How to implement World Class Operational Management in effective way in the initial stage:

A Case Study of BillerudKorsnäs

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Abstract

Under the increased competition on the global market, companies should deliver world-class performance exceeding the capabilities of their strongest competitors. Company is not only concentrating the efficiency and effectiveness, but also needs to change the culture. Hence, nowadays, World Class Operational Management (WCOM) is a significant concept for the company to maximize the operational performance, continuous improvement, and efficient and effective operations. In terms of that, this master thesis intends to explore how to implement WCOM in the initial stage in an effective and efficient way. After reviewing related literature, and choosing the single-case research method, collecting qualitative data with case company BillerudKorsnäs, some findings are found through the literature review: 1) the WCOM model consists of 20 pillars and the implementation steps 2) identify the 16 success factors of WCOM implementation.(e.g. top management commitment, leadership, big picture, prepare plan, coordinator etc.al 3) the prior findings show it is also important to know how to lead these changes of company. By reviewing the case company BillerudKorsnäs’s implementation, the researcher found most of the employees, team leaders and top managers are confused in the initial stage. Meanwhile, the case study also identified the main obstacles that the company met in the initial stage are lacking of top management commitment, leadership, communication and motivation or awareness to implement the WCOM. Therefore, the researcher also provides some suggestions to deal with these barriers. After discussion of these findings, this study concludes that to be more effective implementation of WCOM there are 17 key activities/ factors should be well prepared and full support. In addition, the researcher provides a different suggestion for the case company to implement more successful in the future.

Key words: World-Class, World Class Operational Management (WCOM), Change Management, Effective and Efficient implementation of WCOM,
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1 Introduction

1.1 Background

Traditional manufacturers do not seem to strive for a balance between efficiency and effectiveness (Kaydos, 1991). Efficiency means accomplishing tasks to produce the best yield with the lowest cost. Effectiveness is the capability of achieving an objective or target (Kaydos, 1991). Manufacturing management practices made a significant evolution during the 20th century. The evolution reflected by globalization, the quality of product and service, changing economy and policy, customer needs and new technology (Dogan, 2013). To be a competitive company, they must deliver world-class performance exceeding the capabilities of their strongest competitors (Lu, et al., 2011). The World Class Operational Management provides a culture of problem solving, continuous improvement, efficiency, effectiveness and excellence operations (T. Murino, et al., 2012).

The original thinking starts from the “World Class” term; Schonberger defined the “World class” as the essence of significant changes occurring in larger industrial enterprises (Schonberger, 1986). Recently, a new philosophy for world class management appears - World Class Operational Management (WCOM). WCOM is a process-driven approach to improve manufacturing operations. The process primarily focuses on continual improvement in quality, cost, time, flexibility and customer needs. The concept of WCOM originated from the consultant company Solving Efeso for achieving excellence in operational management in the shortest time (Lind, 2001; Solving Efeso, 2014). WCOM is also known as the workplace where the problem is solved, teamwork and leadership results in the ongoing development in an organization (Dogan, 2013). Both Johnson & Kaplan and Patell mentioned that WCOM will influence the way of managing companies (Johnson & Kaplan, 1987) (Patell, 1987). Further, Johnson claimed that WCOM proposes and establishes a new model for controlling the operational management (Johnson, 1992). According to different various scholars, implementation of WCOM will radically affect a company’s culture (Haleem et al., 2012; T. Murino et al., 2012), performance management (Flynn.B.B, 1998; Vrakking & P., 1992) operational process (Norri & Radford, 1993; Lu, et al., 2011) and lead to systematic working environment (Kotter, 2012).

However, the increased attention on the World Class Operational Management (WCOM) requires a manufacturing company not only concentrating on the efficiency and effectiveness, but also including its culture change. More systematic and structural work appears in a long-term period after implementation with WCOM (Mahadevan, 2009). The present challenge for manufacturers is the way to implement WCOM with the right direction and appropriate technique. To address the challenges
of WCOM implementation, the company needs to understand the success factors of WCOM implementation and how to achieve WCOM in an effective way (Lind, 2001).

Nevertheless, some authors assuming implementation of the successful projects that have a long operational lifetime and spent less time in the initial stage. On the contrary, nearly all Japanese companies would spend 80% time developing the big picture of the project and 20% time on implementation (Briner, et al., 1995). Compared with the Japanese model, the first view expends more time, cost, and produce poor-quality product. Therefore, the effective implementation requires the complete planning/scoping in the initial stage. Moreover, majority of empirical research merely focus on the executing, operating and controlling WCOM in order to maintain the successful implementation. Only a few of research concentrate on the initial stage of WCOM implementation. Hence, it is also significant and necessary to analyse and deepen the understanding about how WCOM does implementation in the initial stage in order to find the key activities and factors.

Therefore, the research approach of this master thesis is based on an empirical case study, and then establishes the literature framework by reviewing different articles with logical description. Then, comparison between the literature concepts with the empirical finding is done to identify successful factors of WCOM implementation in the initial stage. Furthermore, the overall view of WCOM is explored on how to implement it efficiently in the future.

1.2 Research question
The main question of this master thesis is to gain an understanding of how WCOM (World Class Operational Management) implementation can be successful in the initial stage, with reference to the case company BillerudKorsnäs. The main questions of the research are as follows:

- **Research question 1**: What did the case company do to implement WCOM in the initial stage?
- **Research question 2**: Which are the success factors for WCOM implementation in the initial stage?
- **Research question 3**: How to implement WCOM effectively and efficiently in the initial stage for the future?

1.3 Scope
Since most of the literature on World Class Operational Management is limited, some information exists on the concept behind it. Also, much information is available for the implementation of other concept (e.g. world class). But not a lot is mentioned about the implementation of WCOM. Therefore, this master thesis is to provide an overview of world class operational management, but also investigate and describe it
within the case company. Implementation of the WCOM project consists of five stages: initial stage, planning stage, executing stage, monitoring and controlling stage, and closing stage (Project Management Institute, 2013). In this master thesis, the researcher focuses on the initial stage of WCOM (The initial stage also refers as plan phases of Deming’s plan-do-check-act cycle) (Liker K. & Franz K., 2011). This is done as the case company is currently in the process of implementing WCOM. In the end, this master thesis provides suggestions for more effective implementation in the future within the case company. The thesis scope includes and excludes:

**Scope:**
- The framework of world class operation management
- The way of leading the change
- The important factors for WCOM implementation in the initial stage
- Empirical study with case company
- Provide suggestions for future WCOM implementation in the case company

**Out of scope:**
- Whole implementation phase, only focus in the initial stage
- Does not explore how WCOM affects the company operations.
- No comparison of WCOM implementation with other companies
2 Method

This chapter focuses on the research method chosen to collect the data for the master thesis. Further, the quality of the research is evaluated based on validity and reliability.

2.1 Case Study

Case study is an inquiry that focuses on describing, understanding and controlling the company. According to Yin (1994), a case study is an empirical research that investigates a contemporaneous fact within its real-life circumstance, particularly when the boundaries between phenomenon and circumstance are unclear (Yin, 1994). Also, the case study is an appropriate research strategy for many research objectives going beyond description and explanation. This master thesis not only intends to identify the success factors for WCOM implementation, but also investigates how to deal with obstacles when implementing WCOM. The purpose of such observation is to probe deeply and to analyse intensely the successful implementation of WCOM. This master thesis is an empirical inquiry that observes WCOM in the real-life context. Thus, it is a suitable choice for this master thesis to use a case study method to gain a deep interpretation and exploration for the case company.

Case study research is one of the usual methods with students. It can be built on a single case study or multiple case studies (i.e. more than one case) (Yin, 2008). This master thesis uses the single case design. As a result of this, the researcher is going to be able to concentrate on one target and study it in detail. Specifically, compared with multiple-case study, a single-case requires less time and less information.

According to Biggam (2011), a case study can be classified into three types: explanatory, descriptive and exploratory. Explanatory case studies attempt to explain why something happens. Descriptive case studies provide a detailed description of this project or an event. An exploratory case study requires a large-scale investigation. This master thesis is concerned with an in-depth study of WCOM in a modern context – an industry environment. First, due to the time constraint, this master thesis explains and describes the implementation process, obstacles and barriers. Second, ideas for future implementation are formed based on the findings (Biggam, 2011). The case study approach provides the focus and emphasizes the depth of study based on the assumption that reality can only understand through social interactions and constructions. As such, this proves that the case study method fits perfectly with this research objective: to implement an exploratory study of employee views on WCOM, and investigate the success factors and drivers efficiently of WCOM implementation.
Since deciding the case study strategy, the case study unit was then chosen. In this empirical study, the Swedish company, BillerudKorsnäs was chosen because: 1) BillerudKorsnäs started the WCOM project three years ago. When the project started, BillerudKorsnäs met multitudinous and complex obstacles. Until today, they are still faced with different challenges in the WCOM implementation. Like the old quote mentioned, ”the past is behind, learn from it. The future is ahead, prepare for it.” As a result, the data related to the research subjects are more abundant and structural collecting than other companies who do not implement WCOM. 2) The author had a study visit to the company before and was deeply impressed to conduct research. 3) Permission was received from BillerudKorsnäs to work with the master thesis on their World Class Operational Management project.

