provide us with the best, most accurate and valuable information needed for fulfilling the second part of the purpose of this study. The second reason to why we focus on the managers is the responsibility that they have in that the implementation shall suceed (Löfving, et al., 2015). This thesis takes on the collective case study strategy, which involves one case (HK) that is investigated through instruments (Japanese subsidiaries) in order to be able to make a theoretical generalization from these instruments (Cousin, 2005).

1.4 Contribution

We aim at making a contribution in the field of strategic management where HK is a quite new and unknown system outside Japan. By clarifying the theory of HK we hope to make this strategic management system more attractive and available for practitioners. Moreover, we aim at contributing to the insight of the spread of HK in Sweden by mapping the application of HK in Japanese owned companies in Sweden. Finally, we hope this thesis serves practitioners in creating an understanding of how to, in practice, proceed when wanting to implement HK.

1.5 Structure

In order to fulfill the purpose of this study, this chapter will be followed by a frame of reference (Chapter 2) were we will present the history of HK, previous research on HK, known scholars and their view of HK and finally a model of the HK process will be presented followed by descriptions of each step in the process. Following the frame of reference is the research method (Chapter 3). In this chapter we present the philosophy behind and the approach to the research, followed by the research design, purpose and strategy. Moreover, in

this chapter we describe the method for the data collection step by step as well as the method for the data analysis. The chapter on research method is finalized by a description of the dimensions of trustworthiness and ethics. The results of the collection of our primary data are presented in the empirical results (Chapter 4). In this chapter we presented each of the companies that we interviewed by providing the reader with background information about each company in order to give a context, followed by the presentation of a visual model that represents the HK process at each company. The visual model is enhanced by a description of how each step in the process looks like in each company. The results presented in this chapter are then analyzed and discussed in the discussion (Chapter 5). In the concluding chapter (Chapter 6), we will present our contribution, limitations, suggestions for future research and practical implications.

2 Theoretical Framework

In this chapter the theoretical framework will be presented which will be the basis for our thesis and enables us to present and elaborate the theories relevant to fulfill purpose of this study. The knowledge presented here is the result of a systematic literature review (appendix 1) and a following snowball-sampling with focus on the most prevalent scholars in the systematic review and recommendations from an expert in the field.

The definition and name of HK (see appendix 2) has changed throughout the history and has depended on the scholar that has portrayed the concept (see appendix 3) (Jolayemi, 2008). Familiarizing with the development of the HK concept and history can therefor serve in creating a better understanding of the theory and method.

2.1 Historical background to Hoshin Kanri

After WWII, the Civil Communication Section (CCS) was put in charge of the development of management techniques in Japan. One of the techniques that was taught was Statistical Quality Control (SQC) according the work of Walter Shewhart. Shewhart is known as the father of modern quality control and teacher to, among others, William Edwards Deming (American Society for Quality, 2016). The CCS was cooperating with the Japanese Union of Scientist and Engineers (JUSE) in order to conduct the training. According to JUSE, SQC was a major contributor to that the Allied won the WWII, therefor JUSE asked CCS for more training and experts in the field. William Edwards Deming was recommended and during a two-month period in 1950, he trained hundreds of engineers and managers. Deming's training and lectures were focused around; process controls, cause of variation and the Plan-Do-Check-Act (PDCA)-cycle. The initial results were encouraging and JUSE increased the use of their new learnings until they overemphasized it and it almost started to be contra productive. To deal with this JUSE invited Joseph Moses Juran in 1954, to teach them about management's role in promoting and emphasizing quality controls. This marked a turning point for Japan and their work towards high quality products and they developed an understanding for the management's responsibility to get the company aligned towards a certain goal. At the same time as Juran's teachings spread throughout Japan, the Austrian-born American management consultant Peter Drucker's book; *The Practice of Management,* was released in Japan. The book is the first documentation of Management by Objectives (MBO) (Babich, 2007). To summarize MBO, every company must create a 'true team' that can work effectively together, where every individual provides different skills and together the team moves towards a common goal. The effectiveness of MBO is grounded in three core values; participation in decision making, goal setting and performance feedback (Kessler, 2013).

The Japanese engineers, scientists and managers now had enough knowledge about the different techniques and philosophies that Deming, Juran and Drucker had taught them, to be able to start experiment with them. This made it possible for the Japanese to adopt the techniques to their own companies in order to create their own quality systems and start the work with strategic quality planning (Babich, 2007). To ensure a continuous development of

Japanese quality control, JUSE introduced the Deming Prize, in honor of W. E. Deming, to highlight organizations or company divisions that had been successful in establishing a "company-wide quality control" (Law, 2009). The prize created a benchmark for quality work and by sharing best practices it further contributed to the continued development. Soon themes began to appear among the winners, which laid the foundation of the many Japanese management systems that exist today (JUSE, 2015).

2.2 The Hoshin Kanri literature

One of the techniques that culminated from the Deming-winning techniques was HK, which was made an official term in 1965 when Bridgestone Tire published their company regulations, *The Hoshin Kanri manual* (Babich, 2007). However, the first description of the HK method was accounted for earlier that year in, as indicated earlier, a report concerning the Deming price-winning practices (Akao, 1991). Yoji Akao is the one who, at that time, provided the most complete definition of HK (Ćwiklicki & Obora, 2011). However, Akao (1991) refers to the HK as *target and means deployment*, which is just another name for HK. Akao (1991) defines HK as a system for quality control and continuous improvement activities. He further describes it as "all organizational activities for systematically accomplishing the long- and mid-term goals as well as yearly business targets, which are established as the means to achieve business goals." (Akao, 1991, p. 47). Initially the texts on HK where all in Japanese and the global interest for this method did not really gain momentum until the book by Akao was translated into English in 1991 (Ćwiklicki & Obora, 2011). This translation can be considered as the seminal text, or the bible, of HK (Witcher B. J., 2013; Ćwiklicki & Obora, 2011). Outside Japan, HK was first implemented in the late 1980s at Florida Power & Light where it was called *policy deployment* (Jolayemi, 2008).

According to Jolayemi (2008), the fullest definition of HK is provided by Barrie G. Dale (1990), where he refers to HK as *policy deployment*. Dale further describes it as a process of developing strategies and goals that are based on previous year's performance and then used to detect areas of enhancement. Adding on, he explains that the strategies and goals, and even the methods for reaching these, are discussed at all levels of the organization until consensus is achieved (Dale, 1990).

Pete Babich (2007) describes his experience of HK at Hewlett-Packard and explains how the company considered the method a competitive advantage, and it was treated as a company secret until the early 1990s. Babich (2007) used his own experience at Hewlett-Packard and created a model of HK in 1998. The scholar chooses to call the system *Hoshin planning* and describes it as "a system of forms and rules that provide structure for the planning process." (p. 22). Babich (2007) describes this system as means of focusing the organizational efforts in order to create success, further he attaches importance to the use of forms for the purpose of facilitating the documentation and execution of the plan. According to Ćwiklicki and Obora (2011) the focus on documentation in Babich's HK created an alteration that leads to a more bureaucratized management style. We agree with Ćwiklicki and Obora in their argument that Babich's HK process leads to a lot of documentation for the management which certainly can

be frustrating and stressful for managers that also have to handle people and operations of a running business. Nevertheless, we believe that the time spent on documenting the work during the different stages of the HK process can have many benefits later on. For instance, our belief is that the documentation can greatly serve in creating an understanding of the HK process and help in instructing others with how to proceed with the process. Moreover, we agree with Babich (2007) in his statement that the documentation of the process serves the standardization process that, according to us, is a reason in itself to actually document the work and different procedures.

One of the more recent models of HK is portrayed by David Hutchins (2008) and is founded from his own experiences of implementing the HK system. The scholar explains the concept of HK as, What is it that we want to achieve? and the practical issue of how to achieve it is answered by Total Quality Management (TQM), which is ”the means by which to close the gap between currant performance and target performance” (Hutchins, 2008, p. 3). Hutchins' HK model is characterized by many additional tools and methods that can be used in order to facilitate the implementation process of HK. The model is to be used like a road map for implementing the HK process (Hutchins, 2008).

Several of the mentioned scholars attempt to facilitate the understanding of the concept of HK by looking at the origins of the Japanese words *Hoshin* and *Kanri*. The first word Hoshin can be divided into two words; *Ho* and *Shin*. *Ho* can be, literally, translated to 'direction' or 'side', while *shin* means 'needle' or 'focus'. Together these words create direction- needle/focus, which refers to a compass. The second word, *Kanri*, also consist of two parts, namely; *Kan* and *Ri*. Kan translates into 'control' or 'alignment' and *ri* translates into 'reason' or 'logic'. Put together, the word *Kanri* means administration, control or management. By combining all four components of the words, *Hoshin Kanri* stands for control and management of the company's compass or focus (Lee & Dale, 1998; Babich, 2007; Hutchins, 2008).

Witcher and Butterworth's (2001) definition of HK, which they refer to as *policy management*, is: "a corporate-wide management that combines strategic management and operational management by linking the achievement of top management goals with daily management at an operation level" (p. 651). Their work, *Hoshin Kanri: a preliminary overview* (1997) is an overview of HK and is based on the assumption that HK requires previous knowledge and experience of TQM. Witcher and Butterwort wrote *Hoshin Kanri: Policy management in Japanese-owned UK subsidiaries* in (2001). Here, the scholars give a description of HK and its process and moreover they account for the Western type of HK, which they identify in some case studies of Japanese subsidiaries in the United Kingdom. There are several works by Witcher and Butterworth (Witcher, 2002; Witcher & Butterworth, 1999a; 2000; 2001) that are based on studies of UK companies. These works have contributed to the creation of a British model of HK that is provided in the mentioned works. Ćwiklicki and Obora (2011) describe how Witcher and Butterworths' model indicates some key characteristics in the procedure of HK that are shared in all the case studies. The implementation however differs somewhat between the companies since the culture of the organization and the style of management in these companies are different (Ćwiklicki & Obora, 2011).

Tennant and Roberts use different names for HK, they call it *policy control* (2001a) and *policy management* (2003). The scholars describe HK as a system that focuses on the means or processes by which the targets are reached. According to Tennant & Roberts (2003) HK is not a strategic planning tool but an execution tool that allows you to deploy an existing strategy plan from the top to the bottom of the organization.

Regarding the HK literature that is based on the experience of HK in the Swedish settings we have, in our review of the literature, not come across many research papers portraying this situation. In fact, the only research papers about HK application in the Swedish setting that we found where two papers written by the same team of scholars. Löfving et al. (2014) developed an approach to HK that is adapted to Swedish-owned, small and medium-sized enterprises (SMEs). Further, the scholars study the initiation of this adopted approach in four SMEs and account for the lessons learned in those cases. Löfving et al. (2015) study eight SMEs in Sweden that have initiated HK using a tentative process. Based on these case studies the scholars identify factors that in some way influence the process of introducing the HK method. These factors are; written strategies and strategic work, lean experience and work with continuous improvement, strategic and operational focus, leadership commitment, top management team and regular top management team meetings and organization open for change and organizational culture. The study shows that the most important factor for the initiation of HK is leadership commitment. The implementation is likely to fail if the CEO is not committed and involved (Löfving et al., 2015). Since HK requires involvement and dedication, having a top management team in place that has regular team meetings is another important factor for HK initiation. Moreover, having written strategy and strategic work in place when first introducing HK is another enabling factor for implementation (Löfving et al., 2015).

As presented above there are several names and definitions of the HK management system. While there may not be one exact definition of what HK is, and despite the fact that the name of the system may differ depending on scholar and geographic location of the application, the core characteristics and the main idea of HK stays the same. Now that we are familiar with the historical background of HK and the literature and most renowned HK scholars we will proceed by accounting for the statements in the literature, regarding the relationship between HK and TQM.

2.3 Hoshin Kanri and TQM

TQM (or Total Quality Control (TQC) as it has also been called) is a collection of philosophies on how to manage a business, its people and processes while focusing on achieving customer satisfaction through continuous improvements (Law, 2009). TQM programs often demand; improved training at the workplace and empowerment of the employees, re-designing of business processes, dedication to continuous improvements and long-term thinking and solid performance measures that the employees can understand and work with. (Law, 2009) The TQM pioneers and enthusiasts where, among others, W.

Edwards Deming, Kaoru Ishikawa and Joseph M. Juran. As one might remember from the section on the historical background to HK, Deming and Juran are also the men that provided the methods and techniques used in Japan after WWII which later came to be the HK system. Hence, it may be somewhat tricky to know what TQM is and what HK is. In fact, some of the HK scholars argue that HK cannot exist without TQM (Hutchins, 2008; Dale, 1990; Lee & Dale, 1998; Tenant & Roberts, 2000; Witcher & Butterworth, 1997). Lee and Dale (1998) call it a myth that Hoshin management can be implemented without other TQM methods. Hutchins (2008) describes HK as the 'what' that should be achieved and TQM as the 'how' that shall be achieved, by looking at HK and TQM in this way it is clear that Hutchins believes that these concepts are connected. Witcher and Butterworth (1997) argue that TQM is what makes HK different from other strategy methodologies, hence TQM must be in place before applying HK according to the scholars. However, we do not fully agree with these arguments because we believe that it indeed is possible to apply the system of HK without adopting TQM. Since we agree with Law's (2009) definition of TQM, we see it as a collection of multiple quality management philosophies and not as a preamp to HK. However, we would like to argue that it is necessary to embrace some kind of quality awareness and with quality we mean anything that raises the value for the stakeholders and/or for the organization itself. With that reasoning we would also like to argue that it is not necessary to embrace all the philosophies of quality management, and thereof not TQM, in order to apply HK. What we believe is most important is that the management and organization as a whole has some kind of quality awareness but adopting the whole concept of TQM would not be a necessity for the success of HK.

With all of this in mind we are ready to state our own definition and explanation of HK. So, hereinafter we will treat HK as an independent strategic management system that requires a foundation of some form of quality awareness. Further, our definition of HK is; a strategic management system that aims at convergence through planning and execution of annual strategic objectives while maintaining a long-term focus. Following we will first, present our categorization of the HK literature and secondly, we will present our HK model with its different steps and processes.

2.4 The Hoshin Kanri process in the literature

While reviewing the literature we came across a lot of models and ways to conduct the Hoshin Kanri process. To create a clearer picture of the area we have made a compilation of the literature that portrays HK as an independent management system. We have categorized the models into one of two categories; Cyclical or Sequential (see table 1). The Cyclical category is for the models that build upon the PDCA cycle, while the Sequential category is for those models that are of a more linear approach and do not revolve around the PDCA cycle. The biggest difference is the level of iteration between the two categories, were the Cyclical category, due to its reliance on the PDCA, has a continuous iteration that involves the 'whole process/model'. The Sequential category's iteration is on the other hand embedded in some of the different steps. Both categories are repeated every year, so in that sense they

are both cyclical, but the categorization instead refers to the degree of cyclical movement (iteration) that take place during the year.

Table 1: *Categorization of the models*

Scholars	*Cyclical*	*Sequential*	*Company based**
Asan & Tanyaş (2007)	X		X
Ćwiklicki & Obora (2011)	X		X
Kesterson (2014)		X	
Nanda (2003)	X		X
Su & Yang (2015)		X	X
Tennant & Roberts (2001)		X	X
Witcher & Butterworth (1999a)	X		X

**Company based is not a category but an overview of which studies that are made in cooperation with a company.*

2.4.1 Cyclical approaches

2.4.1.1 Asan & Tanyaş (Integrating Hoshin Kanri and the Balanced Scorecard for Strategic Management: The Case of Higher Education, 2007)

Şeyda Serdar Asan is an Assistant Professor at the department of industrial Engineering at Istanbul Technical University, Turkey. Mehmet Tanyaş is an Associate Professor at the International Logistics Department at Okan University, Turkey. Their HK process is based on the PDCA cycle that then is adapted to the FAIR cycle by Witcher and Butterworth (1999a). FAIR stands for Focus (Act), Alignment (Plan), Integration (Do) and Review (Check), and it is an annual cycle that starts with the management 'acting' (focus – act) and review the previous year´s performance. When the review is done and a strategy for the near future is composed into vital few objectives (VFOs), the cycle moves to the 'alignment – plan' phase. During this phase the VFOs are merged with already existing annual plans and are deployed down the organization through the catchball process. Then the cycle turns again and this time to the 'integration – do' era, the VFOs are now merged into the annual plan and it is realized. During this phase the PDCA cycle is used as a corrective tool in order to secure that the organization sticks to the plan. When the year start to come to an end the cycle moves into the 'review – check' phase were the past year is reviewed and evaluated (Asan & Tanyaş, 2007).

2.4.1.2 Ćwiklicki & Obora (Hoshin Kanri: Policy Management in Japanese Subsidaries Based in Poland, 2011)

Marek Ćwiklicki is an Associate Professor at Cracow University of Economics, Poland and Hubert Obora is an Associate Professor at the department of methods of organization and management at Cracow University of Economics, Poland. They investigated three companies in Poland that uses HK and came up with a meta-model of these companies based on the PDCA cycle. In the model the corporate objectives/strategy is set by the headquarters and cannot be influenced by the local organization. When the local site gets the objectives they turn them into business objectives. The participation of staff and managers varies between the companies but is overall quite low (Ćwiklicki & Obora, 2011). During the Do phase the

polish companies engage in a catchball process internally between the senior- and junior management in order to set the site specific goals and plans to reach the corporate objectives. The check phase consist of everyday, monthly, semiannual and annual reviews, were the everyday, monthly and semiannual reviews goes back to the do phase in order to correct departures from the plan. The semiannual and annual review serves as evaluation occasions that end in proposed standardization of processes. The proposed standardization of processes that comes semiannually turns into quality objectives that will be incorporated during the year by the junior management. The proposals that come annually are taken into account when the next year's site specific plans and goals are set.

2.4.1.3 Nanda (A process for the deployment of corporate quality objectives, 2003)

Vivek (Vic) Nanda is a Six Sigma Black Belt, Certified ISO 9000 LA, CMQ/OE, CQA, CSQE, and ITIL Foundations Certified. He is the author of three books on quality and process improvement. Nanda (2003) builds his model upon the FAIR cycle developed by Witcher and Butterworth (1999a), Nanda sees, unlike the authors of this thesis, HK as a part of the quality work in a company and therefore every step is connected to quality and is more a preamp to a quality project but they can easily be applied on 'the whole company' instead. Nanda (2003) defines the FAIR process as a process for; "institutionalizing policy deployment (with regards to corporate quality objectives) in an organization." (p. 1016). His model contains of seven steps divided throughout the four parts of the cycle. The first part, focus, consists of the definition of the organizations quality objectives. When that is done the model moves on to the second part, alignment. Alignment consists of two steps namely cascading the quality objectives, agreed upon in the first phase, into the organization and to define a plan for the catchball process. The next phase is integration and consists of four steps (the last one is shared with the review phase). The first step is the creation of improvement projects for each vital few action followed by the creation of a definition of the improvement grid. The third step is to prepare the improvement project's specifications, followed by the execution of the project. When the project is launched, the model moves on to the review step (called responsiveness by Nanda (2003)). The review/responsiveness phase consist of one step and that is to report on and review the progress of the launched project

2.4.1.4 Witcher & Butterworth (Hoshin Kanri: How Xerox Manages, 1999a)

Barry Witcher is Reader Emeritus Strategic Management at Norwich Business School, UEA, UK. Rosemary Butterworth is a researcher at BT Telconsult, UK. They looked at Xerox and how they handle HK. The model that is described there is the same that Asan & Tanyaş (2007) among others build their article around. A model which is based upon the PDCA cycle and is named FAIR. The process starts of by the Focus (Act) phase, were the company sets the goals for their business and the vision for the organization, this process starts of six to nine months before the implementation process starts and ends with the creation of the vital few programmes (a.k.a VFOs). The next phase is Alignment (Plan) and here the vital few programmes shall be aligned in the different business units and teams at the local level. The Alignment process takes place in the beginning of the year with a meeting were the managers explain the vital few programmes to their employees and units. This carries on until everyone is involved, and shall be finished in February, which means that the different teams already

has started to work with the vital few. The Alignment process represents the catchball process in this model and is necessary to reach an consensus about the targets and means in order to reach the vital few. The next phase is the Integration (Do) phase were the goal captures the essence of HK, namely that peoples daily work shall contribute to the accompleshing of the vital few. During this phase it is decieded how the vital few shall be managed and then they are managed accordingly. Once again the PDCA-cycle is the foundation in order to secure that the development is according to the plan. The last phase is Review (Check) which is the evaluation of the whole year and its performance.

2.4.2. Sequential approaches

2.4.2.1 Kesterson (The Basic of Hoshin Kanri, 2014)

Randy Kesterson is a management consultant with a broad background, he holds the Chair of the Advisory Board for the Center for Global Supply Chain and Process Management at the University of South Carolina's Moore School of Business, US. He builds his model on the PDCA cycle but with the alteration of one additional step, Scan and a non-cyclical approach. This creates S-P-D-C-A phases, which stands for Scan-Plan-Do-Check-Act. The Scan phase consists of seven steps; (1) develop your mission statement, (2) define your values, (3) evaluate your current state, (4) define your vision, (5) design your desired future state, (6) identify gaps between the current and future state and (7) prioritize the gaps and define your VFOs. This first phase can also be incorporated with the Plan phase, as it is in some of the other models, but Kesterson (2014) has chosen to put this 'strategic direction setting' in an own phase and the seventh step is ended with the catchball process were the VFOs are decided upon. The next phase is the Plan phase and since all the strategic direction setting is done this phase is about to plan for how to implement the VFOs. The next phase is Do and here it is time to execute the plan. Next is the Check phase were you review and analyze the results so that you can identify what you have learned, this should be done at least at a monthly basis. The last phase is Adjust (act) and is about to take action based on your newly gained knowledge in the previous phase, either you incorporate what you have learned (standardization) or you implement countermeasures to correct deviations. When the plan is adjusted it is time to go back to the do phase and continue to circle like this until the year has come to an end. Then you start all over again with the scan step, maybe you do not have to change your mission, vision, values etc. but it gives you an opportunity to once a year check them and to ensure that they remain relevant.

2.4.2.2 Su & Yang (Hoshin Kanri planning process in human resource management: recruitment in a high-tech firm, 2015)

Chao-Ton Su is a Chair Professor at the department of Industrial Engineering and Engineering Management at National Tsing Hua University, Taiwan. Tsung-Ming Yang is a Professor at the department of Industrial Engineering and Management at National Chiao Tung University, Taiwan. They have an extension of the planning process in HK called EIDPER. EIDPER stands for envision, identify, diagnose, prioritize, execute, and review model.

1. Envision – the top management imagine and advance their future for the organization, which then is passed on to senior management.

2. Identify – the senior management receives the envisioned concept of the company by the executive management and identifies strategic objectives.
3. Diagnose – an assigned 'core team' take the strategic objectives from the senior management and make a diagnosis of the current situation so that improvement initiatives can be created in order to reach the strategic objectives.
4. Prioritize – The improvement initiatives are then communicated back and forth both with senior management and line managers in order to reach consensus about them and how they shall be prioritized.
5. Execute – The improvement initiatives are then executed according to the plan and closely supervised by different management levels.
6. Review – Throughout the year there are continues reviews and quarterly status updates, the final review and evaluation of the year are then send back to the top management to see if the envisioned future is reached or if some corrective measures has to be taken**.**

2.4.2.3 Tennant & Roberts (Hoshin Kanri: A Tool For Strategic Policy Deployment, 2001b)
Charles Tennant is a Principal Fellow, Quality and Reliability in the Warwick Manufacturing Group, University of Warwick, UK. Paul Roberts is a Principal Fellow, Quality and Reliability in the Warwick Manufacturing Group, University of Warwick, UK. They state that HK needs to be realistic with a focus on what is important and that the organization shall be aligned and that the people that take the decisions must have the necessary information. They also argue that the planning has to be incorporated with the daily activities and supported by a good communication both vertically and horizontally to ensure that everyone in the organization gets involved. To ensure this they present a six-step model. (1) A five year vision, an improvement plan based on both internal and external information. (2) A one year plan, a plan consisting of ideas from the five year vision that is feasible and likely to be achieved during the coming year. (3) Deployment to departments, breakdown of the annual plan into department specific goals. (4) Detailed implementation, execution of the plans with a detailed documentation of the progress to create a system that is self-diagnosing and self-corrective. (5) Monthly diagnosis, the review/analysis of the progress with focus on the actual processes more than on the goals. (6) President's annual diagnosis, the final review/audit of the processes in order to capture the development of procedures that will facilitates the function of the managers.