The case study method also has its limitations that must be addressed. First, failure can occur to obtain the necessary information for gaining the deep understanding of the company. In order to achieve a deep understanding of the case, different research methods across time-scale are used. To achieve the higher reliability level of the thesis, triangulation of the data is needed. Triangulation often includes: 1) direct observation by researcher 2) probing by asking case participants 3) analysis of past scientific articles and books (Denzin, 1978). Secondly, case study is criticized for lacking the cogency because the case study can include some suspicious evidence and views which can affect the findings (Biggam, 2011).

2.2 Data Collection

Once the case study approach was selected, a method of collecting the research data is needed. In this master thesis, qualitative information related to the research objectives is used.

2.2.1 Collecting qualitative data

2.2.1.1 Semi-structured Interviews

As Biggam said “A qualitative approach focused more the collection of information and analysis and concerned with depth of data rather than quantitative methods.” When applying the case study strategy, it is naturally taken as qualitative research. The typical method to obtain data of a case study is interview (Biggam, 2011, p. 130). Through the semi-structured interviews, the barriers of implementation cause of the issues and the relationship between WCOM and company’s management was explored.

The qualitative interviewing, using semi-structured questions, makes use of open-ended questions to receive meaningful answers (Patton, 1990). There are two tasks that should be completed by the interviewer before the interview starts. The first task is to persuade the interviewee’s agreement with this face-to-face interview. After several emails–contacts with the manager Örjan Bergström, within the field of
Operational Excellence was established. The researcher got permission from BillerudKorsnäs to have in-depth interviews with their employees. Based on Örjan Bergström recommendation, 17 interviewees from different departments and different management levels (Top manager, middle manager, and worker) were chosen. The researcher selected the interviewees from different departments (Top manager, middle manager, and employee) in three factories (Frövi, Rockhammar and Gävle). Three criteria were used for selecting the interviewees. First, the interviewees were involved in WCOM project from the start. Second, interviewing different employees will allow cross-comparisons of responses. Third, interviewees should provide diverse, objective perspectives of WCOM. A breakdown of the interviewees is presented in Appendix B.

Interviewing the different employee allowed for cross-comparisons of responses, encouraging different perspectives of issues to emerge, involvement and perceived obstacles. The interviews were recorded for two reasons: to ensure the analysis of data is based upon an accurate transcript and to allow the researcher to pay more attention to the interview.

Moreover, the second task of the researcher’s preparation is to obtain information about the WCOM or case company and prepare the questions list that related to the research problem in advance. As such, document analysis of BillerudKorsnäs’s annual report, WCOM reports and other information, an introduction of the Group, an overview of its WCOM work were reviewed and is referred to in the findings. This allowed the researcher to engross with the WCOM implementation by facilitating the comparison of employee’s perception at different levels within the company. Consequently, 10 interview questions (see Appendix C) which mainly focus on the implementation of WCOM were generated after going through the case (Biggam, 2011).

2.2.1.2 Secondary Data

The secondary data, coupled with the interview data will support this master thesis to provide a whole picture of WCOM implementation by facilitating the comparison of the academic theory against employee perceptions, at different levels within the company.

Secondary sources, in the form of KTH university library, university database and academic website, will be obtained in the study result/findings. Those data come from different source: KTH University DIVA, Academic staffs learning material, LIBRIS, Wiley online Library, and E-book Academic Collection. Then, search the keywords such as “Operational Management” “Change Management” “World Class Operational Development” “World Class Manufacturing” “Operational Excellence”. In addition,
the information from BillerudKorsnäs official website and internal website will be used also.

Bibliography borrowed from the University library such as a book: “Leading change” written by John.p Kotter; “Improving performance “by Geary A. Rummler etc. al. The literature review requires massive books reading and information collecting. In terms of this, validity or reliability is important factors in thesis work. Therefore, according to Biggman, the selection of literature and secondary sources should consider two criteria 1) the sources are authenticity (primary reference) 2) Credibility /trustworthy resource (Biggam, 2011).

2.3 Data handling / Framework for data analysis

To help focus the interviews in terms of reflecting on the research objectives, the analysis of qualitative data and the interviews were structured based on themes. The interview questions focused on the barriers and drivers for WCOM implementation. An important part of this research was to analyse the data, contrast different employee views and reflect on the case study result with respect to the findings in the literature review. Figure 2.1 illustrates the qualitative data analysis process for the case company (Biggam, 2011, p. 162).

FIGURE 2.1: Qualitative Data Analysis Process for Case Study (BIGGAM, 2011, P. 162)

2.4 Validity and Reliability

Valid research is about implementing the empirical work from the selection of an overall research strategy to the collection and analysis of the data in the right way by using the suited approach and techniques (Biggam, 2011). To achieve the target of higher validity and reliability, this master thesis is keen to implement an in-depth discussion with different employees from different working levels (top manager, middle manager, and worker) about how they were involved with the WCOM and collect they thought of WCOM. Moreover, all activities (selecting the single-case-study strategy, reviewing scientific literatures, having an interview approach to collect qualitative information and collecting data about the case company) are supported with unbiased explanations and reasonable motivations.
In addition to validity, reliable research involves using valid strategies and techniques appropriate to the objectives, having a detailed record of the research plan (e.g. interview transcript, interview question) and the plan to reduce the bias (Biggam, 2011; Yin, 1994). This master thesis starts with reviewing the scientific literature, taking the well-known researchers’ views as evidence, and expands the semi-structured interview for collecting different employee views to guarantee the reliability of the critical evaluation. The contribution of this research work to the WCOM knowledge pool will develop from a detailed case study analysis and the findings of the literature review.

In order to establish the validity and reliability of case study data, the researcher followed three principles: (1) Collecting multiple sources to establish data triangulation such as empirical interview, key performance indicator and official website report or peer-reviewed article. (2) Creating a case study database - the way of organizing and documenting the data directly collected from the official channel and empirical interview. (3) Maintaining a chain of evidence - the data/information can be traced from the source (Yin, 2008).
3 Literature review

Literature review is an essential part for examining the main topic around this empirical study, impediments to the successful implementation of WCOM, and how to solve those issues. The literature also presents strong evidence for the in-depth critical evaluation of the research topic (Biggam 2011). In this master thesis, the researcher is going to examine how WCOM impacts the company. Based on the research objectives (see section 1.2) four areas where of significant interest when reading the literature and they are summarised into four topics: (1) World class definition (2) The model of WCOM (3) The successful factors of WCOM implementation (4) How to leading the Change presented in this chapter.

3.1 Definition of “World-class”
World class is a different sect of concepts, principles, techniques for managing and operating a manufacturing company. It originated from the Japanese manufacturing resurgence following World War II, and combines many ideas to steering the competitive advantage. The term “world-class” was first pointed out by Hayes and Wheelwright to describe organizations which achieved the competitive advantage through use of their capabilities as a strategic weapon (Flynn.B.B, 1998; Hayes & Wheelwright, 1984). Before Hayes and Wheelwright, Peters and Waterman identified the basic foundation of the traits of world-class companies with their eight attributes of excellence (Lu, et al., 2011). Schonberger (1986) developed these concepts and provided a number of examples of world-class manufacturers. He focused on continuous improvement, product design, adding the development of supplier relationships and just in time to the practices. According to Schonberger’s view, the term “World class” is an essential part for fundamental changes taking place in the industrial firm. It implies that companies must critically examine the competitiveness of their manufacturing strategies to achieve the world-class manufacturer (Haleem, et al., 2012; Schonberger, 1986). Gunn provides a strong emphasis on the role of technology in world-class manufacturing (Gunn, 1987). In contrast, Hall states that world-class manufacturing is a different way of operating an organization, instead of a set of techniques (Hall, 1987). Seven years later, Gifiti et al. (1990) defined it as the quality and the customer’s needs firstly focus of world-class manufacturing, supported by a combination of manufacturing strategy and capabilities, management methods, human resource, technology, organizational factors, and performance measurement.

3.2 World class operational management (WCOM)
World class operational management is an integrated system, which is designed to improve operational performance (T.Murino, et al., 2012). Different views from Liker K. and Franz K., defined WCOM as a process-driven approach which involve the many techniques, for instance: make-to-order; streamlined flow, total quality
management, just in time, total preventive maintenance; 5 whys; six sigma and total productive maintenance (Liker K. & Franz K., 2011). These techniques have been proven and most of them can be applied in a different process and department in both the factory and office. According to Liker K. & Franz K., World class operational management is a way to continuous improvement to achieve superior performance (ibid). Moreover, several studies have shown that a successful WCOM implementation is a complex process characterized by: (Dogan, 2013; Liker K. & Franz K., 2011; Solving Efeso, 2014)

- An evolution of the organizational culture in place and transformation of the working methods and procedures.
- The implementation of distinct administrative procedure
- All the activities involved in WCOM implementation necessitate well-structured planning and project management offers the tools to control the performance.

Likewise, Schonberger (1986) summarized that WCOM changes the company’s working environmental by integrating individual activities into more complex tasks to operators. The company working based should be based on teamwork rather than on individuals (Dogan, 2013; Schonberger, 1986). The management style is also influenced by the WCOM implementation where the manager plays the role as coordinator and provides some advice instead of instructions. Since more and more employees take more responsibility for their works (Lind, 2001).

### 3.2.1 Pillars of WCOM

WCOM consists of 10 technical pillars and 10 managerial pillars, as illustrated below in Figure 3.1. The upper column (red column) represents the technical pillars and the below horizontal (green column) represents the managerial pillars. (K.Pałucha., 2012). To achieve operational excellence, improve those pillars at same time is necessary. Each pillar is responsible for continuous improvement within their particular area. First, the pillars should find their operational gap or issues, then working as a team to investigate the solution of those gaps. A team building approach is based on the development techniques and oriented to eliminate the losses, supporting the production to be achieved based on the team targets (Felice, et al., 2013; Lu, et al., 2011).
Each pillar's implementation ensures a structured approach for continuous improvement in all branches of industry as quality control, maintenance, planning, employee development and safety (K.Pałucha., 2012). These pillars aim to create and maintain the operations with zero defects, no delays, zero breakdowns, zero losses, and zero accidents (Felice, et al., 2013).

3.2.2 Implementation steps of WCOM
The whole of the WCOM implementation is developed in seven steps for all pillars and the steps are identified in three stages: reactive, preventive and proactive. The correlation between steps and phases is illustrated in Figure 3.2. In fact, each pillar has a different relation and different effects to these phases. The approach of WCOM always starts from a “model area” and then extends to the entire company. The model area is pilots for the implementation of the methods. If the chosen technique is not suitable for this pillar, it is returned to the previous stages (Felice, et al., 2013).
Implementing WCOM is categorized into 3 phases on the initial stage (also called the reactive stage in the WCOM implementation steps) (Felice et al., 2013):

- **Phase 1**: Structural changes in preparation for WCOM deployment. The preliminary assessment of organizational changes and adjustment focused on the WCOM and configuration the appropriate size of the initial change. Selection of the pilot team (Liker K. & Franz K., 2011).

- **Phase 2**: Establishing the initial awareness and setting the vision of the WCOM implementation. To educate the pilot team or middle management team about the concepts of WCOM through training, define the meaning of WCOM, explain the reason of WCOM implementation, show the route map and describe how to achieve it, week seminar, daily group meeting and workshop (Liker K. & Franz K., 2011).

- **Phases 3**: Initial implementation with pilots’ team. Selecting the pilot team to develop a more in depth understanding of the WCOM and provide the fundamental model for implementing WCOM. Then summarise the lessons learned during the initial stage and review the current state to provide a suggestion for the next stage (Liker K. & Franz K., 2011).
3.3 The success factors for implementing WCOM in the initial stage

Based on the literature reviewed, various success factors are attributed to an efficient implementation of the WCOM in the initial stage. The counting process is further detailed with a number of citations/references of success factors specified in Appendix A. Then, describe each major successful factor as below.

3.3.1 Top management commitment:

The most important factor is top management commitment. The WCOM implementation starts from the top (Njie, et al., 2008). According to Bill Rarnsey, the former vice president of six sigma and operations, leadership has to believe in the importance of the WCOM implementation to drive value for the customer (Spencer Stuart, 2007). If the top manager is not working it, operating it, then none of the employees will pay attention to WCOM seriously (Spencer Stuart, 2007). Apart from that, “Monthly WCOM steering committee meeting” is futile. The top manager should be involved and drive the activity daily. The top management should recognise the need to change the competitive and customer pressure by promoting the company to push the excellence practices in the whole company (Liker K. & Franz K., 2011). Moreover, top management support also can foster the speed of WCOM implementation and decision making (Slack, et al., 2006).

3.3.2 Clear strategy and short-term target:

Once Top management commitment and support is gained, steps should be taken to create a visible and clear strategy (Spencer Stuart, 2007). Strategy is essentially about how the organization strives to survive and prosper within its environment through the long-term period (Njie, et al., 2008). Strategy can be considered into three levels in the company. Initially, the corporate level strategy is the highest level of strategy which decide the long-term direction and scope of the whole organization. Secondly, the business strategy is primarily concerned with how a business unit should compete within its market (Kotter, 2012; Liker K. & Franz K., 2011). It requires setting the mission and objective of business, for instance the growth target, profitability targets (Kotter, 2012). The last is the operational strategy, which is the pattern of decisions and actions that shape the long-term decision, objectives, and capabilities of the operation that contribute to the overall strategy (Foss, 1997; Njie, et al., 2008).

Slack states that “the operational strategy plays an essential role to lead the operational management improvement” (Slack, et al., 2006). The World Class Operational Management strategy should enunciate a “vision” for the operations function’s contribution to the whole strategy of company (ibid.). Moreover, to sustain
the continuous improvement of WCOM, the key leverage point for the transformation effort is the Deming’s PDCA thinking (Liker K. & Franz K., 2011). Different from the strategy, the short-term target is a stepping-stone on the way to achieve the goals. After the short-term objectives are achieved, it will guide and encourage employee motivation. Also, the short term target will inform the manager with evidence that the implementation project is on track (Kotter, 2012).

3.3.3 Prepared plan (Project Charter)
Good planning is the capability to deal with the problem/potential issues for WCOM implementation and engage all talent employees (Liker K. & Franz K., 2011). The project charter is a thorough description of a project, and it authorizes the project to proceed. Apart from that, the project charter can be as formal as a memo that has been approved by the top manager with the authority to approve the project and commit organizational resources to it (Cobb, 2012). The project charter lays out what will be needed for the project by first tying the project mission to the objectives and deliverables. It also contains the time-line, budget and cost estimates, human and other resources needed (Project Management Institute, 2013).

3.3.4 Leadership:
As President and CEO of Momentive Performance Materials, Wayne, Hewett mentioned this about leadership: “It was critical that we convince people that this was not just the program of the day and then relate it to the bottom line” (Spencer Stuart, 2007). In the initial stage of WCOM implementation, the journey needs the leadership. First, the implementation should start from the middle manager acting as a coach seeking to extend the team and knowledge base. However, in the beginning the implementation suffers from the lack of middle management engagement and accountability, and fall into the trap of the “WCOM team doing it for them” (Liker K. & Franz K., 2011). Therefore, ways for changing the dilemma are highlighted in the points below:
• The site consultation visit with the management team was shifted from the executive meeting and to the workshop, and followed up by confirmation the next steps (K.Palucha., 2012).
• The meeting previously was managed with the consultant and the pilot team members. Now changed to the middle managers (safety, production, maintenance.) to facilitate the review (Liker K. & Franz K., 2011).
• The middle manager would show the areas of focus. Such as, the production team members from these areas would communicate directly with plant leadership on what they are doing and how they feel with the WCOM implementation (ibid.)
• The middle manager became a full-time member of the pilot team (ibid.)
• Explicit the homework assignment between visits and follow up activities (ibid.)
• Summarized and recorded the foregoing work per month/day (Spencer Stuart, 2007).

The role of team leader mainly aims to lead continuous improvement with WCOM way and achieve the operational excellence, which includes: 1) Identifying, selecting and prioritizing projects 2) Constantly focusing on problems/ gaps/ losses 3) Understanding the WCOM and leadership 4) Ensuring an open, fair and equal discussion.5) Communicating with and coaching, developing, and encouraging team members 6) Dealing with issues and leading the team to achieve team target 7) Tracking the projects 8) Be patient and persistent to guide the team working. (Briner, et al., 1995; Liker K. & Franz K., 2011)

3.3.5 Team working
Following the high standard to team member; creating cross-functional team; original pilot team is expected to take a leading role to facilitate and to work with team member (Liker K. & Franz K., 2011). Today companies need people to work together in development teams, sharing knowledge, experience and ideas and hence providing the capability of working on production and support from an early phase (Dogan, 2013).