2.5 The steps of Hoshin Kanri

In order to present the HK process in a good visual way we have created our own model that is based on our literature review, the model presented by GOAL/QPC Research Committee (1994) and the ten steps of Hoshin Kanri provided by Jolayemi (2008). The aim of the model is to provide an understandable overview of HK and to act as an instruction for practitioners that want to implement HK. We began in the model by GOAL/QPC Research Committee (1994) since it gives a very clear picture of the processes that takes place in HK. The model also divides the process into two phases; strategic planning and operational processes. Further on the model highlights processes that are important but apart from the key HK processes; the

PDCA-cycle, the catchball process and that the whole HK process is cyclical, seen for several years. To further strengthen and simplify the GOAL/QPC Research Committee's model we have chosen to merge it with the ten-steps planning process presented by Jolayemi (2008). The reason for this is that Jolayemi (2008) provides a more detailed process with his ten-step approach that will, together with the model by GOAL/QPC Research Committee (1994) and the knowledge we gained through the literature review provide a good introduction for practitioners to HK. The model that we have created is categorized as a Sequential model due to its "linear" appearance and will also provide a good structure for the coming section.

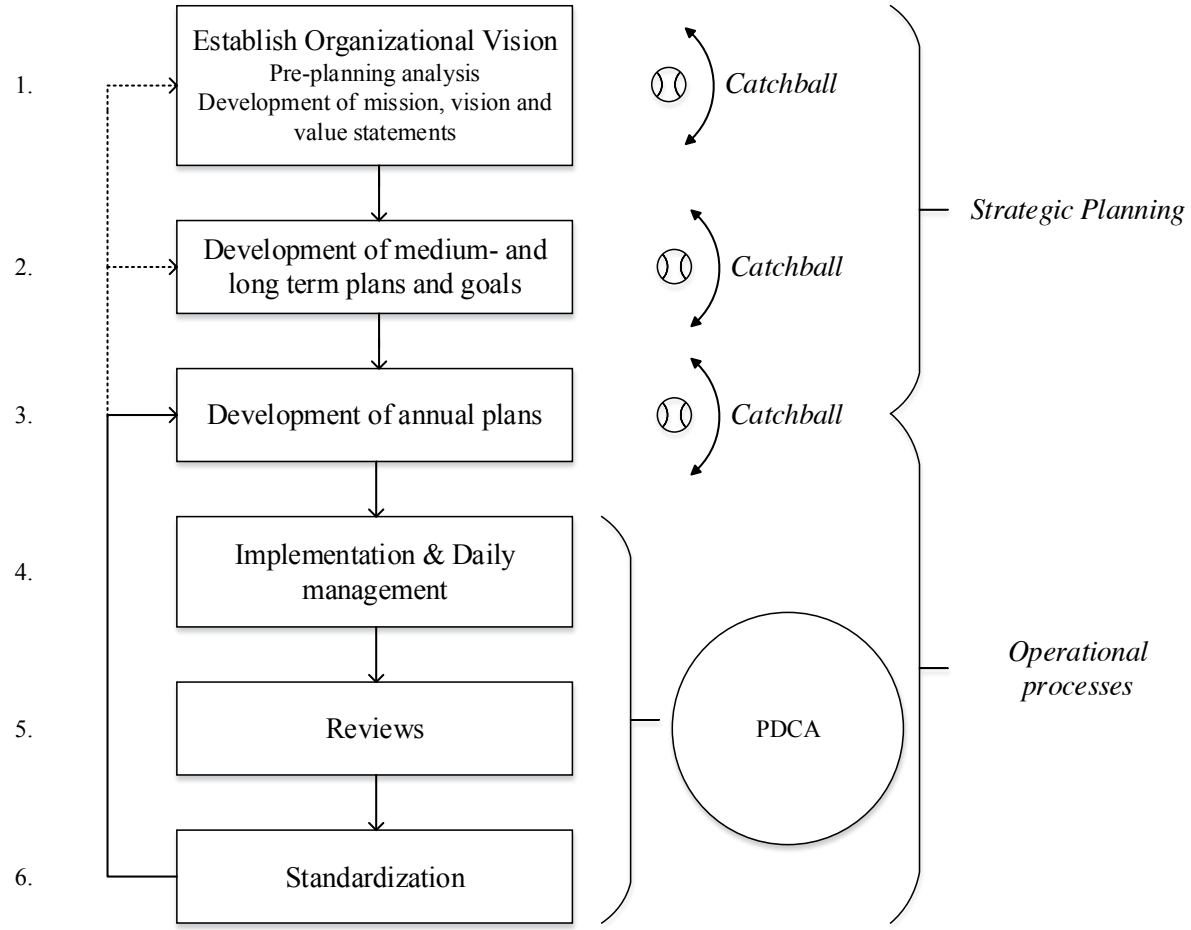

Figure 1: *The Hoshin Kanri process* (Alic & Ideskog, 2016)

2.5.1 Step 1: Establish Organizational Vision

2.5.1.1 Pre-planning analysis

A thoughtful and careful assessment of the organization's current seat is a basic step in any kind of planning, and so also in the HK (Cowley & Domb, 1997). Watson (1991) explains, about the HK process, that "The first step is performing an environmental analysis of the situation in which the business system functions. This includes the economic, market, political, technical, social, and legislative aspects of the company's business and how it performs relative to the competitors in these areas." (p. 19). Peter Drucker concretizes this in

his book, *The Practice of Management* (1954) by stating that all business planning must be rooted in the answers of three basic questions:

- What is our business?
- What will it be?
- What should it be?

Babich (2007) states that the pre-planning process must state why the organization exist, this should be decided by the customer needs and not the company's products or services. This since an organization's customer's needs change and therefore the pre-planning process must be adjusted according to this and express why the company will exist in the future. Babich (2007) further adds that the pre-planning process also must handle the question; if the company shall influence the future or react to it? Jolayemi (2008) contributes by stating that the analysis needs to deal with the company's internal environment and not only the external one. The scholar also states that it is impossible to develop strong mission-, value-, and vision-statements without a proper pre-planning analysis. In a survey conducted 2008 by Jolayemi (2008), he concludes that despite its (the pre-planning analysis) importance only 50 % of the HK literature brings up pre-planning analysis. The connection between the pre-planning and the quality of the three statements (mission, value and vision) is according to Horak (1997) the market and environmental conditions. Since they decide the statements, these factors need to be included in the initial analysis. One approach to the pre-planning analysis is to use the seven strategic tools (S-7 tools) (see appendix 4) by Osada (1998), by taking this seven steps you will get a clearer picture of what your organization is and be able to lay the foundation for a continued implementation process. Another famous and powerful tool is the SWOT analysis, Strengths, Weaknesses, Opportunities and Threats, it builds on that the management reflects over the present situation. Where strengths and weaknesses is an internal scan, while opportunities and threats represents an external scan of the environment where the company acts (Cowley & Domb, 1997). We agree with the scholars above in that the pre-planning analysis is of big importance. If you do not know what you have, how should you then know how to get to where you want to be?

2.5.1.2 Development of mission statement

An organization's mission statement explains and expresses what the organization does, why it does it and what value the company creates (Kesterson, 2014). To understand why the mission statement is important, it is, according to Jolayemi (2008), crucial that one remembers that HK consist of two operating levels namely strategic planning, also called breakthrough plans (Babich, 2007), and business fundamentals. Babich (2007) further argues that the mission statement is the foundation of the business fundamentals and after that they are set and communicated, everyone in the organization shall be able to understand how they are contributing to the overall performance. He continues by talking about business fundamentals as the mechanism that keeps the ship afloat (Babich, 2007).

Classical ingredients in a mission statement are, according to Kesterson (2014), the company's different stakeholders, industry, the company's offerings in terms of products and service and which communities the organizations is operating within. However, the main focus of an effective mission statement shall be on the customers and the markets and not on the products and services provided by the company (Babich, 2007). The scholar continues by stating that the most important factor of an effective mission statement is that it can be memorable. If people cannot remember the mission, it will not have any influence on their daily operations and thus lose most of its advantages and the effort to create a mission statement will be more or less fruitless. One approach to creating a mission statement is to answer the questions given by Babich (2007):

- Who are our customers?
- What are their needs?
- How will the measure our performance?
- What are our products and/or services?
- How well do our products and services satisfy customer needs?

By answering these questions, the necessary information that is needed to create a good outward focused mission statement is captured. Babich (2007) explains that the statements do not have to capture all customers. You will serve all customers otherwise you will lose them but there is only room for the biggest/most important customers in your mission, i.e. they who will significantly influence your processes. Babich (2007) propose the use of the Pareto principle, a principle promoted by Joseph M. Juran. The Pareto principle, or analysis, is the process in which the vital few are separated from the less important many (Juran & Godfrey, 1998). "This principle states that in any population that contributes to a common effect, a relative few of the contributors—the vital few—account for the bulk of the effect. The principle applies widely in human affairs. Relatively small percentages of the individuals write most of the books, commit most of the crimes, own most of the wealth, and so on." (p. 5.21). However, remember to keep the statement simple.

Cowley and Domb (1997) stresses the importance of keeping the mission statement simple and add that simple language is best so that everyone in the target audience; management, employees, customers and shareholders fully understands it. They further recommend Jeffrey Abrahams' overview of mission statements (1999) for inspiration and to get a better understanding of corporate mission statements. As mentioned above it is important that everyone understand the mission, but in order to do that they need to receive it and transform it from something abstract to something tangible (Babich, 2007). This is done by a mission deployment process (See figure 2), that according to Babich (2007), is a process were the mission is divided into different activities for the lower levels, activities that are necessary for achieving the mission. To follow the company's organizational chart is a good way to structure the deployment. We would like to further stress the importance of a short and memorable mission statement. According to us a mission statement that is too long and complicated will be forgotten. Without a mission statement it is harder to assign a meaning to your work tasks and hence, find joy in your work.

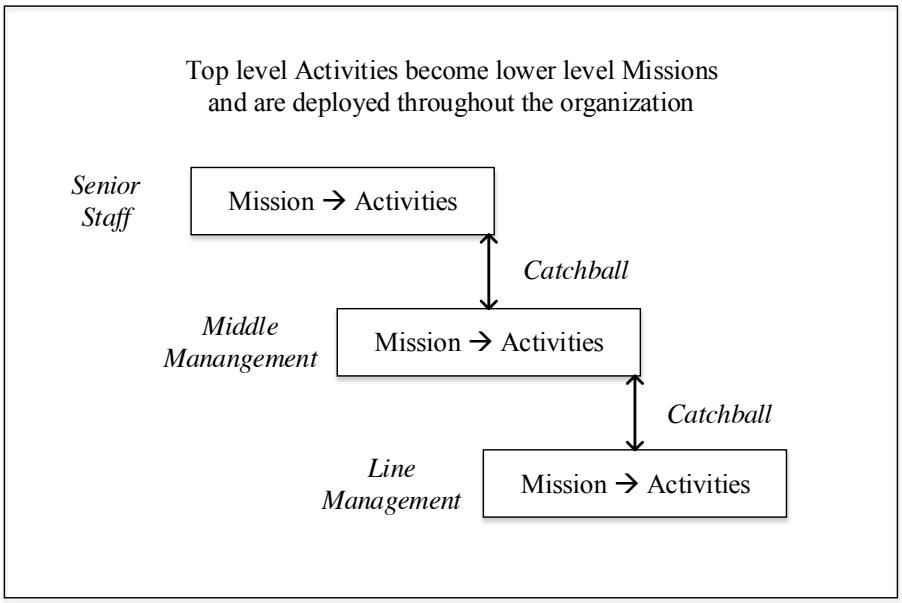

Figure 2: *Mission Deployment* (Babich, 2007).

2.5.1.3 Development of value statements

If the mission statement justifies the existence of the organization, the value statements makes it clear what the organization values, cares about and what distinguishes it (Jolayemi, 2008). The value statements are the guiding principles of the organization and informs and inspires everyone in the organization to act according to them (Kesterson, 2014). They can also be described as the foundation on which decisions shall be made and how one shall relate to colleagues and customers (Cowley & Domb, 1997). According to Bean (1993) it is the company's values that drives its action. So in order to be successful in the HK process, the company's values need to be clear to everyone, agreed upon and clear about how they will affect actions and policies (Cowley & Domb, 1997).

2.5.1.4 Development of vision statement

As presented earlier, HK can be translated to a compass or a shining needle that points out the direction (Hutchins, 2008; Lee & Dale, 1998), this highlight the importance of a good vision statements for the HK process. A vision statements is namely the description of an organization's future (Jolayemi, 2008), and thereby sets the course and objective of the company, which is crucial since your operations otherwise have no meaning. As the author of *Alice's Adventures in the Wonderland* puts it:

> "If you don't know where you are going, any road will get you there." – Lewis Carroll (1865).

Law (2009) gives the following explanation for vision. "A clearly understood statement of the direction in which a firm intends to develop. It should be both understood and interpreted by each employee in relation to their work and is a crucial element in the strategic management of a firm." (p. 128). Babich (2007) stresses the importance of a good vision by explaining that the breakthrough plans or VFOs has their roots in the vision.

Cowley and Domb (1997) also present guidelines for a good vision;

- It should be based in the present situation of the organization.
- It should create problems that challenges the organization.
- It shall give the stakeholders a picture of themselves and their interest in the organization in the future.
- It shall be a shared vision, a result of integrated thinking and not a compilation of individual ideas.
- It shall be inspiring and inviting.

A good way to start the creation of a vision is, according to Cowley and Domb (1997), to ask a 'vision question' like; it is 2025 and we are very pleased with our strategic success; what do we look like and how did we get here?

2.5.2 Step 2: Development of long- and medium term plans and goals

As the name says, long- and medium-term plans are what is going to happen over the next long- to medium-term time period. The vision statement was a representation over the future, which makes the vision the goal and the long- and medium-term plans the way to get there and they are therefore highly connected (Jolayemi, 2008). Witcher and Butterworth (1999b) conclude that what sets the two plans apart is their clarity, general or specific, and the time horizon over which they extend. There is no agreement in the literature of the length of each plan. Kendrick (1988) argues that a long-range plan shall be five to seven years long, while Babich (2007) declares that some companies today has long-term plans that stretches ten to twenty years into the future. When it comes to medium-term plans some claim that they shall range from three to five years in time (Leo, 1996; Malone, 1997; GOAL/QPC Research Committee, 1994). Kendrick, on the other hand, (1988) propose that they should be one to two years and Kondo (1998), in turn, propose five to seven years for the medium-term plan. Due to the dynamic nature of today's business environment it can be questionable to plan long into the future but Jolayemi (2008) states that it is necessary in the HK process and made possible by the medium- to long-term plans. The dynamic business environment further stretches the importance of a good pre-planning analysis because it is a prerequisite for the medium- to long-range plans (Akao, 1991; GOAL/QPC Research Committee, 1994; Mulligan, Hatten, & Miller, 1996). We agree with Jolayemi (2008) that plans are necessary if you want to move forward, which, according to us, applies whether or not you use HK. As criticized above the future is hard to plan for and therefore we suggest that the midterm plan shall be for, maximum, the five coming years. The long term plan shall span over, maximum, the ten coming years.

2.5.3 Step 3: Development of annual plans

An annual plan is a list of the things that must be achieved during the current year in order to move the company forward and enable the achievement of the medium- and long-term objectives (Wood & Munshi, 1991). GOAL/QPC Research Committee (1994) states that the annual plan's objectives shall be specific and doable, Tennant and Roberts (2001b) argues that the annual plan shall involve objectives chosen with respect to the probability that they

will reach the preferred results. Shiba, Purch and Stasey (1995) give the following checklist over elements to include in the annual plan:

- *Statement of desired outcomes* – a short and simple account of what it is that shall be accomplished. This is often 3-5 objectives called 'vital-few objectives'.
- *Metric* – how to measure your progress towards the goal, also referred to as 'performance measure'.
- *Target value* – the goal/the value of your chosen metric for the specific objective.
- *Deadline date* – the last date by while the goal must be reached.
- *Means* – How and with what you will reach your VFO.

An annual plan shall be based on; the medium and long-term plans, the annual assessments and review of the organizations processes and performance, the current state of the organization and the gaps between current and future state and an analysis of previous years achievement (GOAL/QPC Research Committee, 1994; Shiba et al., 1995; Kondo, 1998). However, a new approach in the development of the annual plan is emerging according to Kondo (1998, p. 426):

> "…more companies now establish a three- to five-year policy at the beginning of each fiscal year and take the policy for the first year of that three-year or five-year term as their annual policy for that particular year. Under this system, a company's annual policy is not determined only by short-term considerations, such as a review of the previous year's results or the company's prediction and aspirations for the coming year. Instead, a company attempts to establish a policy for each year by taking into consideration what is likely to happen further in the future."

Jolayemi (2008) says, about the new approach to develop annual plans, that the possibility to adaptation is one of the strengths of HK, which makes it a truly dynamic strategic management system. The scholar further concludes that this new approach will not lead to any extra work since the medium- and long-term plans already exist and are the preamp to the annual plan. The connection between the annual, midterm- and long-term plan is important, according to us, if HK shall continue to be flexible when it comes to handling external and internal changes (Akao, 1991; Tennant & Roberts, 2001b)

2.5.4 Step 4: Implementation & Daily management

The next step in the process after the planning and setting of statements and goals, is to accomplish these objectives (Jolayemi, 2008). Jolayemi (2008) conclude that this step is a balancing act between reaching the VFOs and at the same time keep the business fundamentals under control. The HK literature presents different names for this step; integration (Witcher & Chau, 2010), implementation (Watson G. H., 2003), execution (Watson G. H., 2003), daily management (Akao, 1991), daily control and managing direction (Wood & Munshi, 1991), they differ operationally but since it is the same step the goal with it, is the same (Jolayemi, 2008). When looking at the difference between integration and

implementation, Butterworth and Witcher (2001) concludes that integration is not accomplishment or strategy employment but the integration of policy into daily management. They continue by stating that integration only enables the strategy to be linked with the operational parts. This means that, in order for the HK process to be complete, the integration of policy into daily activities has to be followed by a strict control. Only those VFOs that cannot be incorporated into the daily activities shall be executed/implemented independently (Butterworth & Witcher, 2001)

According to Akao (1991), HK has to be founded in the daily activities and their management. Butterworth and Witcher (2001) explains this by concluding that in order to give the VFOs the immediacy and significance they need for people to commit to them, they have to be built into the daily work. Daily management is, according to Akao (1991), all activities that, in order to effectively reach the predetermined business goals has to take place, autonomous, within each department every day. An explanation to its importance is given by Witcher and Butterworth (2000) where they say that the quality of the daily work is ensured by standardized process that is under control. These processes can then be continuously measured to confirm that they deliver according to the prospects and if not, countermeasures can be undertaken. Wood and Munshi (1991) resembles the daily control functions with a heart rate monitor, that takes the pulse of the company and concurrently shows if something is wrong and has to be fixed. The scholars also declares that the daily control shall rely on the Plan-Do-Check-Act (PDCA) cycle in order to sustain control of both unstable and stable processes. We would like to argue that this step shall be called integration and implementation, since the VFOs have to be integrated into the daily activities of the employees. When they are a part of the daily routines they need to be implemented so that the goals are reached. If the VFOs only are integrated they risk losing some of their importance and in the worst case scenario be forgotten. If the VFOs on the other hand only are implemented, the ‘old’ task or routines that still has to be done risk being neglected. So therefore, according to us, this step shall be called integration and implementation since both these step are necessary if the goals shall be reached.

2.5.5 Step 5: Reviews

Lee and Dale (1998) presents the following reason why reviews are important; they capture progress and deviations in order to modify the processes, if necessary, to secure its development and quality. They identified four types of periodic reviews; daily, weekly, monthly and annual. Akao (1991, p. 161) states the importance of different reviews; “The point is, it is not enough to do something just once a month; you must have firm control over control items focused on causal factors on a weekly and daily basis”

The production management is responsible for the daily review with focus on the business fundamentals. The middle management is responsible for the monthly review with focus on VFOs and business fundamentals (Lee & Dale, 1998). The senior management is responsible for both the quarterly and the annual reviews, where the quarterly review is on the VFOs and the annual review is a summation of the year and preparation for the coming year and the annual planning session. While the daily, monthly and quarterly reviews are concerned with

the continuous *progress* of the years VFOs, the annual review is more of a yearly evaluation of the *success* of the VFOs and a preparation for the coming year (Witcher & Butterworth, 1997). According to Wood and Munshi (1991) the annual review is the most important feature of the HK process. Every year begins with an in-depth evaluation and analysis of the past year and what to accomplish during the coming one. The success of this review lies in that the quarterly, monthly and daily reviews has been conducted in a good way and been able to capture the necessary data. Wood and Munshi (1991) provides a checklist for the focus of the annual review:

- Achievements of the past year,
- Lessons learned in the past year,
- The gap between goals and achievements in the past year,
- Identification and analysis of root causes of problems,
- Environmental factors,
- Managerial improvement areas,
- Future plans for the organization.

Witcher (2002) highlights another important aspect that should be discussed during the annual review; if the annual policy should continue or not. Lee and Dale (1998) also highlights an important aspect, namely that the policy deployment process (a.k.a. catchball, it will be explained under 2.5.1) shall be evaluated so that also this feature can be improved.

2.5.6 Step 6: Standardization

This last step of the HK process could be seen as a sub-step to the annual review, but due to its importance it will be presented as an individual step. Jolayemi (2008) explains that the standardization procedure makes it possible for an organization to maintain the gains from the previous year's achievement. The standardization of procedures is achieved through the 'Act phase' of the PDCA-cycle (Jolayemi, 2008). According to the scholar a surprisingly low proportion of the literature mention this step and its importance. Our conclusion after conducting the literature review goes in line with Jolayemi's statement that few scholars choose to indicate the importance of this last step of the HK process. Kondo (1998), Witcher (2002) and Su and Yung (2015) mention standard work and standardization and they slightly touch upon its importance within HK work. However, the only scholars that we came across that specifically emphasized the importance of standardization, and even used it as a step or phase in the HK process, was Mothorsell, Moore and Reinerth (2008), Nicholas (2014) and Babich (2007). Babich (2007) captures the benefit of standardization procedures by stating that; the completion of a breakthrough objective will generate, remove or develop a business fundamental process. By closely documenting every breakthrough on a business fundamentals planning (BFP) table, you are guaranteed that no gains will be lost. Seeing that we choose to include 'Standardization' as the 6th and last step of our HK model we do believe that standardization plays an important role in the work of continuous improvement and strategic excellence. As previously mentioned, we argue that standardization is a reason in its own to do thorough documentation of procedures, as Babich (2007) is advocating. By this we mean

that the benefits of standardization are clear and in a way it captures the purpose and very core of HK – be able to do what you want to do.