3.3.6 Training:
Training ensures that the team members have the appropriate fundamental skills. To educate the employee on what is the WCOM, why they need this, and how to implement it (Mey, 2011). To build awareness of the WCOM within team members, it is better to keep asking the team questions to ensure understanding rather than a simple presentation and seminar (Liker K. & Franz K., 2011). There are two purposes of training in the WCOM. The first is to provide the necessary skills that will help the employee to solve the problems in the implementation phases. The second purpose is to present an understanding of the interpersonal, group and organizational skills to facilitate the implementation speed (Slack, et al., 2006).

3.3.7 Big picture of WCOM implementation
Every project must prepare a big picture from which every employee can see what the project is and why it is important on the initial stage (Briner, et al., 1995). If the employee does not understand the purpose behind this project, they would be less involved with the project (ibid.). The big picture should be clear; simply expressed in words that everyone can understand. The big picture depicts the way of WCOM implementation and describes the input and output of WCOM implementation (Liker K. & Franz K., 2011).
3.3.8 Communication:
To fulfil the successful WCOM and lead the change of the operations should work well on the communication channel (Liker K. & Franz K., 2011). More importantly, the WCOM coordinator and auditor play a critical role in promoting the effective communication (Spencer Stuart, 2007).

3.3.9 Empowered Culture:
Based on the organization commitment to transform the present working into the WCOM, the focus should be on continuous improvement, systematic every day work and engaging the entire workforce (Liker K. & Franz K., 2011). Brymer defines empowerment as a process of decentralizing decision making in a company, whereby manager gives more discretion and right for decision making to the employees (Brymer, 1991). Later, Bowen and Lawler gave a more operational level definition of empowerment. They refer to empowerment as sharing and communicating with front-line employees’ information about an organization’s performance and enable employees to participate and be involved in the company (Bowen & Lawler, 1992). Under the empowered culture, the employee feelings of self-efficacy will increase and strengthening the effort to exceed performance (Ugboro & Obeng, 2000). Employees should be empowered through the WCOM implementation. However, increased empowerment is inseparably and connected with frequent control and the managerial selection of each team member (Lind, 2001).

3.3.10 Feedback meeting:
To ensure that selected methods/tools meet the operational requirements, companies should simultaneously explore and communicate with the operator and employees (Chuang, et al., 2009).

3.3.11 External help:
During the pilot stage, the method “learning by doing” requires the team member to take different experiments and learn from the experience or mistakes by themselves. This means the consultant or specialist should provide the appropriate direction, but also the team needs to learn how to explore this direction by themselves (Solving Efeso, 2014). The consultant company provides the solution, from the identification of potential issues, right through to performance implementation to ensure benefits are achieved (Liker K. & Franz K., 2011).

3.3.12 Pilot Working:
Pilot teams should learn and find the gaps/issues of current state and capacity to support the change of WCOM. While experience has shown, the WCOM approach
creates the value for company’s development. If not, change the method or try another technique or methods to implement it and create their own way. It is also obvious that each pilot team should learn at its own pace, and allow the team to make its own implementation mistakes in the initial stage (Liker K. & Franz K., 2011).

3.3.13 Human resource development
Human Resource Development (HRD) is a function in organizations designed to maximize employee performance (Rummler & Brache, 1995). Human Resource Development covers function related primarily to training, career development, organizational development and development in HR functions (McGuire & Jørgensen, 2011). Besides, HRD tries to integrate learning culture into the overall strategy and steer the organizational efforts to fulfil high performance (Slotte, et al., 2004).

3.3.14 Motivation of operation /awareness
Motivation is defined as the characteristic of an individual willingness to expand the effort towards a particular set of objectives (Benson, 2008). The awareness of WCOM can be established through sequence activities by identifying their driving force, training course, manual and weekly seminar by repeating the company’s goal or vision (Liker K. & Franz K., 2011).

3.3.15 Top down/ Bottom up implementation
To lead the changes aggressively from the top down, people should also be engaged from the bottom up. Employees are voluntary and willing to join the WCOM team instead if the manager pushes them to do this (Slack, et al., 2006). The top-down perspective often reflects the top-down corporate or whole business objectives. In contrast, the bottom-up implementation will reflect the experience and operational reality from basic level employees (Liker K. & Franz K., 2011).

3.3.16 WCOM coordinator/auditor
An effective auditor and a full time WCOM coordinator should be checking the process by hours, days and months, thinking deeply about how to improve and engaging more team members, and adjusting the process (Liker K. & Franz K., 2011).

3.4 Leading change
WCOM also represents the structural changes such as teams working to solve problems, changing attitudes for the group focused on customer needs, new techniques using new working routine and changing the strategy for continuous improvement. (Solving Efeso, 2014). However, adopting the implementation of world
class operational management does not make a company world class. But to compete effectively, the company has to be heading in that way (Norri & Radford, 1993). There will be an inherent amount of internal resistance, when the company drives new change in WCOM (Benson, 2008; Blokdijk, 2008). Therefore, another key activity of WCOM implementation is how to lead the change and convince people join the WCOM programme (Spencer Stuart, 2007).

Due to the globalization and enhanced competition the business environment is changing rapidly, which means that companies will face more and more hazards (fierce competition, increase speed) and also excellent opportunities (huge market, potential benefits). Companies should become stronger and greater to avoid hazards and capture this opportunity (Blokdijk, 2008). Change management is a management approach to change individuals, teams, organizations from the present setting to a desired set-up in the future. The change management may involve a change in a new process/product/technology. The aim of change management is to provide a framework on how to manage people. The implemented change management should introduce throughout the company, regularly monitored and audited to ensure the effective and successful implementation (Blokdijk, 2008).

John Kotter's eight steps demonstrate change is a critical way for a company to develop and provides an eight-step model logical framework for creating change (Benson, 2008). According to Kotter, the key factors for successful change management are: “sense of urgency, teamwork at the top, support from top management and got their commitment, share one vision and to ensure everyone understands it, have a good communication, reduce the barriers and concerns, create the short-term wins and continuous improvement” (Kotter, 2012, p. 23). Those factors are closely connecting and affecting each other. The more detailed description is shown in Figure 3.3.
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Establish a sense of urgency</td>
<td>Identify potential threat and develop scenarios in future, and examine opportunities</td>
</tr>
<tr>
<td>2. Form a powerful guiding coalition</td>
<td>Convince people that change is necessary, identify the leaders and work on team building</td>
</tr>
<tr>
<td>3. Create a vision</td>
<td>Determine the values that are central to change, create a strategy for the vision, clear vision and easy understand</td>
</tr>
<tr>
<td>4. Communicate a vision</td>
<td>Talk about the change vision, address the employee's concerns, walk the talk</td>
</tr>
<tr>
<td>5. Empower others to act on a vision</td>
<td>Identify the change leader, checking the organizational structure are line with the vision, reduce the barriers</td>
</tr>
<tr>
<td>6. Plan and create short-term wins</td>
<td>Set the reasonable short-term target, analyze the pros and cons of your target, reward if they achieve the target</td>
</tr>
<tr>
<td>7. Consolidating gains and producing more change</td>
<td>After quick wins analyze what we need for future improvement, continuous improvement</td>
</tr>
<tr>
<td>8. Anchoring new approaches in the culture</td>
<td>Make continuous effort on cultural changes, usually it comes last, not first.</td>
</tr>
</tbody>
</table>

**FIGURE 3.3** THE 8 STEPS OF KOTTER’S CHANGE MANAGEMENT (KOTTER, 2012).
4 Case study

This chapter discusses the findings of this research. The findings will include the views of managers, employees, and others in the field as well as those involved in the WCOM implementation from the start. Also, this chapter reveals the results of the case study described in Section 2 methods.

The case study is structured as follows. First of all, a brief introduction of a case company and the introduction of BillerudKorsnäs operational management (BKOM) are described. After that, a description of staff results is provided. According to the collected qualitative data, the study focuses on investigating the activities of BKOM implementation in the initial stage. In this process, the top management commitment, communication, team working, leadership and change management are regarded as the main activities on the BKOM implementation in the preparation stage. The findings of qualitative data present how to implement the BKOM in an effective way from the beginning. The qualitative information collected was from the face to face interviews with the interviewees from three factories (Frövi, Rockhammar and Gävle). Appendix C includes the collection of structured questions used. Appendix D contains the transcript of the different interviewees.