2.6 Catchball and the PDCA-Cycle

All the steps of the HK process, according to figure 1 above, are now accounted for. However, there are two other processes illustrated alongside the process of HK and that is the catchball process and the PDCA-cycle. We are now going to account for these since they are not steps per se in the process of HK but of great importance for the success of HK. The catchball process is not very well-known but crucial for the HK process. Therefor we will try to describe and explain this process in the following section. The PDCA-cycle on the other hand is already a well-known method in its own in the strategy literature and hence we choose to only present the basics of the method.

2.6.1 The Catchball process

The catchball process, also known as policy deployment or just the deployment process, employs the whole organization in the strategic direction setting both within (vertical) and across (horizontal) functional areas (see figure 3) (Watson G. H., 2003). The scholar also highlights that this process creates a shared ownership of the implementation by its top-down and bottom-up nature. The fact that HK is both top-down and bottom-up is described by Kondo (1998, p. 429):

> "After the opinions of as many people as possible right down to the front line have been incorporated \...\ the information is fed back up through the hierarchy to top management, and the company's policy for the forthcoming year is finally decided on after further discussion and revision as needed."

The process above is also known as alignment but the most common term, when talking about HK, is catchball even though deployment may be more accurate and better captures the essence of the process (Jolayemi, 2008). Kondo (1998) describes the process as starting at the highest management level and then going down to lower levels and at the same time spreading across (horizontal) levels that are affected. Jolayemi (2008, p. 310) describes the catchball process like; "Catchball refers to relative up, down, and horizontal discussions and joint analysis necessary for effective determinations of objectives, strategies, targets and means." The reason that organizations put down so much energy and time into this is, according to Kondo (1998), that the discussions develops the employees understanding and enables them to ponder about the planned objective. The scholar further argues that the catchball process change top-down compulsory targets to bottom-up voluntary goals and finally concludes "that this is an extremely effective way of motivating people to achieve their targets." (Kondo, 1998, p. 430). The main drawback of this process is, according to Jolayemi (2008), its time consumption. Since it requires that you communicate with everyone and let them take their time to understand the matter. Another description of the catchball process is given by Babich (2007) and is based on the use of annual planning table (APT), a table to document and deploy crucial activities for the improvement of the organization. Every level

develops their APT based on the APT from the level next above (see figure 4). With other words each level uses the strategy and related targets from above as their objective and goal.

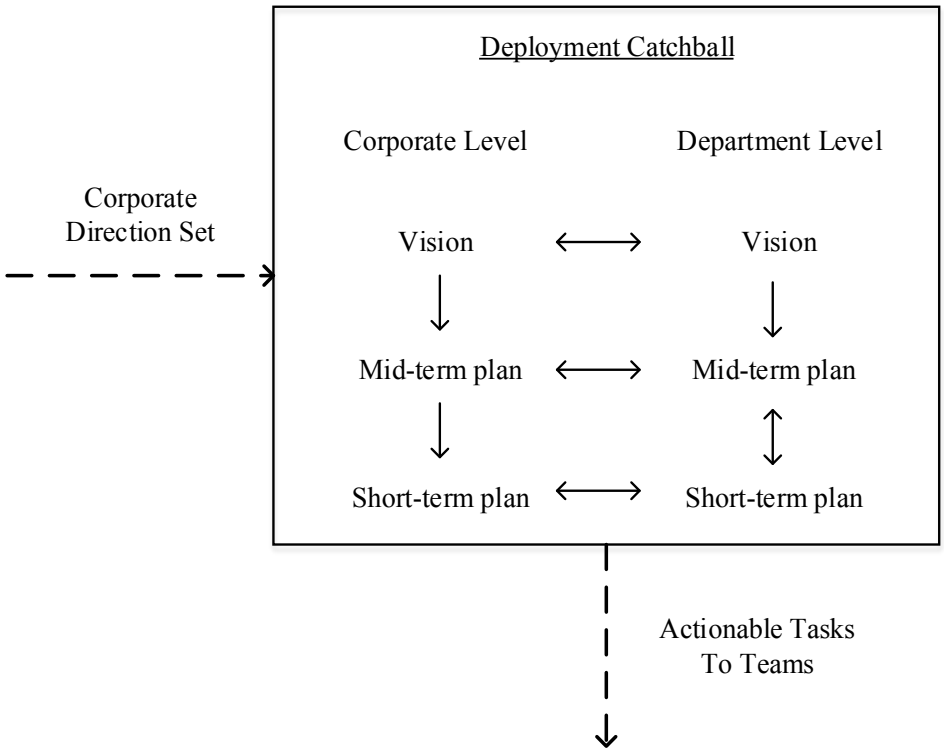

Figure 3: *Deployment both vertical and horizontal* (Wood & Munshi, 1991)

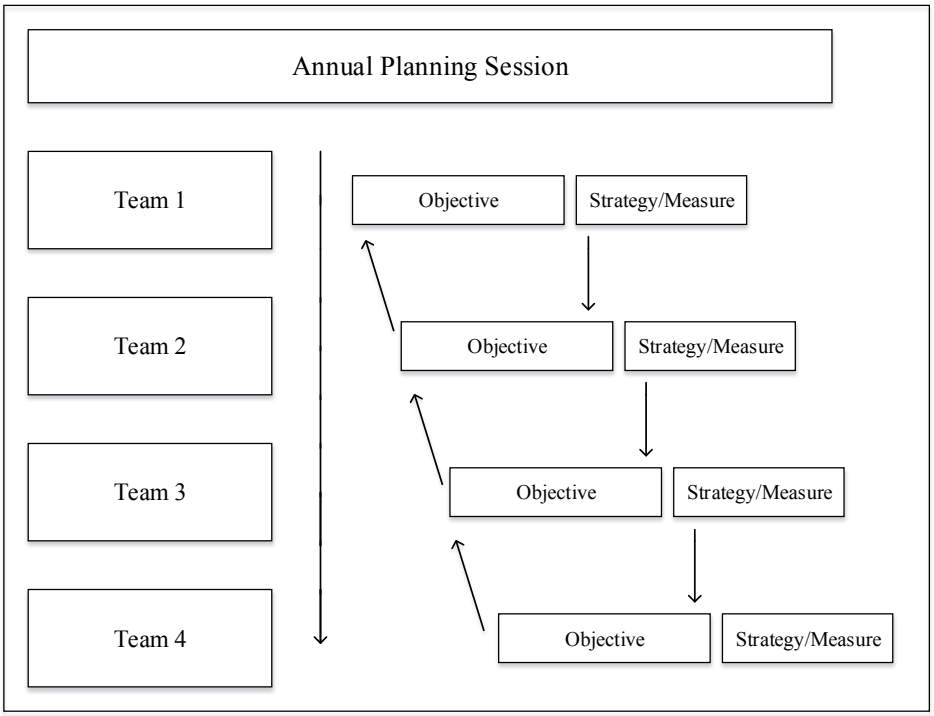

Figure 4: *The Hoshin Kanri deployment process* (Jolayemi, 2008)

The classical picture of the catchball process is a group of children that plays catch by standing in a circle and throwing a ball around, but instead of a ball, an idea is thrown between the participators (Tennant & Roberts, 2001a). This is, according to the scholars, a vital element in the HK process that demands constant communication to secure that the development of desired objectives moves in the right direction. Mulligan et al (1996) provides an alternate name for the catchball process namely CRIP (Catch, Reflect, Improve, Pass), this alternative emphasizes the importance of all participants' involvement. This because its steps implies that a person cannot pass the idea forward without first reflecting over the idea and then improve/develop it before passing it on. The catchball process is performed at several points in the HK process, but mainly in the development of the different statements (mission, vision, value) and the different plans (long- and medium-term and annual) (Jolayemi, 2008; Tennant & Roberts, 2001a; Babich, 2007; Kesterson, 2014). Even though there are different approaches to and different views of the catchball process the goal is the same; to incorporate everyone in the organization´s goal. By doing this the individuals in the organization will feel a stronger commitment to the taken decisions, and the decisions will be better since more knowledge has been used to take them. We believe, after reading the literature, that catchball is one of the key parts in HK and one of the things that distinguishes it from other management systems.

2.6.2 The PDCA-cycle

PDCA is an abbreviation for Plan-Do-Check-Act and the concept was first presented by Walter A. Shewhart in his book, *Statistical Method From the viewpoint of Quality Control* (Johnson, 2016). According to Johnson (2016), Shewhart states that the cycle builds upon that constant evaluation of management practices is the key to develop a successful organization. Even though Shewhart was the first one to mention PDCA, W. Edwards Deming is the one who is considered to be the father of the PDCA cycle (Johnson, 2016). Deming first named it the Shewhart cycle (Johnson, 2016) then the term PDCA cycle become popular (Calder, 2013). Deming also call this process the PDSA (Plan-Do-Study-Act) cycle (Johnson, 2016). There are many names for this process but the idea is the same, to reach continuous improvement. Calder (2013) states that the business process shall be thought of as a continuous feedback cycle so that the steps of the PDCA cycle can be applied. The PDCA cycle is constructed so that it can be repeated endlessly to reach continuous improvement (Law, 2009). According to the scholar the steps in the cycle are;

Plan – define the goals/changes and how to get there.
Do – execute the goals/changes.
Check – review the process and compare the result against the goals/changes.
Act – modify the process if necessary in order to improve it.

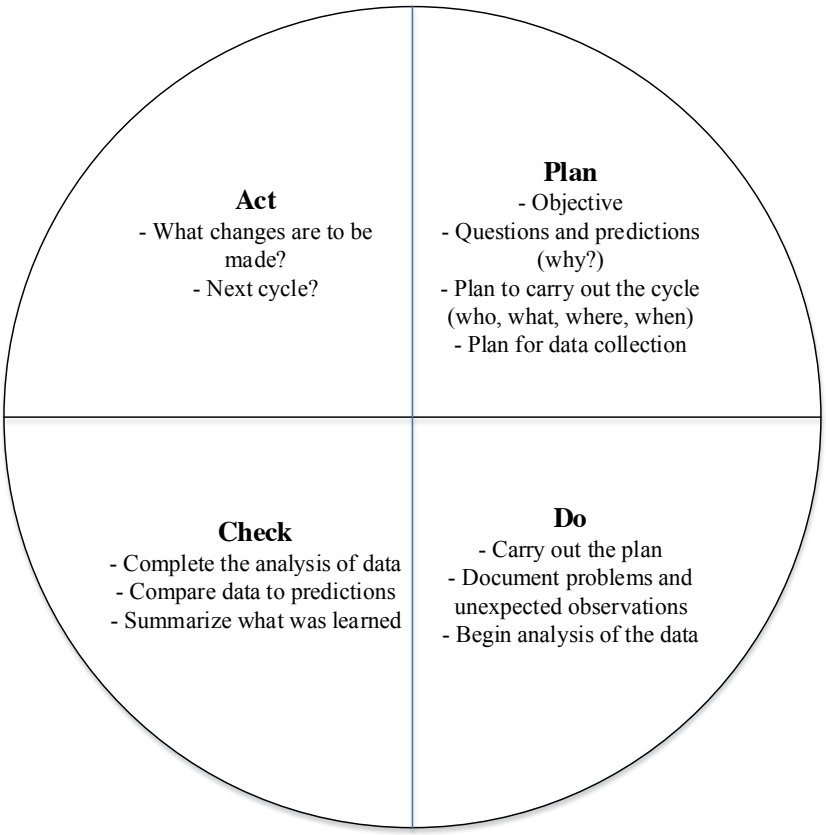

Figure 5: *The PDCA cycle, inspired by Langley* (2009)

In the HK model that we present above, each of the last three steps could be considered as having a smaller, internal PDCA-cycle. However, the PDCA-cycle mainly serves as a method for executing all three last steps of the HK model. The Plan phase of the PDCA-cycle implies the planning of how to carry out the objectives and how to complete the last three steps of the HK model presented. The Do phase works as integration and implementation of the VFOs into the daily management, which is the fourth step of the HK process. Thereafter follows the Check phase that is central in the process of reviewing the HK work (Asan & Tanyaş, 2007), which is the fifth step in our HK model. The last phase in the PDCA-cycle is the 'Act' phase and it relates to the last step in our HK model above. At this stage we believe that it is about acting on the results of the reviews, making changes if necessary and standardizing the processes that worked well.

We now have presented the facts that are needed to answer RQ 1: What are the variations of HK in the literature? The answer to this question and the following discussion will be carried out in chapter 5.

3. Research Method

In this chapter we provide the reader with insight to the motives for the steps chosen in the process of our study. We give a logical reasoning for choosing a qualitative research design and strategy. Thereafter we describe our data collection process and the method for our data analysis. We dedicate the final sections of this chapter to concerns regarding the trustworthiness and the quality of the research as well as the ethical aspects considered.

3.1 The research philosophy

According to Saunders, Lewis and Thornhill (2016) it is important to be aware of research philosophy and one's own standpoint in the matter before deciding upon the research design and method. Since we believe that the truth is relative and dependent on the situation and its circumstances, thus what is true and works for one organization may not be true or appropriate for another, our philosophical assumptions align with the relativistic ontology and the constructionist epistemology approach (Easterby-Smith, Thorpe, & Jackson, 2015). From a position of constructionism one believes that truths are created by people and people have different viewpoints, hence the 'truth' of something is reached through discussion and agreement between the different viewpoints (Easterby-Smith, et al., 2015). The philosophical position that we now have taken is strongly linked to the research approach that we choose to apply for this thesis.

3.2 The research approach

Saunders et al. (2016) present the deductive approach that has its origins in natural science research. They also present the inductive approach that arose as an alternative for social science research when it emerged in the twentieth century. Induction is the more suitable approach when trying to understand how humans interpret their social world and gaining such knowledge is the true strength of an inductive approach. Through an inductive approach the researcher creates a theory or build on an existing one from what he/she finds in the data collected. Hence, induction means moving from observation of the particular case to broader generalization (Saunders, et al., 2016). Since our literature review generated little, close to no, previous research on the how the application of HK occurs in Sweden, we claim that an inductive approach to our study was justified in order to create a theory. According to Saunders et al. (2016), a decision regarding the research approach certainly affects the choice of research design.

3.3 The research design and purpose

According to Saunders et al. (2016) researchers that apply induction are more likely to use qualitative data. However, this is not reason enough to go for a qualitative research design. The second part of the purpose of this study is to investigate how Japanese subsidiaries based in Sweden have implemented Hoshin Kanri. Two of the research questions in our thesis; RQ 2: How do Japanese subsidiaries based in Sweden implement HK?, RQ 3: How does the implementation of HK differ between the companies?, are questions of how something works or seems. The research design that best served us in getting an answer to these questions was

the qualitative research design. Qualitative data can be defined by on one hand their non-numeric form and on the other by the way in which they are created, which is through an interactive and interpretive process (Easterby-Smith, et al., 2015). In terms of research purpose, our research possesses the characteristic of an exploratory study (Saunders, et al., 2016; Yin, 2013). This can be explained by the purpose of our research, which is to investigate the application of HK in the Swedish setting. Exploratory studies are especially useful when wanting to clarify the understanding of an issue or phenomenon whose exact nature is unclear. Since we, after the literature review, perceived the picture of HK as indistinct and somewhat confused it further enhances our conviction that we are conducting an exploratory study. Moreover, the research questions that guide our study are, as mentioned earlier, questions that begin with 'How' which is also characteristic for exploratory studies. The way in which one conducts an exploratory research is through search of the literature, interviewing experts in the subject and through conducting in-depth individual interviews, three methods that we have embraced and completed. In exploratory studies the interview questions that are asked in order to explore the issue or phenomena often start with 'What' and 'How' (Yin, 2013). The interview questions asked for the purpose of our study (see appendix 5) are questions that indeed mostly start with 'What' and 'How'. In conclusion, we chose to apply a qualitative research design with an exploratory nature because it enabled us to obtain a more in-depth knowledge about the implementation of HK, which was necessary in order to answer our RQ:s and fulfill the purpose of our study.

3.4 The research strategy and format

There are many different strategies associated with qualitative research. Some of these are; action research, ethnography, Grounded Theory, narrative research and case study research (Saunders et al., 2016). Of the strategies just presented, action research and narrative inquiry are the two alternatives that could serve well in conducting our study. According to Altrichter, Kemmis, McTaggart and Zuber-Skerritt (2002) action research is hard to define, or rather, the definitions that emerge do not stick because the nature of action research is so diverse and hence likewise is the perception of it. However, Altrichter et al. (2002, p. 128) provide a definition consisting of three points: "(1) action research is about people reflecting upon and improving their own practice;(2) by tightly inter-linking their reflection and action; and (3) making their experiences public to other people concerned by and interested in the respective practice." Action research could serve the aim of our study well because the purpose of action research is to "promote organizational learning and produce practical outcomes through identifying issues, planning action, taking action and evaluating action" (Saunders, et al., 2016, p. 190). Moreover, action research incorporates different types of knowledge, namely both abstract theoretical knowledge and practitioners' knowledge such as experimental knowledge and knowledge that comes from practical application (Saunders et al., 2016). This aspect of action research matches well with the type of knowledge and information that we aim to collect for the purpose of our study. Finally, action research has implications beyond the research project in terms of providing information that can be used as a basis for change in the organization where the action research took place. Hence, this type of research strategy involved implications for practitioners (Saunders et al., 2016), which is

something that we aim for with our study. However, action research was not the research strategy that we chose for our study because of the demand on collaboration with the company in question and above all its longitudinal nature, which requires more time than we have at hand.

Narrative research was another research strategy that we had to consider. Narrative research has its origins in people's stories with the objective to explore, understand and concretize them to capture their experiences (Josselson, 2010). This particular research strategy would serve the purpose of our research well because it is based on participants providing complete stories of their experiences instead of having the researcher collect data in the form of pieces of these experiences from interviews. With the narrative research strategy the researcher gets to analyze a complete story rather than fragmented bits of data, which provides a clearer picture of the situation and deeper contextual understanding. A core aspect of the narrative research strategy is the aiming of preserving the chronological connection and the specific sequence in which events occurred as told by the participant (Saunders et al., 2016). For the purpose of our study, the chronological connection was not of importance. This important aspect of narrative research, together with the intensive and time-consuming characteristics of this particular research strategy, lead to the dismissal of this research strategy as a possible strategy for our study.

However, what indeed was of interest to our study was (1) some level of context, (2) getting access to in-depth information about the application of one specific phenomena (HK) and (3) preferably getting this kind of information from multiple sources in order to be able to do some kind of comparison between the cases and hopefully also generate or build on theory. In order to be able to this we chose to apply the case study strategy, and to be more specific – the collective case study research – to our study. A collective case study involves multiple (no less than three) cases within which the same research questions are examined, using the same methods for data collection and analysis for each case (Goddard, 2010). With the help of this research strategy researchers can undertake close studies of different cases that (must) share a link, either through different similarities, or as in our case, through applying the same strategic management system. Through an in-depth approach to each case the researcher can develop an understanding of each individual case, but also make comparisons of all the cases. Later on, in the phase of analysis, the different cases can, due to the link they share, be considered as a collective whole (Goddard, 2010). In this study the case is that of HK in Japanese owned companies in Sweden. Stake (1995) describes collective case study research as conducting multiple instrumental case studies. Cousin (2005) explains the difference between *instrumental* and *intrinsic* case studies: “Whereas an intrinsic case study aims to generalize *within*, instrumental case study attempts to generalize *from* a case study.” (p. 422). Explaining collective case studies, the author further states that these studies extend the attempt of instrumental case studies, namely to generalize from the case. According to Stake (1995) an *instrumental case study* is used, not for understanding a particular company or person, but rather to understand the specific situation, issue or phenomena that the company or person has insight into or experience of.

Hence, in the case of our study the Japanese owned companies are instruments for us as researchers to get to the true interest and focus of this study, namely HK. Based on figure 6 below, presented by Yin (2013), the type of case study that we conduct can also be referred to as an embedded single-case design (type 2 in the figure). For that particular type of case study we have a context, Swedish companies with Japanese ownership, within which we have the case, HK, and finally we have multiple units of analysis (or what Goddard (2010) and Cousin (2005) refers to as *'cases'* and Stake (1995) refers to as *'instruments'*) embedded in that particular case, represented by three different companies for the purpose of this research. Hence, in order to avoid confusion we refer to HK as the Case (the focus of our interest) and to the companies as instruments.

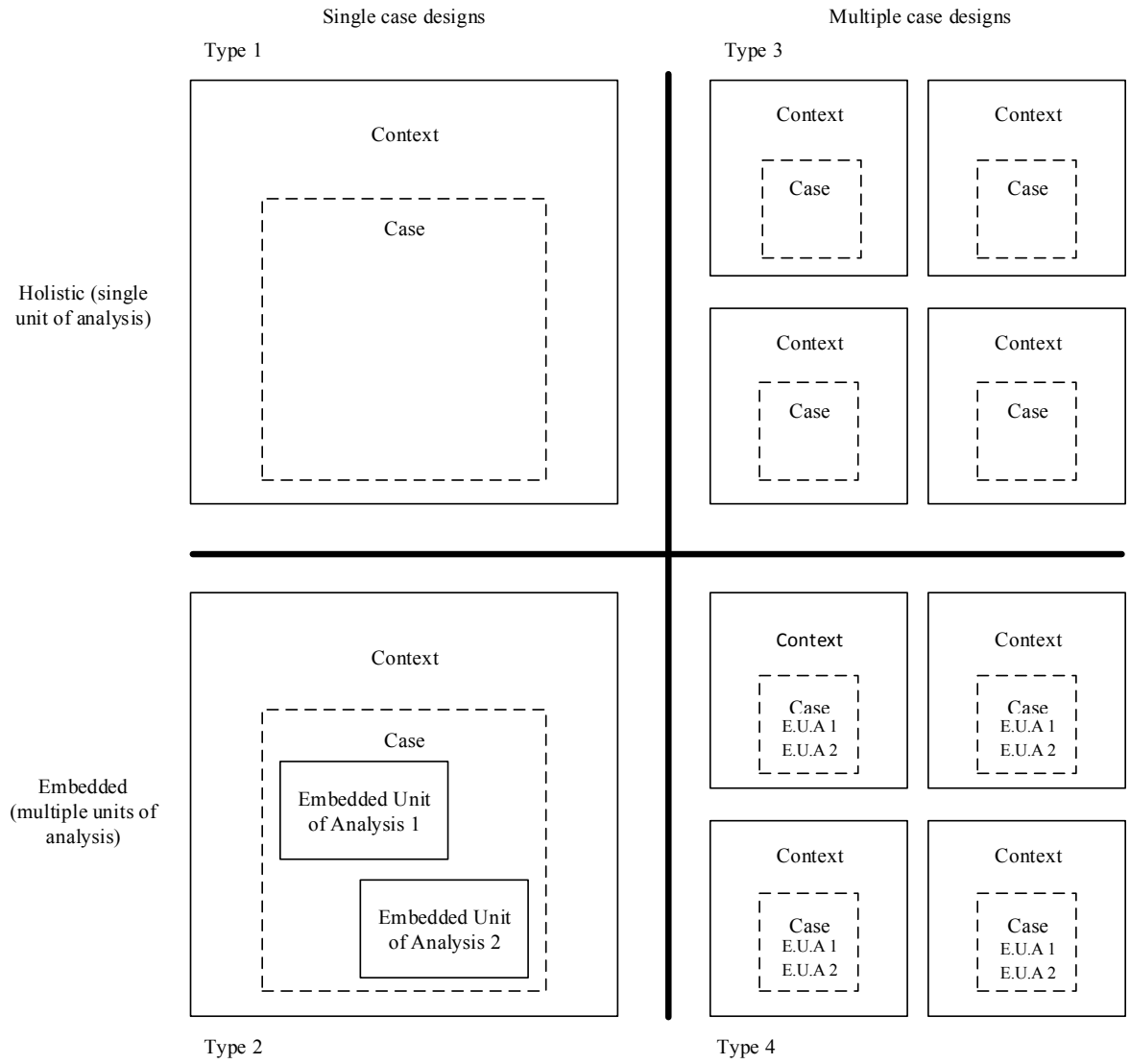

Figure 6: *Basic Types of Designs for Case Study* (Yin, 2013)

According to (Goddard, 2010) there are limitations to this research strategy, which we, just as Stake (1995) chose to refer to as collective case study research. First, this strategy can be both financially straining and time consuming, moreover the time spent at each site or with each respondent should be more or less the same. Adding on, the researchers conducting the study need to be equally knowledgeable in order to ensure the quality during the data collection, but also in order to ensure validity for comparative purposes later on in the process. In our thesis the financial aspect has not been an issue. Regarding the time consumption it did not pose any problem since we knew the time restraint from the beginning and could plan according to that. Concerning the level of knowledge we were both novice in the subject of HK and have together conducted a literature review and structured the HK theory to gain an equal base of knowledge. However, there are benefits to the collective case research strategy as well. This particular research strategy, when properly applied, offers rich data that holds the potential to gain deep understanding about a phenomenon in its context (Goddard, 2010). For the purpose of our research the collective case study strategy is the most fitting one, and hence that is the one we chose. Going back to what was mentioned above as being of interest to our study, the chosen strategy helps us take these into consideration. With the help of a collective case study strategy we can consider (1) the context of the case, (2) the in-depth information both from individual sources and the collective and (3) multiple sources and by that come to a conclusion in the form of comparisons between participants and theory building.

3.5 The literature review

We started our research project by a systematic literature review (see appendix 1) followed by snowballing with focus on the most dominant scholars from the systematic review, combined with recommendations from an expert in the field of strategic management and HK. The literature review started at Google Scholar in order to get to know the literature and which keywords to use. When the keywords were found we moved on to Web of Science and conducted a search on our keywords, this resulted in 128 articles that after the refinement process went down to 19 articles. We used these 19 articles plus those received from the snowball process to create a knowledgebase to build our theoretical framework on. When we reviewed the literature we discovered that the picture of HK is a bit ambiguous which led us to our first RQ. We also discovered that studies had been made about HK in different countries but not in Sweden, which led us to RQ 2-4.

3.6 The data collection

For the data collection of our thesis we were inspired by the master-servant design, which is a mixed, quantitative and qualitative, methods design. This design implies that one method is used in order to serve the other (Easterby-Smith et al., 2015). In one variant of this design the quantitative method comes before and serves the, main and more dominant, qualitative method. In this variant a survey can be used in order to identify a smaller number of particularly interesting cases for a more in-depth investigation (Easterby-Smith et al., 2015). This is, more specifically, the variant of the master-servant design that inspired our data collection. We used a quantitative method, a survey, in order to map the field and serve the main, qualitative method, which were in-depth interviews. According to Easterby-Smith et al.

(2015), the servant part of the method is to the most part not acknowledged in the results of the thesis. However, in this thesis we are going to present some of the survey results and briefly discuss it. Nevertheless the main reason for the survey is to find suitable organizations for in-depth interviews. Following comes an account of the respondents to the survey and the interviews, as well as an explanation of the methods applied and a description of how we practically proceeded with the research.

3.6.1 The selection and number of respondents

The aim of our survey was to map the application of HK in Japanese subsidiaries in Sweden and to generate candidates for in-depth interviews. It was a short (less than 5 min), online survey (created in Qualtrics, see appendix 6) that in the end gave us an indication of which companies that use HK. The initial questions had to do with the recognition and knowledge of HK. If the respondents answered that they had not or did not know if they had heard about HK or applied the system in their organization they were automatically sent to the end of the survey where we thanked them for their contribution. If the respondent had heard of HK before and where applying it in his/her organization than the survey continued. The following questions could be seen as the main questions, where we asked about HK and which steps in the process the person recognized. We ended the key part of the survey with the question; "Could you consider to participate in a more in-depth interview as part of our continuing work on Hoshin Kanri in Sweden?" and we used that question in order to detect possible companies for further analysis in the form of in-depth interviews.

Since the list over Japanese owned companies in Sweden, 158 companies, (see appendix 7) was just over one and a half year old we double-checked all the companies in the list in order to find out which of them that were still in business. There were 18 companies in the list that were out of business by March 15th of 2016 and another 14 companies which did not have any contact information (other than a box number) and/or had an unclear ownership or structure. At this point we were left with 126 companies that still were in business. We started to contact these companies by phone in order to get contact information to a person that could answer the survey either by mail or by phone. During this contact round, another 20 companies fell away due to that they were either out of business or that they did not have any working contact information. We were now left with 106 companies, which received the survey. One company answered the survey by phone and in that case we filled in the respondents answers in the online survey afterwards because of practical reasons. The remaining 105 companies wanted us to send the survey via e-mail. 14 companies answered the survey during the following ten days and when that time had passed we sent out a reminder to the remaining 91 companies. The reminder generated eleven new answers during the following week. We now had 26 companies that had answered the survey, out of these 26, only seven used HK and out of these only three were positive to continue with a more in-depth interview. We contacted the three companies that were positive to the interview and booked these, one by phone and two face-to-face, the last on turned out to not having any time for the interview, so it was cancelled. Since we wanted more interviews we also contacted those three companies that used HK but did not want to participate in an interview, this resulted in zero interviews. The number of interviews was still low so we decided to call

every company that had not answered the survey again in order to get some more responses. This generated another eleven survey answers, six online and five via phone, were we filed their answered in the same way as after the first survey that were answered by phone. Out of these eleven only one company used HK and were positive to do an interview. So to conclude we contacted the companies at least four times, two times by phone and two times via e-mail. Some companies/persons were contacted more times due to some issues about whom that should answer the survey etc. This generated 37 survey answers and 3 interviews.

3.6.2 The interviews

The master-aspect of the master-servant data collection design that we were inspired by is represented by a qualitative method for data collection. The choice of data collection technique for our research is strongly linked to the particular strategy that we apply. As mentioned earlier, in order to follow the guidelines when conducting a collective case study research we needed to gather in-depth information and knowledge about the application of HK in the Swedish setting. Therefore, we chose to conduct in-depth qualitative interviews, which have the aim of gaining an understanding of the respondent's perspective (Easterby-Smith et al., 2015), with the participants in our study. As we proceeded with our data collection we kept in mind some reflections expressed by Brinkmann and Kvale (2005): Today many qualitative interview researches seems to use a lot of interviews as a way to reach a higher scientific level. This seems to be result of a misunderstood qualitative presupposition, namely that more interviews is equated with a more scientific research (Brinkmann & Kvale, 2015). The scholars argues that this is a defensive overreaction and that there is a general impression regarding currant research based on interview inquiry that these researches would be better off with fewer but better prepared and analyzed interviews.

The interviews that we conducted had predetermined questions in a questionnaire that were followed. This aspect implies that our interviews are of the structured kind. However, during our interviews the respondents talked quite freely and the questions asked at each interview where not exactly the same but rather dependent on the respondents' answers and the situation at hand. Moreover, we did not record all the interviews conducted (because one respondent preferred not to do it) nor did we have a standardized schedule with pre-coded answers for the response. These are components that are important for a structured interview. Hence, despite the somewhat structured appearance of our questionnaire we argue that the interviews that we conducted where of semi-structured nature. Since, as mentioned earlier, the purpose of our research is to explore the theory of HK and moreover its' application in practice, a semi-structured interview is quite fitting (Saunders et al., 2016). Semi-structured interviews are characterized by having some themes and key questions. The order of the questions may vary dependent on the participant and the flow of the conversation and additional questions may be needed in order to establish an understanding of the participants' viewpoint. Semi-structured interviews often have an interview schedule, guiding the opening of the discussion but also to provide some closing comments. Interviews of this structure can either be audio-recorded or documented through taking notes (Brinkmann & Kvale, 2015).

Regarding the interviews that we conducted we had the same themes and key questions in the questionnaire mentioned earlier. We did switch the order of the questions depending on the participant and in some cases we also added some questions to clarify the answers we got. We conducted the interviews in Swedish since that seemed most appropriate and natural as Swedish is the native language of all three of our participants. We used audio-recording (except of in one interview) and made sure to take notes during the interview in order to, later on, properly capture and reflect on what the participant said. When setting up the interviews we first reached out to the respondent in order to agree upon a date and place for conducting the interview. When the date and place was set the respondents were contacted by email prior to the interview with the questions so that they could prepare themselves for the interviews. In one of our cases we set up time and date for a phone interview since the participant felt like that would be most convenient for him/her. Interviews like this over the phone or email are called remote interviewing. Their strengths are in that they offer a high flexibility in terms of time and location since the interviewer and interviewee do not need to be at the same location. However, the flexibility also implies a lack of immediate contextualization, depth and non-verbal communication that face-to-face interviews offer (Easterby-Smith et al., 2015; Brinkmann & Kvale, 2015).

In our case with the one remote interview there was not much to discuss or debate since it was a matter of conducting the interview by phone or not at all. According to Legard, Keegan and Ward (2003), it is important that the interview environment is private, quiet and physically comfortable, especially when conducting interviews face-to-face. Hence, for both face-to-face interviews we sat in a conference room at the respective company site. These were comfortable and quite environments that the respondents themselves picked. Both of us were present during these interviews where one of us led the interview and took on a more interactive role while the other one took notes and had a more observing role. The one taking on the more observant role had the chance to ask follow-up questions to the participant if something was unclear about the provided answers. According to Eisenhardt (1989), this is important since it provides views from two different perspectives, one perspective of personal interaction and one from a more distant view.

Ethical issues have become increasingly important within social science and one way to handle some of these issues is through informed consent (Sin, 2005). Sin (2005) states: “Research should, as far as possible, be based on freely given informed consent of research subjects who have been provided with adequate information on what is being done to them, the limits to their participation, as well as any potential risks they may incur by taking part in research.” Thus, in all three cases the interviewees were informed of the purpose of our study, the reason for their participation, how their contribution would be used in our thesis and what the risks with their participations may be. Finally, we promised anonymity to the participants and the companies they represented since the subject of our study can be seen as confidential and the information can be used as a competitive advantage. After all, HK is a strategic management system with the purpose to improve processes and increase effectiveness through setting specific goals. Hence, it could be assumed that the companies would not want to declare their name. Therefore, before starting the interviews, the participants signed an

informed consent (see appendix 8) stating all the information just mentioned together with the promise that they would remain anonymous. After conducting all the interviews we compiled simple transcriptions of each interview. The transcription together with our interpretation in form of a description about the company and their HK process as well as a visual model us representing the company's HK process were sent to the interviewee for the respective company in order to secure that we had interpreted the information from the interview accurately. When the results were written and compiled, these were sent to the respective company together with a final consent (see appendix 9) so that they could approve the material that we were going to publish regarding their company.

3.7 The data analysis

The way in which we chose to analyze the collected data is strongly linked to our philosophical assumptions as well as to our research design and strategy. Goddard (2010) explains the application of collective case study and describes the data analysis process as follow: "Cross-site comparison occurs by the research team taking these individual data sets and combining them for quintain analysis. The data are integrated and analyzed as a whole rather than as separate sets. The results are presented as a collective case study." (p. 3) Quintain is the object, phenomena or condition that bounds the different units of analysis together (Stake, 2006). We conducted a collective case study by looking at several embedded instruments that where bound together by a quintain, The application of HK Japanese subsidiaries in Sweden, in order to understand the quintain. To connect this with our research strategy and figure 6 we got, by investigating the quintain, a switch from a holistic view to an embedded view of the case, which implies a quintain-constrain. Each embedded unit (instrument) of analysis will be constrained by its representation of the application of HK. Since the purpose of this research partly is to gain a general picture of this quintain we did, during the analysis, focus on some selected variables in each embedded unit (interview) that would serve us in creating this general picture.

In order to create one single data set we started by taking the interviews one by one and interpret them to capture the description of their HK process but also to build a model to help visualize the process. Afterwards we continued by 'formalizing' these three data sets and by mainly focusing on some certain variables in each case and not the whole case itself, we created one data set according to Goddard's (2010) description above. This formalization is to be done when the purpose of the research is to achieve a general picture and understanding of the field investigated (Stake, 2006).

We have chosen to create models that visualize the HK implementation. In chapter 2 we created our own model based on the literature we have read and then we created, in chapter 4, a model for each company that was interviewed. The motives behind this are; first, by creating models that represent a specific HK process we are able to, uncomplicated, compare them to each other, in order to see if consistency and patterns exist or not within the Swedish settings. Secondly, the models enable us to easily categorize them into one of two categories, Sequential or Cyclical. The categories help us to structure the literature and arrange it

according to how the view of HK is. The categories were developed in order to structure the literature about HK, which we felt was ambiguous. The categories are based on how the literature looks at the HK process and the differences when it comes to their different levels of iteration. During our literature review it became obvious that the implementation process of HK in the different studies that are made either is of a more cyclical process or a more sequential process. The cyclical process revolves around the PDCA cycle and builds the steps of the HK process according to it. The sequential process instead takes a more linear approach that moves from point A to point B. Both the categories are repeated every year so in that sense they are both cyclical. The categories refer instead to the process that takes place during the year and its different levels of iteration.

Hence, by creating the models we get an understanding of both the individual units and the quintain as a whole. This means that we tangent the case-quintain dilemma, when knowledge is gained in one specific area even more knowledge in that particular area is needed. So both the units and the quintain will "demand" more research since there are more to be understood when we understand more (Stake, 2006). We have tackled this dilemma by only working with the compiled data set and by so doing we have secured that we concentrate us on the quintain and not one of the single cases. Stake (2006) describes the dilemmas as follows: "Whether everything actually is a part of everything, or whether we have a human capacity for seeing everything as a part of everything, it all becomes more complex as it becomes better known, and it cries out for being still better known." (p. 7).

3.8 Concerns regarding quality and trustworthiness for case study research

Most researchers want their studies to be useful, relevant and attractive to others. But in order to make sure that the findings are good and measure up to the quality criteria the researcher needs to consider some aspects. Easterby-Smith et al. (2015) discuss three general concerns, specifically regarding case studies as empirical research: (1) they are not as rigorous as other research designs, (2) studying specific cases raises the question of whether they can be generalized to broader populations or not, and (3) the produced data allow the researchers to make interpretations freely. Even though we may be novice investigators we of course want this research to be useful and relevant and to measure up to quality standards. In order to do this we will address the three concerns, regarding case study research just mentioned, by discussing the aspects of trustworthiness.

Guba (1981) discusses the four dimensions of trustworthiness from two different paradigm perspectives, namely the rationalistic- and naturalistic paradigm, or constructionist as expressed by Easterby-Smith et al., (2015). We as (novice) researchers share the naturalistic perspective and it is clear that our study takes on the viewpoint of this particular paradigm. For instance naturalistic practitioners prefer qualitative methods for inquire which they prefer to exercise in the real world where they welcome the interferences that it provides. Moreover, they argue that relevance is the most important criteria for assessing the quality of a study. Naturalists are also willing to trade off some objectivity and reliability, some would say, in

order to accomplish flexibility and build upon tactic knowledge by using themselves as instruments for inquiry. Naturalist investigators believe in multiple realities which, when explored in interactions with the respondent, will change everyone involved.

The following paragraphs are based on the naturalist (constructionism) approach to the four dimensions of trustworthiness presented by Guba (1981). Beyond Guba's four dimensions we account for another aspect of quality insurance, particularly important for qualitative research, namely reflexivity (Creswell, 2014; Saunders, Lewis, & Thornhill, 2016)

3.8.1 Credibility

What Guba (1981) refers to as credibility, many other scholars (Creswell, 2014; Saunders, et al., 2016; Yin, 2013) refer to as internal validity. In order to reach credibility in their findings and interpretations, researchers can, according to Guba (1981) and Krefting (1991), use techniques such as persistent observation, use peer debriefing, apply triangulation or do member checks. This implies that the data collected is tested with relevant human data sources. However, there are scholars (Saunders et al., 2016) who believe that internal validity is not applicable for studies like ours, namely exploratory studies. Saunders et al. (2016) take this position by stating that the concept of correlation is strongly linked with positivism, or relativism as expressed by Guba (1981), and quantitative research. Hence, the concept of causality can be applied to causal or explanatory studies but not to studies of the exploratory or descriptive nature. Our opinion is that credibility is of great importance and indeed something that can be accomplished, even without establishing causality. We try to insure credibility by conducting peer debriefing of our inquiry with an expert, on the academic side, in the field of organizational strategy and in particular HK. Moreover, we apply triangulation through both the method and theory that we use. In the method triangulation is achieved by combining a questionnaire and a collective case study strategy. Through the frame of reference triangulation is achieved as the purpose of RQ 1 is to present and reflect over the varieties of the theory of HK. Furthermore, other theories, which are independent from the theory of HK but yet in some way connected to it, such as TQM are accounted for and later on reflected upon with the results in mind. We also conduct member checks, which is a form of triangulation (Stake, The Art of Case Study Research, 1995), by testing the data, once interpreted by us, against the human source of that particular data. Finally, we created audio recordings to the extent possible in order to have material that is adequate for referencing.

3.8.2 Transferability

When Guba (1981) starts discussing transferability he starts by describing the aspect of the trustworthiness that it concerns, namely applicability. Applicability regards the external validity or generalizability, as it is sometimes called, a word which in itself goes against a naturalists' conviction that every case is unique in that each phenomena is strongly connected to the time and context in which it is found (Guba, 1981). This assumption would then mean that generalization would not be possible. Hence, instead the expression 'transferability' is used because that concept is in itself dependent on fittingness, or degree of similarity, between two contexts. Besides from the demand on fittingness, transferability also differ from

generalizability in that it does not attempt assumptions that will hold in all times and places, but rather to create working hypothesis which could be applied in different contexts depending on the degree of "fit" between the contexts (Guba, 1981). Saunders et al. (2016) and Yin (2013) also discuss external validity and generalizability. Yin (2013) means that exploratory studies that focus on answering questions of 'what' and 'how' may have difficulties producing generalization and hence suggest that the researcher should argue the study design with 'why' and 'how' questions and collect additional data in order to avoid the situation of not having external validity, i.e. transferability. Similarly, Guba (1981) suggest collecting and developing thick descriptive data to address the issue. For the purpose of this thesis we worked with the issue of transferability by collecting 'thick' descriptive data about each unit of analysis and after the study was completed we used that data to develop rigorous description of the context of the each unit. We did this in order to be able to determine the degree of 'fit' between each unit.

3.8.3 Dependability

Guba (1981) argues that there has to be consistency in the study in order to reach credibility. Since the instruments of inquiry for naturalists are humans these instruments change and evolve which implies that the concept of consistency is not about invariance for naturalist, rather it is about tractable variance that can be tracked back to its source. Thus, consistency implies a thicker concept for naturalists than for rationalists – hence it is interoperated as dependability. Dependability embraces both the concept of stability, considered by rationalists, and tractability required by the explainable instrumental changes (Guba, 1981). Yin (2013), Saunders et al. (2016) and Creswell (2014) also discuss the issue of credibility but they call it reliability and refer to consistency and replication. If a researcher, other than the one originally conducting the study, can follow the process and replicate that study then the study is reliable. What all these scholars, as well as Guba (1981), propose for managing this issue is careful documentation during the whole process of the research and making as many steps as operational as possible. Yin (2013) provides more specific and practical tactics to handle the documentation, namely case study protocol to deal with the documentation problem in detail and developing a case study database. Guba (1981) and Krefting (1991) once again mention triangulation and, for the purpose of insuring dependability, describe it as using overlapping methods in order to overcome invalidities in individual methods. Even though we did not apply the techniques, provided by Yin (2013), for documenting the research process we did, in this chapter, carefully describe the methods, strategies and techniques that we used in order to reach the findings that we did. Hence, we took the measures necessary, for the purpose of this study, to insure dependability and further contribute to the quality of our research.

3.8.4 Conformability

The last dimension of trustworthiness, as presented by Guba (1981), is neutrality. This is an aspect that is particularly important to consider within social science because of the possibility of cultural and ethical bias. However, since naturalists understand that multiple realities that coexist and understand their own predispositions, which can affect the process, they are well aware of the issue of neutrality. This is the reason why naturalist shift the burden

of neutrality from the investigator to the data, hence requiring conformability of the data produced (Guba, 1981). Saunders et al. (2016) and Yin (2013) talk about objectivity, which is equivalent to conformability. Saunders et al. (2016) define objectivity as conscious avoidance of bias and subjective selection during the conducting and reporting of the study. Guba (1981) and Krefting (1991) offer three techniques for handling this issue: (1) triangulation and (2) reflexivity during the process of the study and (3) arranging for a conformability audit after completing the study. For instance, by practicing reflexive analysis the researcher can ensure that he or she is aware of the influences that he or she has on the data, hence impacting the conformability (Guba, 1981; Krefting, 1991). Through the process of using triangulation in order to insure credibility we also insured conformability. In addition, by reveling our epistemological assumptions in the beginning of this chapter we, for both our own and the readers clarity, shed light on our predispositions when going into the process of data selection. By doing so we further ensure the quality of our research through conformability.

3.8.5 Reflexivity

Reflexivity is, as demonstrated above, an important dimension for qualitative research. Even though Guba (1981) does not address reflexivity as a separate dimension of trustworthiness he indeed discusses the importance of this aspect for the rigor in qualitative research. Saunders et al. (2016) and Creswell (2014) also talk about the importance of reflexivity and Saunders et al. (2016) describe it as the researchers critical reflection of his or her own role in the study, it can be anything from the choice of topic to how he or she interact with participants. Guba (1981) and Krefting (1991) suggest keeping a continuing journal where self-observations on a daily basis are recorded, as a technique for securing the reflexivity. Even though we did not formally apply any formal techniques for documenting our reflexivity we did, continuously during the research process, discuss our role in the study and how our previous knowledge and experience affected how we interpreted the data.

3.9 Ethical dimensions

Sunders et al. (2016) define ethics in the context of research, as the guiding standards of behavior that impact a researchers actions in relation to his/her research subject. When conducting qualitative research, tension can emerge between these guiding principles and the wish to obtain knowledge. These ethical dilemmas may occur at different stages in the research process and this should be taken into consideration from the familiarization with the topic to the final reporting of the research (Brinkmann & Kvale, 2015). Even though management and business research generally does not imply ethical dilemmas that could lead to the risking of human lives, they certainly can lead to other kind of harm, mainly economic. In order to avoid this kind of risk Easterby-Smith et al. (2015) present some ethical principles by which a researcher can recognize ethical issues. Some of these principles are; ensuring that no harm comes to participants, ensuring fully informed consents of the participants, protecting their privacy and anonymity, ensure confidentiality and communicate honestly and transparently about the research. Some of these principles are evidently strongly linked to the issue of trustworthiness, hence the issue of ethical dimensions in the research has partly already been discussed. For the purpose of our study we took these ethical principles into

consideration. We respected the dignity of the research participants and we ensured that no harm came to them by communicating in a respectful manner during all encounters, trying to minimize stress and anxiety, by conducting the interviews in a safe and professional way and most importantly we assured confidentiality and respected their wish of being anonymous. Through providing the participants with an informed consent we made sure that they knew the nature and aim of the research as well as their contribution to it. Through following a research process and always basing our decisions of how to proceed with the study on certain aspects of method we assured that our study is conducted in a proper scientifically manner. We made sure to take on a responsible and transparent approach during the interpretation of the data and the reporting of our findings.

4 Empirical Data

In this chapter the result from our survey and the interviews will be presented, one company at a time. Each section start by a presentation of the company, followed by a description of their Hoshin Kanri process and then a visual model of this process will finalize the section.

4.1 Survey results

The response rate for our survey was 34.9 % which is in line with the average response rate of 35,7 % for research that utilize data collected from organizations and companies (Baruch & Holtom, 2008). An overview of the result of our survey can be seen in table 2. Of the 106 surveys that was sent out, 37 companies answered and out of these 37, seven companies used HK.