4.1 Case company introduction

BillerudKorsnäs is one of the world’s leading suppliers of high-quality packaging materials based on the primary fibre. The total turnover is SEK 20 billion, with 4,400 employees in 13 countries. The company has a broad product portfolio and enjoys close collaborations with packaging manufacturers and partners all over the world. Global market drives the customer demand. Presently, there is a desire to expand their market into Asia and America. According to the 2013 global report, the overall objective of BillerudKorsnäs is generating sustainable and profitable growth by achieving 15-20% sales increasing on 2018 (BillerudKorsnäs AB, 2014).

BillerudKorsnäs works on two ways for achieving the strategic objectives. One is focused on customer development, through providing a smart solution to become more attractive and making more cost-effective packaging which strengthens the relationship with the customer. The other way is World-class operational management, through systematic and qualitative improvements of process and cost-efficiency at each level. On short term, World-class process efficiency emphasizes on the growth target, on the other hand, it will influence the culture of the whole production and strengthen the competitive advantage of BillerudKorsnäs (BillerudKorsnäs AB, 2014).
4.2 BillerudKorsnäs Operational Management – A way of BillerudKorsnäs world class operational management

BillerudKorsnäs Operational Management (BKOM) is a program of BillerudKorsnäs working on continuous improvement. Started three years ago, BKOM was an approach that involves staffs to work systematically to find, eliminate loss and take action for prevention. Consequently, it will influence the working environment and contributes to BillerudKorsnäs’s performance and enhance the employee’s skills. (BillerudKorsnäs AB, 2014). BillerudKorsnäs operational management involves three techniques which are total productivity maintenance (TPM), lean and six sigma.

BKOM is their structured way to work together with continuous improvements. Initially, based on the strategy and overall key performance indicator, losses are identified. Then, the losses are addressed by a cross-function team that uses different methods and tools. In other words, BKOM is a systematic way of detecting and eliminating losses in production and making changes that remain permanent. The last step is operational management, which ensures and maintains the best practice result from the team performance. BKOM involve staffs who get the opportunity to influence their work environment, contribute to the site objectives and their own competence development. To facilitate the effective implementation of BKOM, operational management conducts a short meeting to receive the feedback daily/weekly/monthly. Apart from that, each team’s master plan, gap analysis, working route, key performance data, and the performance of the team working are posted or published on a whiteboard (BillerudKorsnas AB, 2013). The operational model of BKOM is shown in Figure 4.1.

FIGURE 4.1 : THE OPERATIONAL MODEL OF BKOM (BILLERUDKORSNÄS AB, 2014)
4.3 How does BillerudKorsnäs implement BKOM in the initial stage

BillerudKorsnäs is one of the world’s leading suppliers of high-quality packaging materials based on the primary fibre. However, the idea of the BKOM came to BillerudKorsnäs about three years ago and one top manager stated: “The concept of BKOM is the culture change and the important programme of continuous development for company” (Håkan Krantz). In terms of the reason BillerudKorsnäs focus on BKOM, The annual report point out: “through systematic and qualitative improvements to process and cost-efficiency at each level” (BillerudKorsnäs AB, 2013). A few interviewees commented: The initial motivation for the company working with BKOM is the customer demands. Working with BKOM is the way of continuous improvement with business” Standing from the business perspective, the purpose of BKOM implementation is delighting and satisfying the customer requirement and be competitive. Working with BKOM assures that BillerudKorsnäs is a continued developing and sustainable company from economic views. Then, one of manager added: “Indeed, the BKOM has impacts on the firms’ productivity, efficient and effectiveness.” (Stefan Eriksson)

According to the BKOM introduction, implementation of BKOM is divided into four stages: Preparation stages a loss Analysis/ potential saving/ Project Plan. One interview commented on this: “During the preparation stage, the training of leadership, FIRO model, Feedback and Kotter’s change management were started at the same time from the first month to sixth month” (Örjan Bergström). Secondly, Pilot phase requires a pilot team to remove the losses. Third, expansion Pillar within 12-18 months to build the system and introduce each pillar under the stabilization workshop; the final stage is stabilization. Those stages move towards BKOM. See Figure 4.2.

![Figure 4.2: The Implementation Stage of BKOM (BillerudKorsnäs AB, 2013)](image-url)
4.4 The qualitative data of BKOM –interview

The interviews revealed a variety of factors that influence the success of the BKOM implementation. The research was able to triangulate perspectives and to develop a robust assessment of each factor by comparing different perspectives across different level of management team. At the employee level, it was found that BKOM met those obstacles during the initial stage: 1) top management commitment 2) information system 3) lack of awareness of change 4) double working load. On the middle management level, managers faced those difficulties on the initial stage: 1) lack of training 2) lack of skills for leadership 3) the issues is to increase the involvement of BKOM. For the top managers, they expend too much time in the beginning to select the appropriate method to use. One top manager said: “It is not that easy to make people find the improvement area with appropriate methods” (Håkan Krantz).

According to the expectations and needs from BillerudKorsnäs’ stakeholders, the interviewees defines important BKOM initiatives or obstacle they meet on the preparation stage. There are several obstacles of BKOM implementation in the initial stage: top management commitment, short term target, leadership, team working, training, communication or information, change management, workshop, Consultant Company, motivation/awareness of BKOM and BKOM coordinator. The details of each activity see below.

- **Top management commitment**
  After the discussion with the top manager, a decision was made to implement BKOM. It is necessary to get the top management support and commitment to implement BKOM. When talking about the top management support and commitment, some of interviewees responded “they receive the enough support from top management support.” On the contrary, the previous coordinator also mentioned that one year ago; she didn’t think the top management/middle management believe that BKOM is good and working on the right directions. In addition, one interviewee commented: “In the beginning, we didn’t have the awareness enough, and we didn’t see the necessity why are we doing this. So the management were not committed enough, the local management group either”.

- **Short term target and strategy**
  BKOM is the way of structured work on continuous improvement. Based on the BKOM strategy, the management team aligns the goals to set a small target monthly, weekly and daily. The breakdown of the overall key performance indicators of production made. The team leader measures the key performance indicator to track the operational performance. One interviewee commented: For each pillar, the BKOM team sets a lot of small targets like the availability, down time of machine and so on, that is very important for operator to follow. If set the result-oriented, so
employees are more efficient to achieve the short-term target on their way (Peter Junitti)

- **Leadership**
  Leadership is significantly part for leading a team working. Leading the change on the BKOM way, requires the professional skills to deal with issues and contribute to company performance. Some of interviewees mentioned: “it is difficult to find a skilful team leader. Most team leaders could not handle the team individually. They are lacking team leader who have the ability of leadership skills”.

- **Team working**
  The team should be cross-functional, composed of 3-6 participants with different skills in order to solve the gaps. The team work is made visible with a team picture and should specify the tasks, research gaps, and master plan. Their work is followed up by the BKOM auditor (BillerudKorsnas AB, 2013). The top manager is also engaged in BKOM team on the preparation stage. A few interviewees mentioned: There also had some top managers been part of the team, to learn and understand. I was a team member of pilot team in the beginning, but that is kind of isolated on the beginning. Most of interviews claim that team working is the best practice for BKOM implementation, brainstorming with the cross-functional team members provides the different views to rethink the gaps. Working as a team and learning from the practical experience. Employees gain more understanding with BKOM concept through the brainstorming discussion. Interviewee commented “Team working is a good approach to deal with problem through team discussion” (Jani Rissanen). During the first team meeting, the BKOM teams expanded a 4 hour seminar to have a brief introduction with BKOM, for example, what is BKOM, what is the team member’s responsibility, what are the benefits to working as team and how to standardize the team work. Also few interviewees suggested with the role of coach and team leader “The coach team and team leader should not be the same person, because they play different roles on the team.”

- **Training**
  In terms of communicating the BKOM concept, BillerudKorsnäs has general training program, e.g. workshop training, team training etc., for both managers and employees. However, during the interview, the top manager said “That the point of training programme is not about learning; but also focusing on the exercising the skills which means the employee should do it and learn it by themselves at same time”. Likewise, some interviewee said the basic training just focuses on team leader and coaches. After that, during the team meeting the coaches helps other team members to understand the new concept.
One of the coordinator mentioned “On the beginning, the training programmes consisted of change management and leadership course. The middle manager initially is involved in the training course for one year and be serious with the training course.” Most of interviewees think the change management training is a beneficial education. Like one of manager said “It is very ambitious program that trainee all the managers with change management. And we also inform the staffs how to leading the change and why we need the change.”