Table 2: *Answers from the survey*

Type of answer	***No. of respondents***	
Answered and do not use HK	30	
Answered, use HK, won't participate in an interview	4	7 companies use HK
Answered, use HK, could participate in an interview	3	
Refrain from/Do not answer	38	
Strategic work is handled in another country or do not fit	10	
Contacted several times without any answer	21	
Total no. of respondents:	106	

4.2 Interview results

From the seven companies that used HK, we conducted three interviews with three managers at three different companies in Sweden. The companies differ regarding the most aspects (see table 3) except for that all three use HK and are in one way or another owned by a Japanese company. The companies and their HK process will be accounted for below.

Table 3: *Characteristics of companies (source: data collected in the thesis)*

	Company A	***Company B***	***Company C***
Year operations started in Sweden	2005	2000	2011
No. of employees	< 10	≈ 460	15-20
*Size of Swedish Site**	Micro	Large	Small
Industry	Logistic	Manufacturing	Marketing (electronics)
*Group***	B	A	C
Position of interviewee	Site Manager	Sales Develop Manager	Senior Business Manager
Connection to Japan	Weak	Strong	Medium
Name on Hoshin Kanri	Hoshin	Hoshin Kanri	-
Definition of Hoshin Kanri	*"Hoshin is a process that sets the target of the organization."*	-	*"It is target management at several levels, where an overall vision is broken down into actions."*
Time since HK first implemented	+10 years	+10 years	5 years

**Partially based on the European Commission's classifications of SME's*

***A = owned directly by a Japanese company,*
B = owned by Japanese companies in Sweden or other countries,
C = Filial/Branch office

4.2.1 Company A

Company A is a small logistic company that is part of an international automobile group. They started to operate in Sweden in 2005 and have less than 10 employees. This company's primary task is to take care of the cars from the production line out to the retailers in Sweden, Norway, Finland and the Baltics. When the car is on the production line it is owned by the producing part of the automobile company and then bought by company A. The company then takes responsibility for managing logistics and assembling any customer specific aftermarket parts etc. When that is done company A sells and transports the car to the retailer. We interviewed the site manager of company A here in Sweden, a person that have had that position for almost ten years. Company A refers to HK as Hoshin and defines it as a process that sets the targets of the organization. According to the European Commission's guidelines (2016) about SME's and the information that we got about the company. Company A is a micro company. Company A have worked with HK for more than ten years and have not used any external consultants in their work with the HK process. Instead they have relied on internally worked up material from previous HK processes. Company A are positive towards the system. They see it as an advantage to work with a system that comprises the whole organization. To quote the respondent; "…it is quite incredible that a person can check on a key figure in Japan and set a goal and then you can work towards this throughout the organization". We classify company A's connection to Japan as weak, meaning that they do not have the opportunity to influence the given objectives, which can be seen by that their HK

process lacks a clearly stated catchball process. The respondent did not recognize the term catchball however after a brief explanation the respondent could conclude that they did not use it. Hence, the same effects were, according to him, achieved due to their size. This will be further discussed under section 5.3.

4.2.1.1 The Hoshin Kanri Process

The headquarters (HQ) sets the objectives for the organization without any influence from the lower levels in the organization. These are then given to the different regions (divided by the continents) where the strategic objectives are broken down into sub goals for the region that will enable them (the regions) to reach the objectives for the organization. When the breakdown process at the regional level is done they are sent down in the organization to the different sites that exist in the region. At the site a new breakdown process begins where the region objectives are divided into site specific goals and then are these site specific goals divided into department specific goals and if possible also into individual specific goals. When every sublevel has set their objectives they start to create a plan for how to reach their objectives, which is the 'Plan phase' of the PDCA cycle. They enter the 'Plan phase' somewhere in the end of the breakdown process and remain there until the plan is finalized. Then they move into the 'Do phase', where they launch their plan. The next step is the 'Check phase', which is on a weekly and quarterly basis. The review checks if the work is according to the plan and if countermeasures need to be taken. From the 'Check phase' they either act upon the deviations from the plan and if no deviations exist they just continue to work as planned. At company A the PDCA cycle is the core of the Hoshin process and it is here they spent most of their work during the year. The 'Check' and the 'Plan phase' is the aspects of HK that company A considers to be keys for their HK process. "My experience is that companies usually deficiencies in the follow-up phase. Usually you lose focus at the end of a process, you want to be active in what you do and therefore you lose the focus when it comes to the review, which is not that active" – Respondent at company A.

An example given by company A of their process would be that the HQ sets a goal of maximum 120 accidents for the whole group. This is sent to every continent, which looks at their operations and then breaks the goal into sub goals for every site. Since there are six continents the goal of maximum 120 accidents is divided by six resulting in a maximum of 20 accidents per continent. In Europe there are 20 sites and the goal of maximum 20 accidents are therefore divided by 20 in order to get the site specific maximum of accidents. When the site specific goal of maximum 1 accident per site are set, every site appoints the objective to a responsible person. This person then takes the goal of maximum 1 accident per site and looks at the operations at the specific site and the critical areas that they have. A plan is then conducted for how to work to avoid accidents at the site and their particular problem areas. If possible even individual plans are made in order to reach the goal.

4.1.1.2 The Hoshin Kanri model

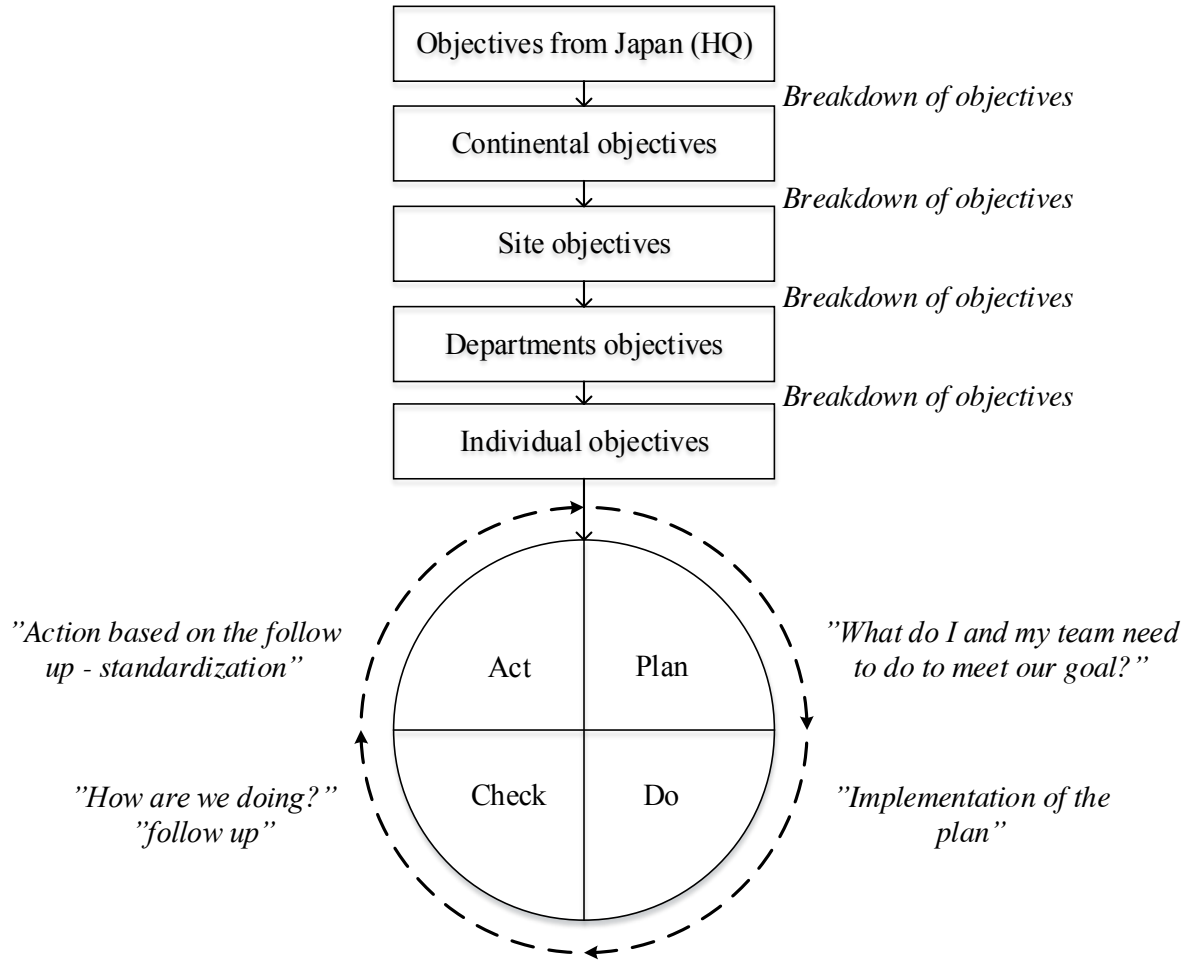

Figure 7: *The Hoshin Kanri process, Company A*

4.2.2 Company B

Company B is a manufacturing company oriented towards material handling and has since year 2000 been a part of a big international group. They employ around 460 individuals, which aim to deliver customer satisfaction by offering a solution for material handling. The solution to the goal can be different from customer to customer. These can range from a total solution with everything from financing to actual operational personnel that comes with the sold machinery and service personnel, to solutions where the customers just buy the machinery or lease it. Thus, company B delivers a solution for the material handling tailored to the individual case so that the customer can put their energy on their core operations. The person we interviewed at company B works as a Sales Development Manager and has been with the company for 13 years. Company B refers to HK as Hoshin Kanri, although in the daily speech it is shortened and thus simply called Hoshin. They do not have a definition of HK because from their point of view it is just the way they operate, hence it is not seen as a management system as such but simply the way they work. They have been working with HK since joining the international group, so for more than ten years. Company B is according to the categorization of the European Commission (2016) a large enterprise when it comes to the number of employees. The company's perception of HK is mixed, in some parts of the

company it works great and it is in those areas where the token has fallen down. But there are many parts that do not work with it at all, even though the management of company B have trained the employees and tried to show the importance of the system. “We push the work one step further every year, one function at a time, so it will come more and more” – Respondent at company B. We classify company B’s connection to Japan as strong, meaning that they have a well develop catchball process that enables a great opportunity to influence the objectives. Company B has a well develop documentation of the process that is continuously update with information. This documentation results in different manuals and handbooks for the employees in order to guide them through the different steps of their HK process. This leads to that company B does not need or use any external consultants when it comes to HK, everything needed has always been available internally within organization.

4.2.2.1 The Hoshin Kanri process

Company B’s Hoshin Kanri process is divided into two periods, December to March, ‘the strategic part’, and April to March, ‘the operational part’. The company has a split financial year, which starts in April. So every HK process last from the month of April one year to the month of March the next. From December to March, before a new financial year and the HK process is started, the strategic objectives are set. Thus, company B has a HK process that takes 16 months, but the four first months (the strategic part) of that period runs parallel with the last four months of the previous HK process. Hence, the work with setting the VFOs for the coming financial years starts in December. The HQ sets the strategic direction and the goals based on the current vision and then create Strategic pillars for the different regions. The regions then send these pillars on to the countries in their region, the countries takes the pillars and creates Hoshins (a.k.a. VFOs) to reach the pillars. The countries also create Strategic pillars that they send to the different sites in the country. When the different sites get their Strategic pillars they repeat the procedure that has been done on the country level. They take the pillars, create Hoshins to reach these and then they create their own pillars to send to the different departments. At the department level the Strategic pillars are broken down into Hoshins so that they can contribute to the overall progress of the site. If possible the departments also creates its own pillars in order to be able to create individual Hoshins. This whole process takes place from December to March and is characterized by the catchball process, which can be seen in the model below. This is a chaotic time with parallel processes defined by movement back and forth. In the model this sequence seems to be linear but as represented by the catchball process during December to March this moves up and down and every catchball and breakdown process takes place parallel. When April comes every level in the organization should have decided upon their Strategic pillars and Hoshins so that they can start to implement them and work accordingly until April the following year in order to reach the predetermined goals. Every month there is a review in order to see how everything goes and to take action if deviations exist. The knowledge gained during the review is then standardized and work procedures are updated. When December comes everything starts all over again with the planning of new Hoshin so that when April comes and the old Hoshin are done, new Hoshins are ready to be used. The most important thing when it comes to HK, according to company B, is to follow through. To stick to the plan and work according to it throughout the whole year is the most important aspect of HK.

4.2.2.2 The Hoshin Kanri model

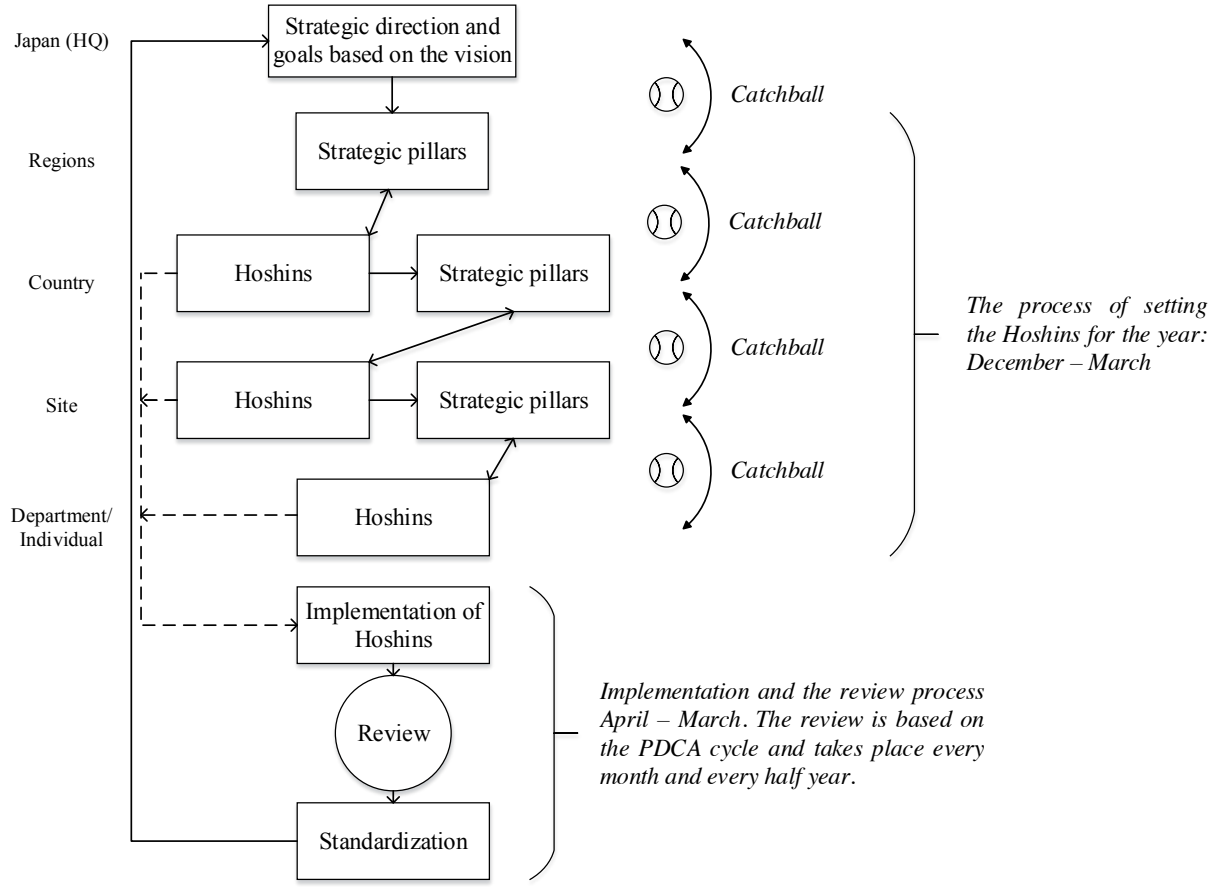

Figure 8: *The Hoshin Kanri process, Company B*

4.2.3 Company C

Company C develops, manufactures and sells audio products and information- and communication-systems (a.k.a. infotainment-systems) for automobiles. The goal of the company is to create customer-oriented innovations that delivers an enjoyable car lifestyle. The group has been in the industry several decades and is a very technology-intensive company with many groundbreaking inventions. The Swedish office is quite new, it was established in 2011 and they employ 15-20 persons. The office here in Sweden is a branch office/filial for the group. We interviewed a Senior Business Manager who had been with the company for the last ten years. Company C does not have a specific name for HK, it is just their way of working with strategy and goals. However, they define it as target management at several levels, where an overall vision which is broken down into actions. According to the guidelines of the European Commission (2016) and by only looking at the number of employees, company C is categorized as a small enterprise. Company C has worked according to HK for more than ten years, they are positive and mostly satisfied with HK. However, the respondent mentions that there can be a little much with all the reports but apart from that the system works well. We classify their connection to Japan of medium strength, neither strong nor weak. This means that they have embraced the catchball process to some

degree, which makes their connection to Japan stronger than that of company A. When compared to company B they have a weaker connection. Company C has not used any external parties in their work with HK. HK is their way of working and a new member of their team just has to accept that and ask questions along the way.

4.2.3.1 The Hoshin Kanri process

The HK process at company C starts with that the HQ sets a vision for the coming five-year period. From this vision a midterm plan is created with some possibilities to influence the objectives through catchballing. When the midterm plan is set an annual plan is created and also here there are some possibilities to influence the process by catchballing. The vision spans over five years and is set by the top-management that then travels around to the different sites and present it. The midterm and annual plan is given by the top management, unlike the vision the plans may be affected. However, they are pretty much already decided by the management. When the different sites/offices receive the midterm and annual plan they start to break them down into sub plans with measurable results, and when possible the midterm- and annual plans are even broken down into individual plans. This process is characterized by the catchball process. When the sub plans are decided they are implemented and followed, with reviews every month and a more extensive review every sixth month. The review process is to check so that no deviations from the plan are made and to report the progress back to the HQ. Their review process is inspired by the PDCA cycle but it lacks the standardization process and only takes countermeasures if the result deviates much from the annual plan. When the year comes to an end the process starts all over again from the midterm phase. However, every fifth year they move up to the vision phase, where they receive a new vision for the coming five years. The key components of HK, according to company C, is the interaction and the discussion about the different things in the process. This way to reach consensus is what company C regards to be one of the most important aspects of their HK process.

4.2.3.2 The Hoshin Kanri model

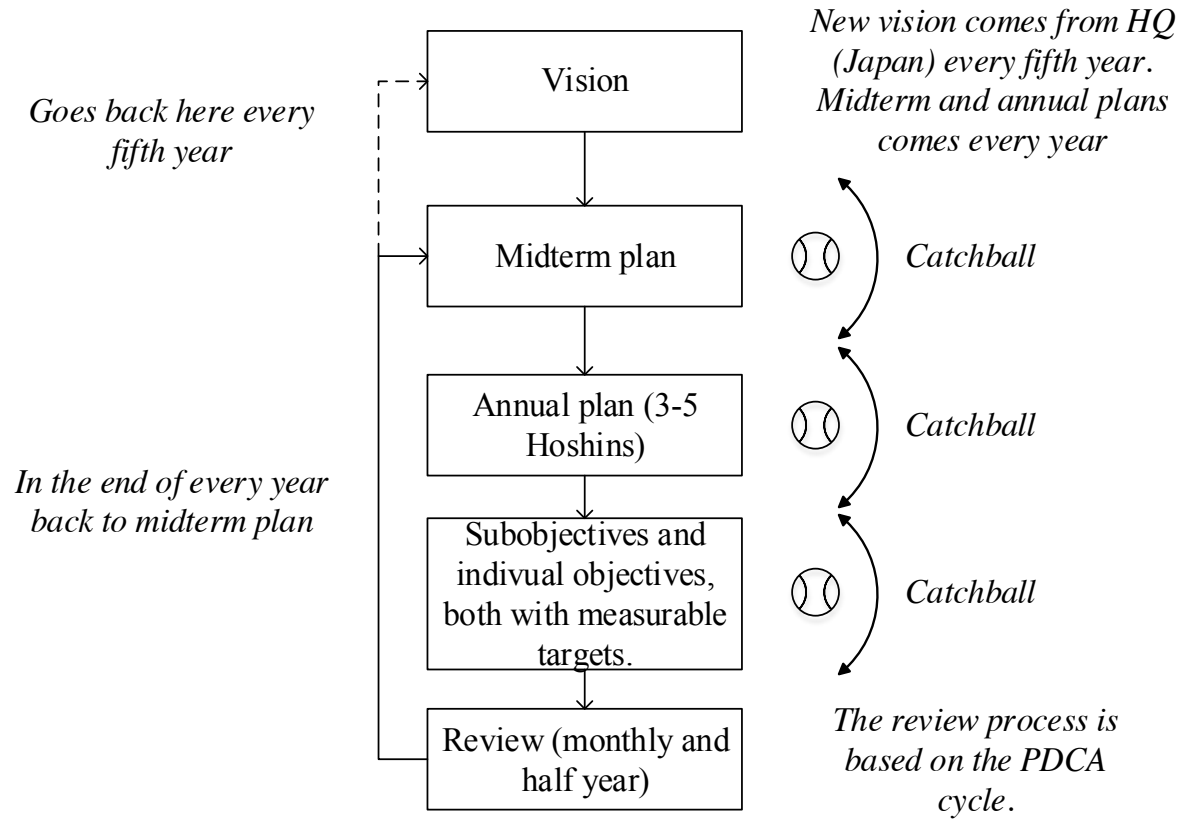

Figure 9: *The Hoshin Kanri process, Company C*

5 Discussion

In this chapter the four research questions of this thesis will be discussed. The discussion regarding RQ 1 is based on the theoretical framework presented in chapter 2. The discussions regarding RQ 2, 3 and 4 are, on the other hand, based on the analysis and interpretation of the empirical material that is accounted for in chapter 4.

5.1 RQ 1: What are the variations of HK in the literature?

The variations of HK presented in the theoretical framework are many and diverse. Some of the variations were; the term used for describing HK, the definition of the system, the purpose and scope of HK, the model in itself as well as which steps or aspects that should be included. For the purpose of this thesis we decided to focus on the difference in terms of the models and the different steps and aspects included in them. We did this because we believe that this may be the most significant variation in the theory of HK and because the model and its steps are what may guide practitioners in their implementation of HK. We would like to argue that the model is the most descriptive and tangible aspect of the theory. Hence, the model would be the guiding, and most useful thing for practitioners to try to understand. Having knowledge about the different terms and definitions of HK may not be as important. Hence, based on the literature review and the different models that we came across and presented in chapter 2, we categorized the models into either Cyclical or Sequential models. Hence, according to our findings the literature is divided into two main variations. While conducting the analysis we discovered that many of the PDCA based models in fact were called/based on another cycle, namely the FAIR cycle. The reason to why we did not create three categories is that the FAIR cycle is based on the PDCA cycle, or rather it is another expression for essentially the same concept. Therefore, the models that are based on the FAIR cycle are categorized as Cyclical models.

The Cyclical category includes those models that are based on the PDCA cycle. A model that has the PDCA cycle included in its process is not, according to us, based on the PDCA cycle. In order for us to categorize a model as being PDCA-based, the whole process of HK has to be fitted into the cycle and described by its four steps, Plan-Do-Check-Act. These models only have four steps were the plans and the objective setting are done during the Plan step, the execution during the Do step and the review during the Check and Act step. Another way to make the strategic setting part is to conduct it outside the model. If the strategic direction is set outside the model this will have implications on the key functions of HK, which will be accounted for below.