- **Communication/information**

Communication and information exchange always takes precedence over other factors, because the bad communication has several adverse effects, which can lead to misunderstanding, and implementation failure. Thus, the company endeavours to put effort on the effective communication. Like top manager said “They will get the information from the team; higher level manager will send out the information, the other will suspicious about those information. We have different information about BKOM, but the things are about how to practice those things into real work, mainly focus on the thinking- learning by doing.” Employee meeting per week, shift discussion, workshop and quarter meeting are providing a good channel to communicate the present performance with BKOM. In those meeting, they are trying to talks about the benefits of BKOM and find the solution together with the gaps.

According to some manager they said “They have a communication plan to share information. The communication plan specifies the time, who, how, why and what to talk.” Few coordinator and manager said “they have a bad communication with co-workers. The employee usually report it to the manager instead of discusses the issues and tries to find a solution by them.” Simultaneously, all of the coordinators said “That is too hard to introduce the BKOM to everyone even though the middle manager in the beginning.”

- **Change management**

The training of change management basically concentrates on the John Kotter’s eight steps. BillerudKorsnäs follows the Kotter’s eight steps for changing culture. According to Peter Juntti, some people are delight to engage in the BKOM. But still have many people asked why they should take this, and few people do not want to join the BKOM change their older working way. Moreover, some managers are suspicious about the implemented way of BKOM. So they are working in two ways, which is a problem that can lead to chaos. One insists on their old ways, the other would take the adventure on the new way.

- **Workshop (Pilot meeting)**

BillerudKorsnäs continual working as a team has the different workshop, daily meeting and seminar to solve the task. The frequent tools used are 5 why-
repeating “Why” questions; fishbone Diagram- the cause and effect diagram; 4M- considering human resource, material, method and machine factors to find the root cause. Through the daily meeting feedback of the present performance is collected. Learning from the feedback provides better solution and further improvement. For instance, as the one of manager said “the goals we have followed up every month; through the daily meeting to track the sub-goals are following the master plan every month”.

• External help (Consultant company)

The top manager also mentioned: in the beginning, they received more help from Consultant Company. That is one of important factors for all pillars works in the right way. The consult company provides the framework of BKOM implementation and the steps for how to implement it. It is important to have a knowledgeable consultant depending on their education. But several interviewees complaint with the steps; few of them think “that is too hard to understand the instructions” “some of methods they already used it before, now it is overlap steps to repeat it again” “hardly see the whole picture” “the instruction are complex to implement it”.

• Motivation/awareness of BKOM

When the BKOM started, most of the employees had no idea about BKOM. Some of them were afraid of the new changes. Some of them were not interested with this project. Some of them were interested with BKOM, but they did not know how to start, what is BKOM, what kind of benefits it will bring. As some manager said “the employee does not have the awareness enough and doesn’t see the necessity why are we doing this, so the management is not committed enough, the local management group either.” One of top manager also emphasizes that “One thing brother us on the initial stage, will be the employee lack awareness for the BKOM, maybe they do not see the benefits, because it is a volunteer work to join the BKOM”. Lack of awareness of BKOM was a big challenge for BillerudKorsnäs when starting the initial phase.

This approach originated from the customer demand, since the customers already successful operates the BKOM programme for a while. Most of the managers saw the customer have done it successful. Therefore, BillerudKorsnäs was willing to engage the BKOM.

• BKOM coordinator

BKOM coordinators directly provided the instruction on how the team should work and what they should do. Each coordinator placed their efforts on communication. Through a good introductory communication, BKOM is a great way to moving forwards. As a coordinator, they try to describe the benefits of BKOM. Besides, the management team should be overwhelmed. Otherwise the middle manager level is
also difficult to deliver. Some of coordinator said “The challenges for the coordinators are to change employees’ mind-set and steer them into BKOM.”

Apart from that, from different interviewees’ transcript, found most of the interviewees said “top management commitment, leadership, communication and motivation and awareness” are main obstacles they met in the initial stage of the BKOM implementation. Nevertheless, how to deal with those obstacles for future implementation? Then, these questions will be discussed in the next chapter.
5 Analysis/Discussion

This section compares the successful factors from the literature review with case study findings and establishes a new process for WCOM implementation in the initial stage. After that, suggestions for future implementation are presented.

5.1 Comparison empirical data with literature reviewing

Based on the ideas from various literature (see Appendix A), the researcher established a comparison model to investigate the success factors for WCOM implementation in the initial stage, see Table 5.1. These successful factors play different roles for WCOM implementation. Not a single one of these factors can be omitted.

<table>
<thead>
<tr>
<th>Successful factors</th>
<th>Literature mentioned</th>
<th>Case study mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top management commitment</td>
<td>✓</td>
<td>✓ ▼</td>
</tr>
<tr>
<td>Clear strategy, short-term target</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Prepared plan</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td>✓ ▼</td>
<td></td>
</tr>
<tr>
<td>Team working</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Training</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Big pictures of WCOM implementation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Communication/ information</td>
<td>✓ ▼</td>
<td></td>
</tr>
<tr>
<td>Empowered culture management</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Feedback meeting</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Pilot meeting</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Human resource development</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>External help</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Motivation / awareness</td>
<td>✓ ▼</td>
<td></td>
</tr>
<tr>
<td>Change management</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Top –down / Bottom up implemented</td>
<td>✓ ▼</td>
<td></td>
</tr>
<tr>
<td>WCOM coordinator and auditor</td>
<td>✓ ▼</td>
<td></td>
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</tbody>
</table>
From Table 5.1, it is shown that change management factors were not mentioned in the literature, however, the findings reveal that there is an important relationship exists with WCOM which has not been considered by the researchers. That just says; WCOM is not designed to improve the operational performance. This further reveals that WCOM is completely connected with change management. Like Schonberger (1986) and Dogan (2013) summarized that WCOM changes the company’s working environment by integrating individual activities into more complex tasks. And the company working based on team work rather than individual working (Dogan, 2013; Schonberger, 1986). This is reflected in that fact that WCOM seeks to change the culture by proposing teamwork instead of the individual work and a more structural and systematic working environment, to change the strategy for continuous development. There will be an inherent amount of fear of the unknown, when a company starts up a new programme such as WCOM. According to Blokdijk (2008), the aim of change management is to provide a framework on how to manage people. Also the implemented change management should introduce throughout the company, regular monitored and audited to ensure the effective implementation (Blokdijk, 2008). As a result, through the change management course, employee would start to understand why they need to implement the WCOM and how it leads to making their job easier. Therefore, it would be inappropriate to skip the change management of WCOM implementation in the initial stage.

However, in the empirical case study, four factors (prepared plan, big pictures of WCOM implementation, empowered culture management and human resource development) are easily neglected. First of all, the prepared plan is capable to estimate/forecast the potential issues for WCOM implementation from the beginning. As, Cobb (2012) said good planning is the capability to deal with potential issues which should be specified the objectives, resources, times, cost and deliverables of the programmes (Cobb, 2012). Hence, the prepared plan specifies the objectives and deliverables of initial implementation and contains the timeline, budget, cost estimates and human resources. Secondly, big pictures of WCOM implementation, most interviewees complained that the whole picture of WCOM was not clear. According to Briner, et al. (1995) the big picture from which every employee can see what the programme is and why it is important for the company (Briner, et al., 1995). Though, the big picture of WCOM implementation should be clearly and simply expressed. The most important is to describe the input/output of WCOM implementation and the implementation steps for whole pictures. Third, according to Lind (2001), the empowered culture will increase the employee feelings of

- The successful factors mentioned
- The factors mentioned in the case study findings, but the interviewees identify those factors as main obstacles they met on the initial stage of WCOM
self-efficacy and strengthening the effort to implement WCOM (Lind, 2001). To encourage the employees’ motivation with WCOM implementation, the operators should be empowered; team members should have the rights to communicate and share information with middle managers. The last factor which has been omitted from the empirical case study is human resource development. According to Rummler and Brache (1995) mentioned the human resource development design is to drive the higher employee performance. It can discover training needs in two ways: firstly in response to requests for training. Secondly, as results to achieve the WCOM programme needs through training (Rummler & Brache, 1995). Consequently, the company should not omit the human resource development for next WCOM implementation.

5.2 Further suggestions for Case Company with next implementation of WCOM on the initial stage

Through the semi-structured interviews, the interviewees mentioned different obstacles they met during the WCOM implementation on the initial stage. In order to achieve more effective WCOM for the next implementation in the future, the researcher hereby analyses the obstacles and provides some useful suggestions. According to the figure 5.1, the black diamond represents the main obstacles of BKOM implementation in the initial stage. There are four obstacles which are mentioned many times by different interviewees are: lack of top management commitment, lack of skills in leadership, lack of efficient communication and lack of awareness and motivation is involved with BKOM.

1) Top management commitment

There exists a huge gap between top managers and the employees of BKOM. Based on the finding of the interviews, some of them said “The manager just tells us what we should do, but they didn’t work on that also. That is a real gap between us, the management team and employee should have the same movement for the BKOM implementation.” According to Nejie, et al. (2008) the top management team should be really committed. If not, the company’s success in implementing BKOM would be futile resulting in a culture trap affecting performance and behaviour (Njie, et al., 2008). Therefore, if the top manager is not walking with BKOM, then none of the employee will focus on the BKOM seriously. Apart from that, in the beginning, employees lack of chances to take relevant training and education course due to the less support/ commitment from the top manager. The basic training program should not only be available for the middle manager, but should be given to all the employees.

Suggested solutions:
a) Full support from top management (Njie, et al., 2008), for instance the investment from the boards for updating the machinery to foster the speed of BKOM implementation.

b) The top management should be involved in the pilot team and drive the activity daily (Liker K. & Franz K., 2011).

c) Ensure that middle managers and BKOM team have sufficient power to lead the changes.

d) It is a culture question. The top management team should be really committed and ensure that lower level employees have more standardized way of working through training and education programs (Spencer Stuart, 2007).

2) Leadership

In the initial stage of BKOM implementation, the middle manager is first trained who then acts as a coach to introduce it to the team and employees. The involvement of BKOM is following the Top-down approach, layer by layer (Top management-middle management –team leaders- employees). Therefore, leadership skills are necessary for managers and team leaders to lead this change. Some of manager said, “It is hardly to pick up the team leader in the beginning; most of the employees are lacking skills of leadership.”

Suggested solutions:

a) Set short-term wins and repeat the messages to sink deeply into team members’ consciousness (Kotter, 2012)

b) More practical training course for the team leader and manager in leadership (Liker K. & Franz K., 2011)

c) Leaders should be communicating with and coaching, developing and encouraging team members (Briner, et al., 1995).

d) Leaders should be skilful and persistence to lead the team working (Liker K. & Franz K., 2011)

e) Walk the talk and delivery by examples to simplify the concept or the visions of BKOM

3) Communication

In the beginning, initial diagnosis revealed that one of the major problems impeded the company’s attainment of world-class operational management did not really know for sure what constitutes the BKOM and how to achieve it. One of employee’s complained: “There is not plan and structure for the BKOM implementation, lack of the information to understand. Most of my co-workers are also confused about how to do it and how does it connect with my present work.” Reflecting the previous implementation on the initial stage, those coordinators also says the good communication is quite important. Previously, they were not good at explaining “why to implement BKOM”. Due to the bad communication, most interviewees believed
that achieving world class was basically about meeting the targets. According to Liker K. and Fran K, the manager should continuous communicate with employees and encouraging them to take participate and be involved with the implementation (Liker K. & Franz K., 2011). Therefore the manager should communicating with employees and encouraging them to do it.

**Suggested Solution:**

a) The BKOM coordinator plays the vital role to promote the effective communication on the initial stage, take the seminar and workshop to introduce the BKOM (Spencer Stuart, 2007)

b) Establish a creative atmosphere for effective communication where the manager should be open and patient to explain the BKOM (Ugboro & Obeng, 2000).

c) The feedback meeting should be hosted per week, and continuously ask employee what is the BKOM? How to implement it until they complete understanding (Liker K. & Franz K., 2011).

d) To ensure that information in records is accessible to everyone.

4) **Motivation / Awareness**

In general, employees either are interested in the BKOM or confused and reluctant to engage with BKOM. Besides, BKOM is a voluntary choice for employees to join; meanwhile a time limit was not set for the entire BKOM programme. Consequently, employees do not feel a sense of urgency to do the work. For those people who have been involved with BKOM, some of them are enthusiastic to join with BKOM, but some of them are confused with the BKOM. For instance, in the beginning, almost all managers received a lot of complaints from the employees. Employees did not see the benefits from the BKOM way, and it is a double load since they are working on the older methods, but also expand times to follow the BKOM way. People complain about the heavy working load and also were confused by the BKOM implementation.

As a result, the employees struggled a lot in the initial stage. Hence, the question is how to raise the attractiveness for employees to work with BKOM and increase the involvement of people.

**Suggested Solution:**

According to Liker K. and Fran K, there are sequence activities to increase employee’s awareness for instance: training course, race game, manual, reward system, extra bonus and seminar (Liker K. & Franz K., 2011).

a) Identify the potential threats or the opportunities exist around the BKOM in the future. Then naturally present the benefits of BKOM that may bring out.

b) Rationalize the work load, for instance replace part current performance content with BKOM

c) Identify those people who are still resisting the change, and help them see what is needed (Kotter, 2012).
d) In need of incentive plans, reward system or racing game to accelerate the BKOM involvement.

e) Talk often about the change vision and discuss the change management with employees.

f) Keep running the training and education program and expand it into whole company, so that constantly introduce BKOM programme to everyone.

5.3 Summary

Based on the findings of the empirical case study, the researcher firstly discussed how to implement WCOM more effective in the initial stage. The literature was then compared with the case study findings to summarize the success factors for more effective implementation. It not only investigates the successful factors from a case study, but also stands on the general view to investigate the key factors. WCOM implementation on the initial stage is linked with the top management commitment, change management, strategic goals, prepare plan, leadership, team working, training, big picture of WCOM implementation, communication, empowered culture, feedback meeting, external help, pilot team, human resources development, motivation of operations/ awareness, top-down/bottom up implementation, WCOM coordinator and auditor. However, the academic researchers merely focus whether the change management plays the most pivotal role in WCOM implementation. Therefore, although the change management is important to lead the WCOM implementation on the initial stage, there is still a lack of research to prove that a strong relationship exists between them. Apart from that, the researcher provides some suggestions for the case company to handle the previous obstacles and future obstacles.

In terms of the inconsistent findings of successful factors between empirical case study and academic literature collected data, several reasons can be explained for that: (1) A greater review of the literature on WCOM implementation successful factors on the initial stages may need to be conducted (2) The empirical case study can be influenced by their business environmental and the current state of the company; (3) It is hard to search the implementation with time scale due to a certain term “on the initial stage”; (4) Lacking of comprehensive tools to investigate the successful factors with WCOM implementation on the initial stage.
6 Conclusion and further research

This section will summarize the findings of this research work and offer the conclusion based on the findings. The previous chapter case study was the main finding of the empirical research. First, small part for reflecting on the research process that has been used is also included. Then, to conclude this research and answered the research questions that mentioned in section 1.2. Hence, recommendations for further research will be discussed. Last but not the least, the contribution of this master thesis to the effective implementation of WCOM will be clarified.

The aim of the master thesis is concentrated investigating how WCOM implementation can be enhanced in the initial stage by identifying the successful factors of its implementation. First, through the literature review to summary the key factors of WCOM implementation. Then, by reviewing the case company BillerudKorsnäs’s implementation, the author found most of employees, team leaders and the top managers are confused in the initial stage. To address this concern, the author identified key factors by comparing the empirical finding with academic data to implement the WCOM in a more effective and efficient way. Meanwhile, through the case study also identified the main obstacles that the company met in the initial stage are: lack of top management commitment, leadership, communication and motivation or awareness to implement the WCOM. Therefore, the author also provides some suggestions to deal with these obstacles.

Research question 1: Review the WCOM implementation

Through the literature review and case study to introduce the template of the WCOM, implementation steps of WCOM and also explains why leading change is important for the WCOM implementation. Moreover, the case company, BillerudKorsnäs follows Kotter’s 8-steps model to implement the WCOM. In other world, one of deliverables of WCOM implementation is the culture change. In other words, WCOM is not designed to improve the operational performance, but also promotes the culture change such as proposed teamwork on the task instead of individually performance, more structural and systematic working, changing the strategy into continuous development. It is necessary to take the change management course with WCOM implementation. To help employees gain more knowledge with change and incentive their motivation to change. However academic report not identify the relationship between WCOM implementation with change management, it is clear that a gap occurs between theory and practice.

Research question 2: Identify the success factors of effective WCOM implementation
The main conclusion and lesson learn that can be drawn from this research on the success factors of WCOM implementation. In the literature reviewing found 16 success factors, then comparison the literature finding with empirical case study to summarize 17 success factors to effective WCOM implementation. Nevertheless, the author proposed a checklist that contains the success factors for the every company to implement the WCOM more effectively in the initial stage which is shown below in Table 6.1. These success factors play the different roles for WCOM implementation. Not a single one of these factors can be dispensed.