The Sequential category includes those models that are displayed as more of a sequence. This does not mean that they have a straight linear process, however they have a more linear-like process but with hints of cycles in it were, for a period, it moves back and forth before proceeding. When the model comes to an end, the year has also come to an end and the process starts all over again. This approach is easier to understand without any previous knowledge but it may miss some importance of the cyclical process. This approach is not based on the PDCA cycle but the PDCA mentality is one of the components of the model.

However since the PDCA mentality is one of the key aspects of HK, its importance may be a little bit underestimated within the Sequential category.

Reviewing the literature and discussing it with an expert raised the idea that the role of the PDCA cycle in HK may take on more of a guiding role than of an actual way of how to work. The exception that proves the rule is the Cyclical category were the PDCA cycle constitute a majority of the foundation. What we mean with that the PDCA cycle is more of a guiding thought rather than an actual process is that, in order to conduct a successful HK process, there is a need of embracing the PDCA mentality and get an understanding for how it works rather than implement it according to the book. The problem with the Cyclical category, discussed below, is about how to move back and forth according to the PDCA cycle when there is a countermeasure to take versus when there is none. However, by adapting a Sequential approach and rather emphasize the PDCA mentality than implement it by the rules solves this problem. Since this is a more flexible approach were the PDCA process is adapted to the current situation rather than that the current situation is adapted to the PDCA cycle. As said before the view and adaption of the PDCA cycle is what differentiates the two categories but also the level of and how they iterate. The iteration aspect can be summarized with that in the Cyclical category the iteration affects the entire process, while in the Sequential category it only concerns the specific step.

Since the PDCA cycle's ancestors, Walter Shewhart and William E. Deming, also are considered to be the co-founders of Hoshin Kanri, it is not surprising that a lot of the models in the theory are based on this cycle. The PDCA cycle is a quite easy model at first glance since it only contains four steps. However, while adapted to HK these steps come to contain several sub steps that are often only explained in text and not included in the actual visual model. Since it is a cycle it is quite straightforward that the process will continue due to the fact that a circle does not have an end. So when the end of one step is reached it is time to move on to the next one and so on. First one enters the Plan-phase where the objectives are set and the plan for the next year is made, and after that it is time for the Do-phase where the plan is executed. The next phase is the Check-phase were the work is checked so that it is proceeding according to the plan. The last phase is Act were actions are taken based on the Check-phase. So far everything seems good, but since the cycle only moves in one direction it creates problems. One issue is that the Check-phase in its own could contain a PDCA cycle. This means that one have to; plan the review, do the review, check the review and act upon the review, which is a process that continues until the year comes to an end. This means that the Check-phase is actually a part of the Do-phase, or mixed up with the Do-phase. With this approach the Act-phase will be about the standardization of functioning processes and documentation of gained knowledge, reported together with a summary for the coming year. However, if the Check-phase is not built like a PDCA cycle, one will make the review and then move on to the act phase and take actions, if any, based on the review. The next phase is the Plan-phase were adjustments are made to the plan according to the new actions, if any. This leads back to the Do-phase were the plan once again is executed. This procedure will be repeated until the year reaches its end. What if no actions are to be made after the review and consequently there is no need for a new plan? I.e. one can move back and forth between the

Check-phase and the Do-phase as long as everything goes as planned, then the Cyclical model loses some of its purpose since one does not move according to it anymore.

A solution to this can either be that you think that the first time the Plan- and Do-phases are entered the strategic setting is done and then the Check-phase is entered were a new PDCA cycle begins. This second PDCA cycle's aim is to lead the review process that ends in one final review when the year draws to an end. After the final review, the Act-phase (in the original cycle) takes place were the year is summarized and preparations for the coming year is made. Another way to see it is that you start with the Plan-phase and then move on with the circle in the pace of your choosing, this is often dependent on how often the reviews take place (weekly, monthly or quarterly). This approach lets the circle spin were only the things that needed to done is made, so if no actions are needed the process move on and in if there is no need for an alteration of the plan or a new plan you move on.

The problem discussed above will not occur with a more sequence like process. Since this starts at the top and then move on to the next phase when the current step is done. When the system requires to move back and forth, this will not be a problem since it does not follow a process that only "rolls in one direction". The problem with the sequential model occurs when the end is reached and the process shall start all over again. Because then the question arises if one shall start again from the beginning and set new strategic objectives etc. or if one shall move directly to the creation of the coming year's VFOs. The same thinking as with the PDCA approach can be applied, namely that only the steps that need to be taken are taken. When a step that not needs to be taken is reached, this can serve as a review of that step until action is necessary in that particular area.

The reasons for the two categories in the literature are hard to explain. All scholars, which is accounted for in section 2.4, except for two are academics (see appendix 10) and even those two have been in the academic world from time to time. All models except Kesterson's (2014) are based on or applied to a company, which will explain why a certain model looks like it does but not why these two categories exists. One possible explanation is that two of the sequential models are the newest models in the compilation, and that the sequence model therefore would be a development of the PDCA based model. This is just a speculation based on the years from which the articles were written, hence this needs further research if it shall be considered to be a valid reason or not. Another possible explanation could be the organizational structure of the tested subject. Since the PDCA cycle in some sense lacks the strategic phase, it could be argued that the strategic objectives are set at a higher level in the organization and that the PDCA cycle only reflects the execution of the Hoshin-plans. Another reason for the variation is the view of HK. Some say that TQM is a prerequisite for HK or that HK is a constituent in TQM but after our literature review our perception of the area is as follows; Hoshin Kanri is like a car that gets you from point A to point B. In order for a car to function properly it must have tires (daily management, philosophical assumptions and values) these tires can be TQM but it does not have to be. The car must have tires in order to function but the tires can be of different brands (different systems to handle the daily management). Some believe that TQM is the car and that HK is the tires, but once again the

car must have tires but these must not nave to be HK. Thus, as stated in the frame of reference we look at HK as an independent management system that is not dependent on one specific system or philosophy but that it indeed needs to be connected to other systems. HK needs tires in order to move the company forward but the brand of the tires is less of important as long as they fulfill their function and suit the requirements of the user. Depending on how you look at HK, the process will be different. Exactly which approach that is the right one may be impossible to say, because as long as the view and approach gets you where you want to go, it is the right approach for your business.

Another possible explanation for the variations in the literature and hence the categories that we have found is that HK is a collection of best practices of Deming price winners. I.e. Hoshin Kanri is the best aspects of many different systems. This allows that different parts of the system are highlighted differently by different scholars, without for that matter seem contradictory. However, it leads to a theory that is incoherent and ambiguous.

5.2 RQ 2: How do Japanese subsidiaries based in Sweden implement HK?

By looking at the three companies that we have interviewed one can conclude that the companies' HK process differs in some aspects but when the whole pictures is taken into account they are quite similar. By taking these three examples of how Japanese subsidiaries in Sweden work with HK we will try to create a model for subsidiaries in Sweden. We know that collective case studies with three companies are not enough to make any empirical generalization or to have any statistical significance. However it is possible to make theoretical generalizations in case studies (Yin, 2013), whether the model and theories could be useful in other different organizations.

We can start by looking at which type of category the companies' processes belongs to and we can then conclude that company A is a Cyclical company and that company B and C are Sequential companies. Therefore we will argue that the model of subsidiaries in Sweden will be a sequential model. In order to not neglect company A and the fact that all three companies, in varying degrees, can affect the process were the vision-, mission- and value statements level are set, this model will start at a lower level, the creation of the annual plan. The annual plan is based on the midterm plan which in turn is based on the overall vision for the company and this strategic part is set by the top management in the group. So the subsidiary comes into the picture when the annual plan is about to be set. The annual plan is set by the company through catchballing with the immediate level above in the organization. When consensus is reached and the annual plan is set, the company starts to create their company specific Hoshins. During the creation of the Hoshins, they are catchballed with both the level above, in order to secure consensus and alignment within the organization, and with the level beneath, i.e. the different departments. The catchballing with the departments serve the purpose of aligning the company and creating consensus in which goals to work towards and how they shall be reached. After the setting of the department specific Hoshins individual Hoshin are set, if possible and necessary. This part we choose to call, The Planning phase. During this

phase everything is planned and arranged before the implementation, i.e. Hoshins are set, plans of how everything shall be performed are made so that everything can be implemented as soon as possible when the next year begins. As described in company B's model, their preparation phase took place from December to March, four months before their new financial year begins. In the subsidiary model, the preparation will start in November - December, the financial year follows the calendar year, and the implementation of the new Hoshin shall be made and the work up and running at latest the last of January so that the review in February can be made on, at least, a whole month. This time frame is only a suggestion in order to clarify the model, and can be changed to fit at different approach.

Thus, when the preparations are done the implementation stage begins, preferably in the beginning of January. Provided that the preparations are properly done, the implementation shall not cause any major problems. The key to a smoother implementation phase is a proper catchball process, which in a logical way demonstrate the benefits with the consensus and alignment work. From an outside perspective it can seem impossible to reach consensus and quite easily the necessity of it can be challenged. However, as demonstrated with the tight timeframe of the implementation, one can see that a catchball process is necessary. It may take some years before everyone learns to work with the catchball procedure but as with all things, practice makes perfect. After the implementation is done and the work against the goals is set in motion it is time to move to the next stage, review. The review process takes place on a monthly basis with bigger reviews on a semiannual basis. The daily management of the operations in a subsidiary differs from one and another and therefore the follow up of the work can differ slightly. Hence if you do smaller daily or weekly reviews does not matter that much, what is important is that every month there is a proper review of the progress. The review shall be guided by the PDCA cycle, as discussed above. To be guided by the PDCA cycle contra to strictly work according to it gives a much more flexible system, with room for change and improvements. This does not mean that you cannot apply the cycle as it is, if it fits. Rather it means that one only have to apply those parts that fit the business. The PDCA mentality gives that the subsidiary start of by checking the progress and if everything goes as planned, the subsidiary checks if any processes are new or have been altered and if some shall be standardized and then continue as planned until the next review. If the progress has deviated from the plan, countermeasures are planned then executed and worked according to until the next review. As said the review process is based in the PDCA cycle but it has another starting point and therefore the order has changed and are CAPD instead of PDCA, which is in line with the work of Mulligan, et.al, (1996). The result of every review is fed back up in the organization so that the higher levels can check their progress and keep track of how the subsidiary progresses. When the final and most extensive review is done, were the goal and which procedures that shall be standardized is checked upon, the final result is fed back up into the organization. The performance reporting is not only necessary for the work of the level above but also to enable an efficient creation of the next annual plan and its Hoshins. By taking the result of the previous year into account a development is secured and problem areas are actively worked with instead of neglected. When the year comes to an end and a new one starts, new Hoshins are prepared and the work starts all over again.

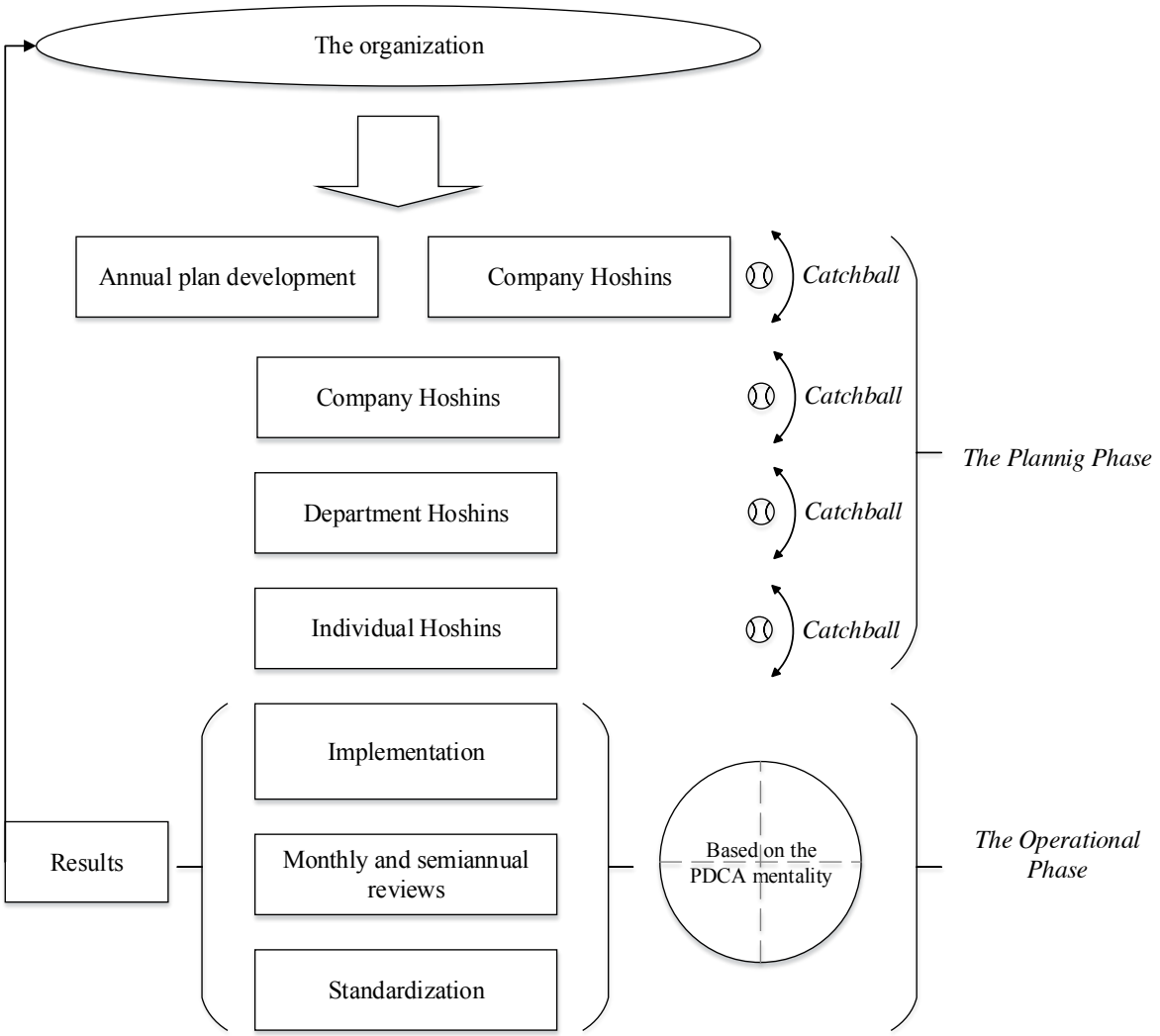

Figure 10: *The Hoshin Kanri process for Japanese subsidiaries in Sweden* (Alic & Ideskog, 2016)

Our model (see figure 1) compared to the models of the three companies (see figure 7-9) and the subsidiary model (see figure 10) has one big difference regarding the upper strategic planning phase. Our model, which is based in the literature review, is a model for a company that is not part of a group or a company that has complete control over its own strategic direction. Therefore the model in figure 1 has a section for the creation of vision-, mission- and value statements as well as a pre-planning analysis. These elements are also important in the other models but since these models portray a company that is a part of a group these element are taken care of higher up in the hierarchy and therefore they are omitted in those models. This is also the reason that the catchball process may seem less extensive compared to our first model and the theory.

5.3 RQ 3: How does the implementation of HK differ between the companies?

The first difference between the companies investigated is that company A is categorized as a Cyclical company while company B and C are categorized as Sequential companies. This reveals some differences, the biggest one being the way of how they look at the process, which is accounted for above. What can be said about the fact that company A lacks the catchball process and is categorized as a Cyclical company is that it is quite natural. The reason behind this is that the PDCA approach is suitable for both predetermined goals and the process were a new goal is developed (American Society for Quality, 2016), since it builds on a process were one plan, do, check and review ideas, improvements or already determined objectives. This is the case when it comes to company A, they get their objectives from above. The objectives are set at the top and then given to the level below, who take the objectives break them down into new objectives that are given to the next level beneath. Every level sets the objectives without any discussion, neither horizontal nor vertical, about these objectives. One of the strengths with the catchball process is that it captures the ideas from even the lowest levels in an organization. Since it is not in use, all levels except the very top-level of the group, the HQ, are being controlled from above. This gives that the model of company A (see figure 7) can be divide into two parts; one organizational part and one company part. Thus, what company A does is in fact just implementing predetermined objectives. They get to choose how to reach those objectives (the breakdown process) but they cannot influence which objectives that are set. The lack of influence may not be so surprising at first glance but it depends on how the situation is looked upon. Either the HK process is applied to the organization as a whole or only to the current company. The other way to look at it, is that the whole organization does HK and that every single company/department within the organization also has its own HK process. With the latter approach it is possible that the Swedish office uses a variant of catchballing from the moment that they receive their site specific objectives. Hence, since the Swedish office has less than ten employees, their organization is so small that it does not matter if they have an organized catchballing or not, everyone in the office will be integrated in the things that happen anyway. However, since company A expressly do not say that they are engaging in catchballing we have chosen to treat them as such, even though some of the effects from catchballing can be received through a more informal system due to the size of the company.

The small size of company A, and the fact that the they expressly do not say that they engage in catchballing, gives an opportunity to suppose that small companies may be able to adopt HK without the catchball process. As mentioned earlier catchball is one of the key characteristics of HK but small companies tend to keep their administration and bureaucracy as simple as possible, often due to limited resources. This leads to flat organizations were everyone knows what happens and this is possible as long as the company is not divided into different departments. Due to the size of the company the information flows quite freely and the persons within the company gets the opportunity to react upon it. The free information flow and the opportunities to react upon it could be a summarization of the catchball process, which prove that the same effects can be reached without catchballing in small companies.

However, after triangulating our results with an expert we learned that he did not share our view on this matter. Instead, he argues that it is more a matter of the level of the formalization at the company rather than the actual size. Also the management plays a crucial role for the HK process, since its direct connection to the formalization of the company. He argued that a company with an informal culture could reach the effects of catchballing without having it as an organized activity. This would imply that up to a certain size you do not need to engage in catchballing as long as your culture and company structure is informal. This may be the root cause to whether a company "needs" catchballing or not. However, we would still like to argue that the size, of the company, matters. According to us, size is one of the more important aspects that controls the need for a company to formalize its culture and structure. Besides the level of formalization also the geographical location of the employees will have an impact on if you reach the effects or not. Employees that works on one site are more likely to reach the catchball effects compared to a company with 10 salesmen spread throughout a country. This opens up an interesting field for further research both regarding the catchball's importance but also which factors that determines its necessity.

Company B is a Sequential company that has the most rigorous model of the companies investigated. Company B's HK process is the one that is most similar to our HK model (see figure 1). With a clear way of how and when to work, they also have the most developed catchball process, which easily can be seen in figure 8. Apart from their well-developed catchball process the fact that their whole objective-setting phase is before the actual year is special. We have not come across any model with such a clear division between the strategic part and the actual operational part. This clear division between the two main parts of the HK process gives an "easier" model for practitioners that are going to use the system for the first time. Hence it is possible to divide the model into different parts, one can work with them more separately. This could facilitate when working with it the first time, since things tend to take longer time the first time one make them. Usually the HK process is treated as a process with a one year span. Although long- and mid-term plans span over more than one year the actual HK process often takes place during one year. The majority of the models that we have read about have a final review of the year in the end and then they move "back" to the preparation of the next year. The time line for the other companies' processes is probably a bit fluctuating, but not as much as company B. Their financial years span from April to March, so the HK process for 2017 starts in December 2016 with the task of setting the objectives for the coming year. Admittedly the literature does not say anything about a certain time frame for this but our conclusion is still that the other models that we have seen do not start with their preparations for the next year before the final review, as in the case with company B. We base this assumption on that, in the literature, one moves from the beginning of the model to the end. Although back and forth sometime during the process, one never goes back from point B to point A before everything in between point A and point B is done. Hence, company B's extra months of preparation is what set them apart from the other companies, but also from the literature that we have read and therefore also our own HK model (see figure 1). Company B's approach towards the strategic work is in one sense logical because if something is to be started at one particular date then it is good if things are ready that particular date. Hence, since the coming year's Hoshins and strategic pillars builds upon the

vision AND the previous year's result, one cannot be completely ready before the previous year has come to an end. Although it is feasible to prepare as much as possible before the current year ends. Depending on whether the results of the previous year are better or worse than expected, various measures needs to be taken in order to reach the midterm plan and consequently also the long term plan and the vision.

Company C is also a Sequential company and is quite similar to company B but what set them apart is company C's undeveloped review process. This review process is also what sets company C apart from company A and the literature that we have read, since the review process often is emphasized as one the key aspects in HK. The review process, often based on the PDCA cycle shall take place at least monthly according to Kesterson (2014), and is the key to keeping the work according to the annual plan that in turn is based on the objectives. The review process plays, in the other two companies, an important role and is the enabler for a successful implementation of next year's objectives based on the previous year's knowledge. Without continued examination of the progress where the PDCA mentality is applied some of the strengths with HK is lost. What differentiates HK from other management systems is that it is consensus building and builds upon continues analysis of the situation so that the work sticks to the plan, countermeasures are taken if necessary and successful procedures are standardized. Hence, without this standardization part company C misses on of the advantages of HK, namely to continually develop its processes and take advantage of the lessons they get. This fact can be seen in the empirical material presented for the company. When asked about the lack of standardization, the respondent answered that their review process only were about checking if their work reached the goal or not. Company C make reviews on a monthly and semiannual base but as long as the objectives are fulfilled without a too big discrepancies there is no need for reviews but if the results starts to deviate from the target the need increases. According to themselves this does not happen so often since they are quite good at setting realistic targets that they meet. Company C do not standardize any procedures and accept small differences, which gives them a bigger tolerance for deviations than the rest of the companies and the literature, which can be one explanation to their own perception of their ability to set realistic goals. Another reason that makes the review process less important to company C is that they are managed from the top in a way that is similar to that of company A, but not as strictly. When the year comes to an end new objectives are provided and through the catchball process the next year's Hoshins are set. Company A and B work according to this process and company B also takes the previous year into account when working with the review process, however, as mentioned, company C does not in the same manner. This gives them a process that is even more linear than anyone else that we have encountered during our research. Even though the model has an arrow from their last rectangle, review, up to either Midterm plan or Vision, dependent on which year it is in the process, this does not mean that take the review into account when they create the next year's Hoshins, which is the case in the other two models.

5.4 RQ 4: If there are variations in the implementation of HK, why do they exist?

As just discussed there are indeed variations in the implementation of HK among the three companies in our study. The question is then, why do these variations exist? Since these three companies define HK in roughly the same way, a process for target management, and since they are all well acquainted with HK, two of the companies have been using it for more than ten years and one company since the start of the Swedish subsidiary. Why are their models so different? We believe that this can, partly, be explained by three relevantly simple reasons; the size of the company, the type of work that the company performs and the company's link to Japan.

The method that a company uses for strategic planning and decision-making usually differs dependent on size (Grinyer & Yasai-Ardekani, 1981). While small companies and family businesses with only local operation can basically ignore the topic of strategic systems, big international companies need to have some kind of strategic system in place in order for the organization to work and move forward. If a company has, as in the case with Company A, a low number of employees it will be easier for the management to organize and structure the work, make sure that the objectives are reached each month, without having a formal strategic system. The reason for this is that it is easier to communicate in such a small company. For big companies however, like Company B, communication is not as easy and self-propelled and hence the work of reaching objectives needs to be structured in order for everyone to know what needs to be done. Thus, this could be one reason to why there are variations in the degree of catchballing between different companies. Nevertheless, we would like to argue that independent of company size HK is a useful system. In fact, Kesterson (2014) demonstrates how, by applying HK to his private life, one could reach the goals (objectives) that one sets with help of this system. Hence, even on a more simple and small-scaled individual level, HK really does work when implemented properly. Thus, as mentioned earlier, size or rather the level of formalization might affect and slightly alter the HK procedure, e.g. the catchball process. We believe that the benefits of implementing HK would be the same independent of the size of the company. It would to a greater extent include more employees in the decision-making process, and by that lead to more supported objectives and thus to greater effectiveness and better results. However the disadvantages of having to produce rigorous documentation and guide continuous review processes may be more inconvenient for small companies than large ones. On the other hand, the constant seeking of consensus through catchballing may be seen as a disadvantage for large companies due to its time consumption. Nevertheless, according to us, the relevance and positive effects of a proper implementation and tenacious application of HK, at any type or size of company, should certainly not be doubted. Thus, we recommend practitioners in all organizations to consider applying HK.

Another reason for the variations in the implementation can, according to us, be explained by the work that the company performs. As the theory of HK is originally based on practice in manufacturing companies (Akao, 1991), one can assume that the HK model and process is particularly useful in those types of companies. This argument is supported by our findings

where company B, which is a manufacturing company, has the HK process that best fits the model that we present in figure 1 and that is based on the theory of HK. Hence, we would like to argue that some of the variations that we can see in the models presented in the results are due to that company A and C are not manufacturing companies. As mentioned earlier, company A works with logistics and exists with the purpose to serve the manufacturing companies in the group with the distribution of the cars produced. This means that they do not have a particularly extensive part in the process of supplying the cars. Their work may be very important and it surely contributes to the purpose of supplying automobiles but their part in the supply chain is not so protracted. This may be an explanation to why company A has a HK model that focuses on the PDCA cycle, as this is the aspect in the theoretical model that is maybe the most hands-on. Company C mainly works with the marketing and sales of the electronic products that the manufacturing companies within the group produce. Thus, company C's main purpose is to contribute with a service to the group as a whole. In the case of company C they have a quite unhindered communication channel to the HQ in Japan which may be a contributing factor to the fact that they have a more Sequential HK model than company A, even though their tasks may seem pretty similar, namely providing services to the supply chain. Because the connection to Japan is stronger for company C than for company A they do have the element of catchball.

Another reason as to why there are variations in the implementation models is an aspect that we have already touched upon, namely the link to Japan and the group's HQ. As already mentioned company C has a medium strong link to Japan and the Swedish site is a filial/branch office of the group. We believe that this affected the way their HK model looks like. Company B is directly owned by a Japanese company and consequently they have a strong link to Japan, which we believe is also evident in the way that their model is portrayed. The same logic, but in a contrariwise manner, goes for company A. This company is indirectly owned by a Japanese company located in another country, which makes company A's link to Japan relatively weak, and consequently their HK model is not very consistent with the model presented in the frame of reference.

Finally, connecting back to the very origin of HK, one could argue that the variations in the implementation of HK are due to the fact that it started off as a *collection* of several different price-winning management practices. Since HK is a collection of different techniques it is possible to assume that practitioners who have been applying HK have been focusing on different techniques to different extents dependent on what suits them and their organizations. This would lead to the development of HK processes with different focuses, for instance; one with more emphasis on strict application of the PDCA-cycle, one with a more informal catchball process or one with less emphasis on the review stage. As much of the literature on HK is based on company cases, as mentioned earlier, this would mean that the scholars' contributions to the topic and theory of HK would provide an indistinct picture with varying models to visualize the implementation of the HK theory in practice.

6 Conclusion

In this final chapter of the thesis we conclude our discussion and analysis and reveal our contribution to both theory and practice. We continue by describing the challenges and limitations that we have experienced during the process and we connect these with some suggestions for future research. We finalize this chapter by demonstrating the connection between our process and the guiding principles of Jönköping International Business School.

Our thesis aimed at creating an introduction for practitioners to HK. We did this by first explaining the different concepts of HK and then creating a model, based on the theory, for the HK process in a company (see figure 1). The theory was a bit ambiguous so in an attempt to make it clearer, we categorized the models in the literature into two categories, Cyclical- or Sequential-focused. Since HK is a Japanese management system we wanted to look at, if and how Japanese owned subsidiaries in Sweden work with HK. This gave us an opportunity to create a model of the HK process of Japanese subsidiaries in Sweden (see figure 10).

In order to bring clarity to the HK literature we have created two categories, Cyclical or Sequential, dependent on the view of HK. A view that is more concentrated around the PDCA cycle will therefore be classified as a Cyclical model. While a model that does not concentrate on the PDCA cycle but instead applies a more sequence (linear) like process therefore will be classified as a Sequential model. This also has other implications such that different weight is given to the catchball process, were the Sequential category seem to embrace it more than the Cyclical category.

When looking at the empirical data we found that the subsidiaries in Sweden have a Sequential model that start with the development of the annual plan followed by the creation of the Hoshins for the company. These two steps together with the breakdown of the Hoshins into the company through a catchball process is called the Planning phase. After the Planning phase the Operational phase takes place were the plans for the different Hoshins are executed. This work is then reviewed on a monthly and semiannual basis, a review process that is based on the PDCA approach with standardization as a last step before the results are send back up to the top management of the organization. These results are then taken into consideration in the preparation of the next year's annual plan and Hoshins.

The three companies that were subjects of our investigation differed; Company A is categorized as a Cyclical company and is quite strictly controlled by the top-management of the group. This reduce their need for the catchball process and at the same time since there are no catchball process in place there is a need of a strict control from the top management. Company B is categorized as a Sequential company and is the company that is most similar to our own model and the literature reviewed. What makes this company special is that they clearly have divided their process into two parts were the first part is about setting the Hoshins and the second is about executing them. This whole process takes 16 months. Company C is categorized as a Sequential company and is, like company A, also managed from the top-management of the group, but not as strict. They get their strategic direction

from Japan and through catchballing the Hoshins are set and then the work is performed accordingly. What is interesting is that they do not put so much effort on the review process, as long as everything goes as planned. The standardization process that would normally follow after the review is disregarded when it is a question of good behavior/procedures.

Regarding the question of why these variations of the HK model exist between the companies we have concluded that the explanation can be connected to the companies' size and the roles that they fulfill in their group as a whole. Another reason as to why the variations exist is that the subsidiaries' link or relationship to Japan and the HQ of the group is of varying strength which, according to us, affects their perception of the HK model that they apply.

6.1 Contribution and practical implications

This study contributes to the existing literature on the topic of HK by; (1) structuring the literature and the existing HK models under one of two categories, namely Cyclical or Sequential; (2) providing a theory-based model of HK that aims at making it more understandable and attractive for practitioners to apply; (3) initiating the mapping of the spread of HK among Japanese subsidiaries in Sweden and (4) providing a Swedish model for the application of HK in Japanese subsidiaries. The study also reveals several practical implications. Firstly, the model of the HK process demonstrated in the frame of reference can be used by practitioners in their pursuit for strategic excellence through thorough planning, executing and reviewing. Thus, practitioners can use the model (figure 1) and the corresponding explanations of each step in the process as an introduction to implement HK as their strategic management system. The second part of our thesis can be useful when trying to understand how HK works in corporate groups. Although this thesis explicitly looks at Japanese owned subsidiaries, the subsidiary model (figure 10) can at least give a hint of how HK works in other corporate groups as well. However, this aspect needs to be confirmed by further research before it can fully work as a guiding model, but until then it gives practitioners and scholars somewhere to start.

6.2 Challenges and limitations

During the course of this study we have encountered several challenges. Firstly, the existing literature on HK was quite ambiguous and occasionally hard to grasp. This posed a true challenge for us in terms of trying to give the literature a structure. However, this was also a part of our purpose with this study. Secondly, it was a challenge, in general, to get the companies that we targeted to participate in our study, which resulted in an imperfect mapping of the HK application among Japanese subsidiaries in Sweden but also in limited further in-depth interviews with companies of interest. Some of these challenges also implied limitations in this study. The restricted company participation is one of the limitations in this study. With a better participation rate the mapping of the HK application would be even more rigorous. Time was another factor that limited our study. With more time we could have expanded the data collection and by that get an even more accurate and solid understanding of how the HK process looks like in Japanese subsidiaries in Sweden. With more time we also could have conducted a longitudinal study, spanning over a longer time period, and with on-

site observations that could have resulted in even stronger results and more elaborated discussion and conclusion. However, the approach that we used and methods that we applied are the most suitable ones for the timeframe that we had and for the purpose of our study.

6.3 Further research

To begin with, a part of our result provides a mapping of how many of the Japanese subsidiaries in Sweden that uses HK. This points towards that the knowledge about and spread of Hoshin Kanri among Japanese subsidiaries in Sweden is low. Therefore, one suggestion that we have for future research on this topic would be to investigate why Hoshin Kanri as a management system has not taken root in Sweden. Even though we, with this study, hope to make Hoshin Kanri more interesting and attractive for practitioners we think that it also would be interesting to know what more specifically it would take to make Hoshin Kanri popular and attractive for business practitioners in the Swedish setting.

This reasoning leads us into our third suggestion for future research, namely investigating the implications for the application of the HK theory with regards to the cultural differences between Japan and Sweden. We already, during the embodiment of this study, thought about how the cultural aspect might affect the implementation of a Japanese management into a Swedish company with Swedish workers. Hence, this would be an interesting topic to do further research on.

Also the need for the catchball process could be interesting to investigate further. With beginning in our discussion about if size and/or management style affects a company so that they do not need an organized catchballing in order to reach the effect of that process would be an interesting topic for further research.

Finally, based on the results of this research an attempt was made at creating a model for how subsidiaries in Sweden applies HK (see figure 10). This model aims at helping to explain the process, step by step, of how a Swedish company, that is a part of a Japanese group, shall proceed when wanting to implement HK. This model was created based on a limited number of inquiries and we therefore suggest that future research further develop our idea and test the validity of the model that we created. Further, and connected to previous suggestion, it would be interesting for future researchers to test and see if the model we provide holds in other cultural contexts, or if it can be complemented so that is does. The same suggestion of future research goes for our first model (see figure 1), which is created to guide the implementation of HK in a company that is not part of a group or that completely sets its own strategic direction.

6.4 Connection to guiding principles

From the very start of the research process to the finalizing of our discussion and contribution this thesis has been influenced by some guiding principles. These are the three simple guiding principles of Jönköping International Business School (JIBS), namely; *International at Heart*, *Entrepreneurial in Mind* and *Responsible in Action* (Jönköping University, 2015).

The aspect of being international at heart is evident in the aspect that we investigate a Japanese management system that has started to root internationally. Furthermore, we explore HK in the Swedish setting, thus we also take on a national perspective, which is in line with the first of JIBS' guiding principles. The aspect of being entrepreneurial in mind is shown though the quite unusual and innovative topic of HK that we chose to investigate, but also through the creation of an introduction to HK for companies and entrepreneurs. Moreover, our curiosity, passion and dedication to our topic and this thesis are further evidence of being entrepreneurial in mind. The aspect of being responsible in mind is expressed through the transparency of our research process, but also through the respect we show the participants of this study by keeping their anonymity and treating them with kindness and thoughtfulness.

By acting according to these values at all times we have also tried to ensure that our topic and our study does not violate any ethical and societal standards. In fact we believe that our study can contribute to a better, more motivated working environment were more people can be involved in the daily decision-making as well as to a stronger Swedish trade and industry that has a better chance at competing internationally.

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Appendices

Appendix 1: Literature Review

Literature Review – Web of Science

The purpose of the study:

The purpose of this study is to investigate how Japanese subsidiaries based in Sweden have implemented Hoshin Kanri

Keywords used for refining the search: *(written exactly as they were in the search fields)*

"Hoshin Kanri" or "Policy Deployment" or "Management by policy" or "Hoshin planning" or "Planning for results"

Web of Science Categories:

- Business
- Economics
- Management
- Planning Development

Document types:

- Articles (peer per view)

Source titles: Top ten (ranged after 5 years impact factor collected from Web of Science)

1. 7,692 – Journal of Operations Management
2. 5,883 – Journal of Management Studies
3. 5,765 – Long range planning
4. 3,451 – Business Strategy and the Environment
5. 2,704 – British Journal of Management
6. 2,612 – International Journal of Operations Production Management
7. 1,665 – Management Decision
8. 1,482 – Total Quality Management Business Excellence
9. 1,290 – Futures
10. 0,500 – Asian Journal of Technology innovation

Found articles:

- Asan & Tanyaş (2007) – Integrating Hoshin Kanri and the Balanced Scorecard for Strategic Management: The Case of Higher Education.
- Bessant & Francis (1999) – Developing strategic continuous improvement capability.
- Craig & Roy (2004) – Developing a customer-focused culture in the speculative house-building industry.
- Ehrlich (2006) – The EFQM-model and work motivation.
- Hines, Silvi & Bartolini (2002) – Demand chain management; an integrative approach in automotive retailing.

- Hong & Chung (2013) – User-oriented service and policy innovation in shared research equipment infrastructure; an application of the QFD and Kano's model to the Gyeonggi Bio-Center.
- Hosoda & Suzuki (2015) – Using Management Control Systems to Implement CSR Activities An Empirical Analysis of 12 Japanese Companies.
- Marinho & Cagnin (2014) – The roles of FTA in improving performance measurement systems to enable alignment between business strategy and operations; Insights from three practical cases.
- Mulligan, Hatten & Miller (1996) – From issue-based planning to Hoshin; Different styles for different situations.
- Nanda (2003) – A process for the deployment of corporate quality objectives.
- Oakland (2011) – Leadership and policy deployment; the backbone of TQM.
- Su & Yang (2015) – Hoshin Kanri planning process in human resource management; recruitment in a high-tech firm.
- Tennant & Roberts (2001) – Hoshin Kanri: Implementing the catchball process.
- Witcher & Butterworth (1999) – Hoshin Kanri; How Xerox manages.
- Witcher & Butterworth (2001) – Hoshin Kanri; Policy management in Japanese-owned UK subsidiaries.
- Witcher & Chau (2005) – Longitudinal Tracer Studies; Research Methodology of the Middle Range.
- Witcher & Chau (2007) – Balanced scorecard and Hoshin Kanri; Dynamic capabilities for managing strategic fit.
- Witcher & Chau (2012) – Varieties of Capitalism and Strategic Management Managing Performance in Multinationals after the Global Financial Crisis.
- Witcher, Chau & Harding (2008) – Dynamic capabilities - top executive audits and Hoshin Kanri at Nissan South Africa.

Appendix 2: The different names of Hoshin Kanri

Scholar(s):	*Name:*	*Definition:*
Barrie G. Dale & R.G Lee	Policy Deployment	HK is a process of developing strategies and goals that are based on previous year's performance and then used to detect areas of enhancement. The strategies, goals and methods for reaching these are discussed until consensus.
Barry Witcher & Rosemary Butterworth	Policy Management	Policy management is a corporate-wide management that combines strategic management and operational management by linking the achievement of top management goals with daily management at an operational level.
Charles Tennant & Paul Roberts	Policy Control/Management, target and means management	Policy control/management is a system that focuses on the means or processes by which the targets are reached. It is not a tool for strategic planning but an execution tool that allows you to deploy an existing strategy plan from the top to the bottom of the organization.
David Hutchins	Hoshin Kanri	Hoshin Kanri is what it is that we want to achieve and this is reached by TQM.
Marek Ćwiklicki & Hubert Obora	Hoshin Kanri	---
Pete Babich	Hoshin planning	Hoshin planning is a system of forms and rules that provide structure for the planning process.
Yoji Akao	Target and means deployment	HK is a system for quality control and continuous improvement activities. It is an all organizational activities for systematically accomplishing the long- and mid-term goals as well as yearly business targets, which are established as the means to achieve business goals

Appendix 3: Background of the different scholars in the literature review

Scholar:	*Country:*	*Profession and background:*
Barrie G. Dale	United Kingdom	Professor of Quality Management at Manchester School of Management, UMIST.
R.G Lee	United Kingdom	Professor at Manchester School of Management, UMIST.
Barry Witcher	United Kingdom	Reader Emeritus in Strategic Management at Norwich Business School, UEA - B.Sc. in Economics and PhD in Technological economics
Rosemary Butterworth	United Kingdom	Researcher at BT Telconsult. - B.Sc. in Social Science and PhD in Business Management
Charles Tennant	United Kingdom	Principal Fellow, Quality and Reliability, in the Warwick Manufacturing Group, School of Engineering, University of Warwick. He is also a registered Chartered Engineer, and Fellow of the Institute of Mechanical Engineers. - B.Sc. in engineering and M.Sc. in manufacturing systems engineering and an engineering doctorate
Paul Roberts	United Kingdom	Principal Fellow, Quality and Reliability, in the Warwick Manufacturing Group, School of Engineering, University of Warwick - B.Sc. in Engineering and M.Sc. in Production Engineering
David Hutchins	United Kingdom	Academician at International Academy for Quality - M.Sc. in Quality and Reliability from Birmingham University UK. A Chartered Mechanical and Electrical Engineer, Member of the Chartered Institute of Management, Fellow of the Institute of Quality Assurance (IQA) and Senior Member of the American Society for Quality.
Marek Ćwiklicki	Poland	Associate Professor at Cracow University of Economics
Hubert Obora	Poland	PhD and Associate Professor at the Department of methods of organization and management at Cracow University of Economics
Pete Babich	USA	President at Total Quality Engineering Inc., B.Sc. in electrical engineering
Yoji Akao	Japan	Developer of Hoshin Kanri, founder of Quality Function Deployment (QFD) and ASQ's 24th Honorary Member. Dean of the Faculty of Engineering at Tamagawa University and professor of management at the Asahi University School of Business Administration

Appendix 4: Seven strategic tools (S-7 tools) (Osada, 1998)

	Main Objective:	***Outline:***
Environment Analysis	**Weighing the attractions of the industry** Illuminating trends of the business environment (macroscopic analysis), business structure, characteristics, attractive points of the industry (industrial structure analysis)	Macroscopic analysis: Analyzing and forecasting various circumstances such as macro- and micro-economy, politics, social phenomena, distribution channels, technological innovation, etc. Industrial structure analysis: Following the method proposed by Prof. M. E. Porter, forecasting based on: 1) competitors, 2) buyers' negotiating power, 3) suppliers' negotiating power, 4) threat of new entrants, 5) threat of alternative products
Product Analysis	**Benchmarking products** Comparison of product qualities, including service and price, with those of competing products for clear differentiation	Comparison of price and quality aspects, including basic performance, ease of use, reliability, durability, safety, environmental impact, ease of maintenance, service; using the competing products themselves, catalogues and other publicly available literature, substantive information regarding service, etc.
Market Analysis	**Attracting users** Comprehending customers' needs and purchasing criteria. Elucidating the company's strengths in a market segment	Customer needs analysis and purchasing criteria analysis using a quality table. Analyses correlated with market segments
Product -Market Analysis	**Comprehending competition and positioning** Optimum positioning determined by a product's suitability to customer needs	Using a product-market matrix based on products and market segments. Mapping the company's and competitors' products determine competitive positioning.
Product Portfolio Analysis (PPM)	**Ranking products by priority** Products assigned priority based on their market strengths	Using a matrix with one axis indicating competitive advantage of products in their markets, the other axis indicating attractiveness of the industry. Separating this matrix into four quadrants to review the balance of the product line up and affix priority to products
Strategic Elements Analysis	**Determine strategic factors** Extracting the factors on which policy is based	Using a matrix of business functions (R&D, production, marketing, etc.) and strategic elements (quality, cost, delivery, safety) to determine the factors of strategy which correspond to the business's characteristics
Resource Allocation Analysis	**Priority allocation of resources** Determining priorities for allocation of limited resources (human, material, capital, time) to achieve strategic goals	Using time series PPM to assign future priority to products. Functions are given priority for resources using a matrix of products and functions

Appendix 5: Interview questions

Questions for interviews

Get to know the company/interviewee:

- What does your company do?
- For how long have you worked there?
- What position do you have in the company? Have you always had the same position?
- What is your background?
- How would you describe your leadership style?
- What does your organizational structure look like

HK generally:

- What is the name of your strategic management system?
- How do you define this system?
- For how long has your company been using the HK method?
- For what purpose do you use HK? As an independent strategic management system or as a part of your quality process?

HK specifically:

- How does your HK process look like?
- Please describe each of the steps in your HK process
- What do you see as the key components of your HK process? And what makes them so important?
- How does HK work for your organization?
- What are the up sides and down sides of HK?
- Have your organization used any consultants/external parties while implementing HK?
- How important would you say that commitment, communication and support is for the success of HK?
- Do you have any concluding comments/anything to add?

Hoshin Kanri Survey

Appendix 6: Hoshin Kanri Survey

You have been invited to participate in this study concerning the management theory Hoshin Kanri in Japanese owned subsidiaries based in Sweden. The Study is conducted by Adina Alic and Johan Ideskog, students at Jönköping International Business School, and is part of their Master Thesis.

The aim of the survey is to map which Japanese owned subsidiaries in Sweden that are using Hoshin Kanri. Your participation is voluntary and you have the right to withdraw at any point. The information generated by this survey will only be used for the purpose of this thesis. If you have any questions about anything, please contact;
Adina Alic – alad1205@student.ju.se, 07x-xxx xx xx
Johan Ideskog – abjo1217@student.ju.se, 07x-xxx xx xx

Company Name:

Position within the company:

Date:

Have you heard about Hoshin Kanri (Policy Deployment, Policy Control, Policy Management, Target and Means Deployment)?

☐ Yes ☐ No ☐ Do not know

Do you use Hoshin Kanri?

☐ Yes ☐ No ☐ Do not know

If yes, please move on to question #3, if no, then that was the last question. Thank you for your participation and have a nice day!

For how long have you been using Hoshin Kanri?

Which of the following steps do you use in your Hoshin Kanri process? (Please check off the relevant boxes)

☐ Establish Organization Vision (Pre-planning analysis and development of mission-, value- and vision-statements)

☐ Develop 3-5 years plan

☐ Develop annual plan/objective

☐ Deployment/catchball of above steps

☐ Implementation

☐ Review (daily, monthly and quarterly)

☐ Annual review

☐ None of above

☐ Additional or different steps:

-

-

-

Have you followed any particular author, expert or theory in your Hoshin Kanri work?

☐ Yes ☐ No ☐ Do not know

If yes, then which?

Have you used any consultant or an external party in your Hoshin Kanri work?

☐ Yes ☐ No ☐ Do not know

If yes, then which?

Could you consider to participate in a more in-depth interview as part of our continuing work on Hoshin Kanri in Sweden?

☐ Yes ☐ No ☐ Do not know

Concluding comments or thoughts:

Thank you very much for taking the time to complete this survey. Your feedback is valued and very much appreciated!

Appendix 7: The 158 companies

	Name of entity	Location	Category	Group	Business	Japanese parent company	Employee	Started
1	Anest Iwata Scandinavia AB	Partille	Service	A	Marketing	Anest Iwata Co., Ltd	5	1992
2	Atryz Europe AB	Nacka	Chemical	A	Marketing	Atryz Yodogawa Co., Ltd.	3	2009
3	BioReal (Sweden) AB	Stockholm	Life S	A	Marketing	Fuji Chemical Industry CO. LTD	16	2003
4	BT Europe AB	Mjölby	Auto	A	Marketing	Toyota Industries Corp.	200	2000
5	BT Products AB	Mjölby	Auto	A	Manufacturing	Toyota Industries Corp.	1283	2000
6	Comercial Metales Blancos AB	Göteborg	Mining	A	Holding	Sumitomo Corporation	0	2006
7	Cyberdyne Sweden AB	Västerås	ICT	A	R&D	Cyberdyne Inc.	1	2010
8	Eizo Nordic AB	Stockholm	ICT	A	Marketing	Eizo Nanao Corporation	16	1992
9	Fuji Autotech AB	Eskilstuna	Auto	A	Manufacturing	Fuji Kiko CO., LTD	146	1993
10	Gadelius Europe Aktiebolag	Halmstad	Machinery	A	Retail	Gadelius KK	2	1996
11	Great Works AB	Stockholm	Service	A	Marketing	Tyo INC	44	2007
12	Haglofs Holding AB	Avesta	Retail	A	Marketing	ASICS corp.	128	2010
13	Hamamatsu Photonics Norden AB	Stockholm	Machinery	A	Marketing	Hamamatsu Photonics K.K.	19	1988
14	Hokusei Europe AB	Stockholm	Packaging	A	Marketing	Hokusei Products Co., Ltd.	1	2010
15	Hyundai Bilar AB	Stockholm	Auto	A	Marketing	Sumitomo Corporation	29	1999
16	Jasco Scandinavia AB	Göteborg	Machinery	A	Marketing	Jasco Co., Ltd.	1	2000
17	Jensen Devices AB	Stockholm	Electric	A	Marketing	Sumida Corporation	38	2001
18	JMAC Scandinavia AB	Göteborg	Service	A	Consulting	JMA Consultants Inc.	18	1999
19	Kintetsu World Express (Sweden) AB	Göteborg	Logistics	A	Service	Kintetsu World Express INC	4	2005
20	Komatsu Forest AB	Umeå	Machinery	A	Manufacturing	Komatsu Ltd.	344	2003
21	Kyocera Mita Nordic AB	Stockholm	Machinery	A	Marketing	Kyocera Mita Corporation	23	1991
22	LCL Sweden AB	Stockholm	Logistics	A	Marketing	Nippon Yusen KK	0	2001
23	NKC Manufacturing Sweden AB	Göteborg	Machinery	A	Manufacturing	Nakanishi Metal Works Co., Ltd	130	2011
24	NYK Cool AB	Stockholm	Logistics	A	Service	Nippon Yusen KK	49	2007
25	Pilot Pen Sverige AB (PILOT NORDIC AB)	Stockholm	Retail	A	Marketing	Pilot Corp	10	1999
26	Press & Plåtindustri AB	Oskarshamn	Machinery	A	Manufacturing	Press Kogyo CO LTD	101	1992
27	Santen Pharma AB	Stockholm	Life S	A	Marketing	Santen Pharma. Co., Ltd.	11	1997
28	SATO Technology & Business Development Centre AB	Göteborg	ICT	A	R&D	Sato Corporation Japan	17	2007
29	SC Motors Sweden Aktiebolag	Stockholm	Auto	A	Holding	Sumitomo Corporation	103	2001
30	Sharp Electronics (Nordic) AB	Stockholm	Electric	A	Marketing	Sharp Corporation	95	1979
31	SiTek Electro Optics AB	Partille	Electric	A	Manufacturing	Autex Inc.	9	2004

32	SMC Pneumatics Sweden AB	Stockholm	Machinery	A	Manufacturing	SMC Corporation	88	1986
33	Sony Mobile Communications AB	Lund	ICT	A	R&D	Sony Corporation	2938	2001
34	Sorsele Trä Aktiebolag	Stensele	Real estate	A	Trading	FREESIA HOUSE Co.,Ltd	0	1983
35	Stensele Såg i Storuman Aktiebolag	Stensele	Wood	A	Manufacturing	Freesia Homes Co., Ltd.	6	2001
36	Suzuki Garphyttan AB	Garphyttan	Auto	A	Manufacturing	Suzuki Metal Industry CO., LTD	318	2009
37	Tomoku Hus Aktiebolag	Insjön	Wood	A	Manufacturing	Tomoku Co., Ltd.	74	1991
38	Toshiba TEC Nordic AB	Stockholm	Electric	A	Marketing	Toshiba Corporation	197	2004
39	Toyota Industries Finance International AB (publ)	Mjölby	Financing	A	Financing	Toyota Industries Corporation	0	2003
40	Toyota Material Handling Europe AB	Mjölby	Auto	A	Manufacturing	Toyota Industries Corporation	94	2000
41	Toyota Material Handling Sweden Rental AB	Stockholm	Auto	A	Manufacturing	Toyota Industries Corporation	0	2000
42	Westinghouse Electric Sweden AB	Västerås	Electric	A	Manufacturing	Toshiba Corporation	1087	2006
43	YASKAWA Nordic AB	Kalmar	Electric	A	Manufacturing	Yasukawa Electric Corporation	178	1984
44	Yokohama Scandinavia AB	Stockholm	Auto	B	Marketing	Yokohama Rubber Co. Ltd.	12	1995
45	Amada Sweden AB	Göteborg	Machinery	B	Marketing	Amada Co., Ltd	24	1990
46	Anritsu AB	Kista	Electric	B	Marketing	Antitsu Corporation	25	1985
47	Astellas Pharma AB	Malmö	Life S	B	Marketing	Astellas Co.Ltd.	36	1992
48	Atlet AB	Mölnlycke	Auto	B	Manufacturing	Nissan Motor CO.Ltd.	945	2007
49	Berlitz International Sweden AB	Stockholm	Service	B	School	Benesse Corporation	15	2002
50	Bridgestone Sweden AB	Sundsvall	Auto	B	Marketing	Bridgestone Corporation	55	1992
51	Canon Svenska AB	Solna	Electric	B	Marketing	Canon INC	447	1970
52	Carl M Lundh AB	Malmö	Chemical	B	Manufacturing	Aderans Co.Ltd	56	2005
53	CN System AB	Göteborg	Machinery	B	Marketing	Nittan Co., Ltd.	12	2006
54	Consilium Nittan Research & Development AB	Göteborg	Machinery	B	Marketing	Nittan Co., Ltd.	0	2007
55	Daikin Sweden AB	Stockholm	Cleantech	B	Marketing	Daikin Co., Ltd.	22	2008
56	DENSO Sales Sweden AB	Göteborg	Auto	B	Marketing	Denso Corp	49	1997
57	Eisai AB	Stockholm	Life S	B	Marketing	Eisai Co., Ltd.	23	2005
58	EPCOS Nordic AB	Stockholm	Electric	B	Marketing	TDK Co., Ltd	18	2000
59	Eystrasalt Vind AB	Älandsbro	Cleantech	B	Development	Green Power/Mitsubishi Corp	0	2010
60	Fastighetsbolaget Ellipsvägen 4 AB	Stockholm	Auto	B	Real Estate	Toyota Motor Corporation	0	1985
61	Fuji Hunt Nordic AB	Stockholm	Chemical	B	Photo laboratory	Fuji Photo Film Ltd.	5	1986
62	Fujifilm Nordic AB	Stockholm	Chemical	B	Marketing	Fuji Photo Film Ltd.	5	2012
63	Fujirebio Diagnostics AB	Göteborg	Life S	B	Manufacturing	Fujirebio Co., Ltd.	43	2006
64	Fujitsu Services AB	Stockholm	ICT	B	System int'n	Fujitsu Ltd.	732	1970
65	Fujitsu Sweden AB	Stockholm	Electric	B	Marketing	Fujitsu Ltd.	246	1971

66	Furuno Sverige AB	Göteborg	Electric	B	Marketing	Furuno Electric Co., Ltd.	19	1987
67	Gothia Vind JD AB	Göteborg	Cleantech	B	Development	Green Power/Mitsubishi Corp.	0	2010
68	Hitachi Data Systems AB	Stockholm	ICT	B	Marketing	Hitachi Ltd.	37	1977
69	Hitachi Power Tools Sweden AB	Stockholm	Machinery	B	Marketing	Hitachi Ltd.	31	2005
70	Honda Logistics Center Sweden AB	Malmö	Auto	B	Logistics	Honda Motor Co., Ltd.	8	2001
71	Honda Nordic AB	Malmö	Auto	B	Marketing	Honda Motor Co., Ltd.	67	1991
72	HOYA Lens Sweden AB	Malmö	Retail	B	Marketing	Hoya corp	70	2002
73	IWAKI Sverige Aktiebolag	Stockholm	Machinery	B	Marketing	Iwaki Co., Ltd	7	1993
74	JEOL (Skandinaviska) AB	Stockholm	Electric	B	Marketing	Nihon Densi KK	15	1973
75	JVC Svenska AB	Stockholm	Electric	B	Marketing	Victor Co. of Japan Ltd.	0	2000
76	Konica Minolta Business Solutions Sweden AB	Stockholm	Machinery	B	Marketing	Konica Minolta Ltd.	113	1991
77	Kontorslösningar i Karlstad AB	Karlstad	Electric	B	Retail	Canon INC	10	1994
78	Koyo Kullager Scandinavia AB	Stockholm	Machinery	B	Marketing	JTEKT Corporation	5	1977
79	Mitutoyo Scandinavia AB	Stockholm	Machinery	B	Marketing	Mitsutoyo, KK	32	1981
80	MMC Bilar Sverige AB	Stockholm	Auto	B	Retail	Sumitomo Corporation	31	1986
81	NAMCO BANDAI Partners Nordic AB	Stockholm	Game	B	Marketing	Namco Bandai	13	1999
82	NEC Scandinavia AB	Stockholm	ICT	B	Marketing	NEC Corporation	19	1988
83	Nikon Nordic AB	Stockholm	Machinery	B	Marketing	Nikon Corporation	63	1995
84	Nitto Scandinavia Aktiebolag	Göteborg	Chemical	B	Marketing	Nitto Denko Corporation	15	1980
85	Nomura Sweden AB	Umeå	Financing	B	Service	Nomura Holdings	43	2008
86	Oki Systems (Sweden) AB	Stockholm	Electric	B	Marketing	Oki Electric Industry Co., Ltd.	24	1989
87	Olympus Sverige AB	Stockholm	Machinery	B	Marketing	Olympus Optical Co., Ltd.	58	1975
88	Omron Electronics AB	Stockholm	Electric	B	Marketing	Omron Corporation	30	1987
89	Opticon Sensors Nordic AB	Stockholm	Electric	B	Marketing	Opto Electronics Co., Ltd.	12	1998
90	Otsuka Pharma Scandinavia AB	Stockholm	Life S	B	Marketing	Otsuka Pharma. Co., Ltd.	20	2000
91	Panasonic Electric Works Nordic AB	Malmö	Electric	B	Marketing	MatsushitaElectricCorporation	251	2006
92	Pilkington Floatglas AB	Halmstad	Glass	B	Manufacturing	Nippon Sheet Glass	88	1072
93	Panasonic Nordic AB	Stockholm	Electric	B	Marketing	MatsushitaElectricCorporation	29	1999
94	Pioneer Scandinavia AB	Stockholm	Electric	B	Marketing	Pioneer Electronic Corporation	3	2003
95	Pro-face Sweden AB	Löddeköpinge	Electric	B	Marketing	Digital Electronics corporation	0	1997
96	Reichhold Sverige AB	Västerås	Chemical	B	Marketing	DaiNippon Ink & Chemicals Inc.	619	2009
97	Ricoh Sverige AB	Stockholm	Electric	B	Marketing	Ricoh Company Ltd.	2	2008
98	Rocla AB	Skärhamn	Machinery	B	Manufacturing	Mitsubishi Heavy Industries, Ltd.	0	1999
99	SB Sweden AB	Stockholm	ICT	B	Holding	Soft Bank Corporation	20	2009

100	Sericomex Sweden AB	Landskrona	ICT	B	Marketing	Mutoh Holdings Co., Ltd.	56	1993
101	Sharp Center AB	Stockholm	Electric	B	Retail	Sharp Corporation	39	2004
102	Shimano Nordic Cycle AB	Uppsala	Retail	B	Marketing	Shimano Co., Ltd	3	1997
103	SM-Cyclo Scandinavia AB	Malmö	Machinery	B	Marketing	SumitomoHeavyIndustries Ltd.	40	1988
104	Sony Music Entertainment Sweden AB	Stockholm	Electric	B	Marketing	Sony Corporation	42	1986
105	Sun Chemical Aktiebolag	Stockholm	Chemical	B	Manufacturing	DaiNippon Ink & Chemical Inc.	24	2014
106	SunPine AB	Piteå	Chemical	B	Manufacturing	Harima Chemicals, Inc.	9	1986
107	Svensk Specialgrafit Aktiebolag	Trollhättan	Chemical	B	Marketing	Tokai Carbon Co., Ltd	2	2009
108	Takeda Pharmaceuticals Nordics AB	Stockholm	Life S	B	Marketing	Takeda Co., Ltd.	4	2000
109	Terasaki Skandinaviska AB	Stockholm	Electric	B	Marketing	Terasaki Co., Ltd.	26	2002
110	Terumo Sweden AB	Göteborg	Life S	B	Marketing	Terumo Corporation	9	1990
111	Tumlare Corporation Sweden AB	Stockholm	Service	B	Marketing	JTB	8	1990
112	Tumlare Net Travel Service AB	Stockholm	Service	B	Marketing	JTB	31	1998
113	Topcon Scandinavia AB	Göteborg	Machinery	B	Marketing	Topcon Corporation	0	1988
114	Toyota Center Göteborg Aktiebolag	Göteborg	Auto	B	Marketing	Toyota Motor Corporation	0	1985
115	Toyota Center Malmö Aktiebolag	Malmö	Auto	B	Marketing	Toyota Motor Corporation	5	2001
116	Toyota Logistics Services Sweden AB	Malmö	Auto	B	Logistics	Toyota Motor Corporation	0	2005
117	Toyota Material Handling Europe Flexiblefleet AB	Mjölby	Auto	B	Marketing	Toyota Industries Corporation	9	1990
118	Toyota Material Handling Europe Rental AB	Mjölby	Financing	B	Financing	Toyota Industries Corporation	0	2004
119	Toyota Material Handling Europe TruckFleet AB	Mjölby	Auto	B	Marketing	Toyota Industries Corporation	20	1994
120	Toyota Material Handling International AB	Mjölby	Auto	B	R&D	Toyota Industries Corporation	454	1990
121	Toyota Material Handling Sweden AB	Stockholm	Machinery	B	Marketing	Toyota Industries Corporation	280	1985
122	Toyota Sweden Holding AB	Stockholm	Auto	B	Marketing	Toyota Motor Corporation	62	1995
123	Yamaha Motor Scandinavia AB	Stockholm	Auto	B	Marketing	Yamaha Motor Co. Ltd.	6	1994
124	Yanmar Sverige Aktiebolag	Stockholm	Machinery	B	Marketing	Yanmar Co., Ltd.	3	2000
125	Yokogawa Measurement Technologies AB	Stockholm	Electric	B	Marketing	Yokogawa Co., Ltd.	42	2006
126	WesDyne TRC AB	Stockholm	Electric	B	Consulting	Toshiba Corporation	44	1987
127	XL Office Team Aktiebolag	Stockholm	Electric	B	Retail	Canon INC	31	1993
128	Seibu Giken DST AB	Göteborg	Cleantech	C	Manufacturing	Seibu Giken CO LTD	10	2005
129	Alpine Electronics of UK Ltd, Filial Branch	Göteborg	Auto	C	Marketing	Alpine Electronics Co., Ltd.	10	2011
130	Brother Sverige, filial till Brother Nordic A/S, Danmark	Askim	Machinery	C	Marketing	Brother Industries Ltd	1	2010
131	Daifuku Co., Ltd.Japan, Sweden Filial	Helsingborg	Logistics	C	Marketing	Daifuku Co., Ltd.	10	2005
132	Daifuku Europe Limited Storbritannien filial	Stockholm	Logistics	C	Marketing	Daifuku Co., Ltd.	10	2006
133	Fujicolor Sverige filial - Eurocolor Kiel Photogrosslabor	Stockholm	Chemical	C	Photofinishing	Fuji Photo Film Co., Ltd.	1	1994

134	FUJIFILM Recording Media GmbH	Stockholm	Chemical	C	Distribution	Fuji Photo Film Co., Ltd.	10	1988
135	Hitachi Europe (England) Ltd Swedish Branch	Södertälje	Electric	C	Marketing	Hitachi Ltd.	10	1993
136	Horiba Europe GmbH, Germany Filial Sverige	Södertälje	Machinery	C	Marketing	Horiba Ltd.	10	1999
137	Kawasaki Motors Europe N.V.Filial Sverige	Stockholm	Auto	C	Marketing	Kawasaki Heavy Ind.	5	1971
138	MITSUBISHI CORPORATION	Stockholm	Trading	C	Trading	Mitsubishi Corporation	10	1999
139	Filial	Göteborg	Auto	C	Marketing	Mitsubishi Electric Corporation	20	1996
140	Mitsubishi Electric Europe B.V. (Holland) Filial	Stockholm	Electric	C	Marketing	Mitsubishi Electric Corporation	20	2004
141	MOL (Europe) B.V. Netherlands, Filial	Göteborg	Logistics	C	Marketing	Mitsui O.S.K. Lines, Ltd.	1	2002
142	Mizuno Corporation (Japan) filifal Sverige	Stockholm	Apparel	C	Marketing	Mizuno	20	2005
143	Finland	Stockholm	Auto	C	Marketing	Nissan Motor Co., Ltd.	10	2002
144	Sysmex Deutschland GmbH, Filial Sverige	Kungsbacka	Life S	C	Marketing	Sysmex Corporation, Japan	1	1997
145	Taiyo Yuden Europe GmbH, Germany, Branch Office	Skänninge	Electric	C	Marketing	Taiyo Yuden Co.,	5	1997
146	TDK Electronics Europe GmbH Germany filial	Stockholm	Electric	C	Marketing	TDK Co., Ltd	5	2006
147	THK GmbH Germany - Sweden Filial	Stockholm	Machinery	C	Marketing	THK Co., Ltd.	20	2003
148	Toshiba Electronics Europe GmbH,	Stockholm	Electric	C	Marketing	Toshiba Corporation	20	2000
149	Toyota Kreditbank GmbH Tyskland, Sverige Filial	Stockholm	Financing	C	Leasing	Toyota Motor Corporation	1	2005
150	TS Tech Co., Ltd. (Japan) filial	Borås	Auto	C	Marketing	TS TECH Co., Ltd	20	1975
151	Yamaha Music Europe GmbH Germany Filial Scandinavia	Göteborg	Retail	C	Marketing	Yamaha Corporation	20	1991
152	Yazaki Europe Ltd, England, Gothenburg Branch/ Filial	Göteborg	Auto	C	Manufacturing	Yazaki Corp	1	1994
153	YKK (U.K.) Limited, England filial Sverige	Borås	Logistics	C	Marketing	YKK Corporation	3	2000
154	Yusen Air & Sea Service (Benelux) B.V., Holland filial Sverige	Stockholm	Logistics	C	Logistics	Nippon Yusen KK	3	1996
155	AW Technical Center Europe S.A. Swedish Rep.	Göteborg	Auto	D	Rep office	Aisin AW Co., Ltd.	3	2001
156	Murata Electronics (Netherlands) B.V Stockholm Office	Stockholm	Electric	D	Rep office	Murata Mfg. Co. Ltd.	4	2004
157	SANDEN INTERNATIONAL (EUROPE) LTD	Vänersborg	Auto	D	Rep office	Sanden Co., Ltd.	3	2010
158	Zephyr Corporation EMEA	Stockholm	Cleantech	D	Rep office	Zephyr Corporation	3	2010

Appendix 8: Informed Consent

Informed Consent:
Hoshin Kanri

Adina Alic – alad1205@student.ju.se
Johan Ideskog – abjo1217@student.ju.se

Project Description:
The information that you provide us with today is going to be used by us, as part of our empirical study and master thesis. We are students at Jönköping International Business School and the thesis that we are writing is the concluding work of our 4 year studies in business administration. The purpose of this study is to investigate how Japanese subsidiaries based in Sweden have implemented and work with the Japanese strategic management system Hoshin Kanri. You are of interest to us because you meet the criteria; your company is in one way or another owned by a Japanese company and you apply Hoshin Kanri. The information that you provide us with today is only going to be used for the purpose of our study and with the final thesis we hope to be able to contribute in the field of strategic management. Besides hoping to clarify the theory of Hoshin Kanri, we aim at making it more understandable and therefor more attractive to practitioners. We also hope to contribute by providing an overview of the spread of the application of Hoshin Kanri in Sweden. Your participation in this study will not pose any risk for your company.

Procedure and Risks:
We would like to record the interview, if you are willing, and only use the recordings to write our materials. We will record the interview only with your consent. Please feel free to say as much or as little as you want. You can decide not to answer any question, or to stop the interview any time you want. The recordings and transcripts will become the property of the project and will not be shared or distributed in any way.

There are no known risks associated with participation in the study.

Benefits:
It is hoped that the results of this study will benefit the community through providing greater insight into Hoshin Kanri, which we believe can be a powerful tool for companies in Sweden.

Cost Compensation:
Participation in this study will involve no costs or payments to you.

Confidentiality:
All information collected during the study period will be kept strictly confidential until such time as you sign a release waiver. No publications or reports from this project will include identifying information on any participant without your signed permission, and after your review of the materials. If you agree to join this study, please sign your name on the following page.

INFORMED CONSENT FOR INTERVIEWS

Hoshin Kanri

I, _____, agree to be interviewed for the project entitled Hoshin Kanri which is being produced by Adina Alic and Johan Ideskog of Jönköping University.

I certify that I have been told of the confidentiality of information collected for this project and the anonymity of my participation; that I have been given satisfactory answers to my inquiries concerning project procedures and other matters; and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project or activity at any time without prejudice.

The interviewee will be kept anonymous – Yes/No
The company that the interviewee works for will be kept anonymous. – Yes/No

I agree to participate in one or more electronically recorded interviews for this project. I understand that such interviews and related materials will be kept completely anonymous, and that the results of this study may be published in an academic journal or book.

I agree that any information obtained from this research may be used in any way thought best for this study.

_____Date _____
Signature of Interviewee

Appendix 9: Final Consent

Final Consent Form

Hoshin Kanri

Dear Participant:

This form gives us final authorization to use material from your interview in Hoshin Kanri. A draft of these materials should have been presented to you for your review, correction, or modification. You may grant use rights for this draft "as is," or with the modifications you specify, if any. See "Conditions" at the bottom of the form

I, _____, hereby grant the right to use information from recordings and or notes taken in interviews of me, to Adina Alic and Johan Ideskog of Jönköping University, and as presented to me as a draft copy. I understand that the interviews will be used by the interviewer and the project (but erased after the submission of the thesis), and that the information contained in the interviews may be used in materials to be made available to the general public.

_____ Date: _____
Signature of Interviewee

_____ Date: _____
Signature of Interviewer

The following conditions limit the release of information, as agreed between the interviewer and the interviewee:

_____ None needed

_____ Material may be released once corrections I specified have been made (please make specifications below):

Appendix 10: Background of the different scholars to the categorized models

Scholar:	*Country:*	*Profession:*	*School:*
Barry Witcher	UK	Reader Emeritus	Strategic Management at Norwich Business School, UEA
Chao-Ton Su	Taiwan	Chair Professor	Department of Industrial Engineering and Engineering Management at National Tsing Hua University
Charles Tennant	UK	Principal Fellow	Quality and Reliability, in the Warwick Manufacturing Group, School of Engineering, University of Warwick.
Hubert Obora	Poland	Associate Professor	Department of methods of organization and management at Cracow University of Economics.
Marek Ćwiklicki	Poland	Associate Professor	Cracow University of Economics
Mehmet Tanyaş	UK	Associate Professor	International Logistics Department at Okan University
Paul Roberts	UK	Principal Fellow	Quality and Reliability, in the Warwick Manufacturing Group, School of Engineering, University of Warwick
Randy Kesterson	USA	Management consultant	Engineering
Rosemary Butterworth	UK	Researcher - BT Telconsult	PhD in Business Management
Şeyda Serdar Asan	Turkey	Assistant Professor	Department of Industrial Engineering at Istanbul Technical University
Tsung-Ming Yang	Taiwan	Professor	Department of Industrial Engineering and Management at National Chiao Tung University
Vivek (Vic) Nanda	USA	Author and consultant within strategic management and quality	MS in Computer Science from McGill University, Canada and a BS in Computer Engineering from University of Pune, India