**TABLE 6.1 CHECK LIST OF SUCCESS FACTORS OF WCOM IMPLEMENTATION IN THE INITIAL STAGE**

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<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>Top management commitment</td>
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<tr>
<td>2</td>
<td>Empowered culture</td>
</tr>
<tr>
<td>3</td>
<td>Clear strategy, short-term target</td>
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<td>4</td>
<td>Feedback meeting</td>
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<td>5</td>
<td>Prepared plan</td>
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<td>6</td>
<td>Pilot meeting</td>
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<td>7</td>
<td>Leadership</td>
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<td>8</td>
<td>Human resource development</td>
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<td>9</td>
<td>Teamwork</td>
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<tr>
<td>10</td>
<td>External help</td>
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<tr>
<td>11</td>
<td>Training</td>
</tr>
<tr>
<td>12</td>
<td>Motivation/awareness</td>
</tr>
<tr>
<td>13</td>
<td>Big Picture of WCOM implementation</td>
</tr>
<tr>
<td>14</td>
<td>Change management</td>
</tr>
<tr>
<td>15</td>
<td>Communication/ information</td>
</tr>
<tr>
<td>16</td>
<td>Top-down or Bottom-up approach</td>
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<tr>
<td>17</td>
<td>Empowered culture</td>
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</table>

**Research question 3: provide suggestion for future implementation with WCOM**

To sum up, the author provides the different suggestions for the case company to be more effective implementation in the initial stage: 1) the first condition to successfully implement WCOM requires the full support and commitment from the top management team 2) the leadership skills are necessary for managers and team leaders for the future 3) keep and maintain an effective communication with open and creative atmosphere 4) keep running the training & education program and expand it into whole company. Meanwhile, identify the potential threats or the opportunities of BKOM to employees, then train people to learn by doing to see the benefits of BKOM implementation by themselves.

**6.1 Contribution of the research**

As mentioned in the introduction, most studies in this research area concentrate on the other concepts (e.g. world-class), with a few researches focusing on world class operational management. The achievements of this master thesis, on the one hand, provide the overview framework of world class operational management with logical description. On the other hand, identify the successful factors for more effective WCOM implementation in the initial stage for the future. Besides, this master thesis also deepens the knowledge with WCOM implementation in the case of manufacturing company BillerudKorsnäs.
6.2 Limitation of the research
There are some limitations for this master thesis. Such as the master thesis is emphasis on the “Initial stage of WCOM implementation” instead of the whole process of implementation.

- A single-case design is used in this master these, since multiple case studies (more than one case) can establish more reliable data.
- Lacking the quantitative data evaluate the implementation process
- Time limitation for in-depth research
- Restriction to collect the information relate to “world class operational management”

6.3 Further research
In this master thesis, a single-case design is used to investigate the successful factors of WCOM implementation on the initial stage. Thus, the future studies can be generated to explore how to implement WCOM effectively by using multi-case research strategy, to compare the different key factors for successful implementation across different industries. Moreover, explore the relationship between WCOM and change management.
References


Leonard, D. & McAdam, R., (2002). *The role of the business excellence model in operational and strategic decision making*, s.l.: Emerald


Monica Linder, (2014). *BKOM [Interview] (7 3 2014)*.


Appendix A The Reference list for successful factors of WCOM implementation on the initial stage

A summary list of 16 critical success factors for WCOM implementation from the beginning are shown below in Figure 0.1.

### The number of citation

<table>
<thead>
<tr>
<th>Successful factor</th>
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<td>References</td>
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<td>---------------------------------------------------------------------------</td>
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<td>Pilot working</td>
<td>(Liker K. &amp; Franz K., 2011) (Chevron Corporation, 2010) (Haleem, et al., 2012; Muda &amp;</td>
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<td>Category</td>
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## Appendix B: Interviewee list

<table>
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<th>People interviewed in Frovi and Rockhammar</th>
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</thead>
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<tr>
<td><strong>Interviewee name</strong></td>
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</tr>
<tr>
<td>Håkan Krantz</td>
</tr>
<tr>
<td>Stefan Eriksson</td>
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<tr>
<td>Peter Juntti</td>
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<tr>
<td>Hans Jennsjö</td>
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<tr>
<td>Tomas Nyberg</td>
</tr>
<tr>
<td>Monica Linder</td>
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<tr>
<td><strong>Leading people in the organization</strong></td>
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<tr>
<td>Per-Erik Adolfsson</td>
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<tr>
<td>Jani Riissanen</td>
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<tr>
<td>Pelle Ericsson</td>
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<tr>
<td><strong>BKOM organization</strong></td>
</tr>
<tr>
<td>Petra Lönnberg</td>
</tr>
<tr>
<td>Jessica Dahl</td>
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<tr>
<td><strong>People interviewed in Gävle</strong></td>
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<td>Daniel Norlin</td>
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<tr>
<td>Thomas Björklund</td>
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<tr>
<td>Sara Westberg</td>
</tr>
<tr>
<td>Jenny Johansson</td>
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<tr>
<td>Andreas Nordell</td>
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<tr>
<td>Örjan Bergstrom</td>
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</tbody>
</table>
Appendix C Interview questions

1. What’s your role and responsibility?

2. What’s your first feeling when you heard BKOM?

3. What are the obstacles you met at initial stage? How do you overcome them?

4. Learning from previous implementation, what are the successful factors for BKOM implementation?

5. Before the BKOM start up, what is your responsibility on preparation stage?

6. What the benefits you’ve already recognized by BKOM?

7. What are the major changes leading by BKOM?

8. What do you learn from BKOM?

9. What you think should be done to accelerate the implementation of BKOM at initial stage?

10. What’s your expectation from BKOM?
Appendix D Transcripts of interview

1. What is your first feeling when you hear about BKOM?
   - That was interesting. I don’t why the company to start it? But I think that was great we made those changes.
   - That was quite interesting. And some people are very engaged in this project this is a very good thing, but we also have many people ask why we should take this.
   - This approach is demanded by our customer in Tetra Park, we decide and companies decide to give effect to this!
   - I hear that this project will improve the competence and gap the competence, so I did not know much from the beginning.
   - I was also confused about this project; maybe the senior management knows the benefits. But it took more times for us to see why it's important to make machine shine or clean
   - Very good, that is the things we need! I am still happy! Nevertheless, it takes time to do!

2. What kind of difficulties/obstacle you met in the beginning?
   - That is the new way of thinking; we don’t use to analyze it so much before. Before we did not take anything analysis for planning, but now we have. And it brings a lot of work to be done now. But it takes times to analyze, and learning the new skill (improve our)
   - We want to try to do things, to see it is working. As coordinator, we are tried to tell all of them join us. In that time, that was a hard time. No one wants to come with us!
   - I think the main problem is without enough employees (human resource) working in a team to run those pillars. Because to have that amount of team, should work overrun time.
   - Of course that is different for them, we ask people do they want to join those teams, and well some people are interested in that, not all of them. We have some group not that interested in this. Of course, you have to do a lot of for your normal work! Two tasks at the same time. Much more pressure for team members
   - The board machine is more successful than I thought. They produce more … the process maybe more easier to manage and control. It is not that easier to make people find the improvement of …
   - The challenge will be how we work this in everywhere. Before youth understands that, what is the program supposed to do, how much it will change. I think the manager will also confuse it?
   - It has been travelling for this company a lot, middle managers have to make this first. The department should decide it.
   - From now, that is a double work for us to do; we got extra work to do.
• The major challenges and obstacles are the involvement and commitment in the beginning.
• The local management team is not committed enough so that they didn’t see the necessity to do the program
• Try to solve the problems with investments (hard to rebuild and get new equipment)
• The daily management system is worth of noticing.

3. **How you overcome with this?**

• Dialogue with manager, to make them thinks that is benefit for this. It takes one year for the training with manager, to make them understand why we should do this, and show them we are so serious about this, not that going away.
• It’s a culture question. The top management team should be really committed and the lower level of employees require to be more standardized through training and education program
• Keep on working and naturally it would be solved. Document all the issues. Put down on activity check list.

4. **Any change you have seen right now?**

• The main change is we have realized that we should work systematically. We haven’t done it everywhere. Our job it’s regarded to for improving competence, education, but in my view, we should be systematically everywhere
• It changes all the time, so many things to do every day! In the beginning, I don’t see the plan and structure. That is easily understood for the team work. But I am very confused about how they will do it, how does it connect
• I haven’t seen many changes, but I can say when more people involve we can see the changes, more and more teams working!

5. **The BKOM already running for a while, did you see any benefits from this?**

• We started the pilot two years ago. Today is not about self, more and more people understand. That is the easier way to solve problem and operation management that is the biggest benefits.
• BKOM both raises the awareness and develop the employees.

6. **Should we have the time limit for BKOM?**

• Yes we have a master plan, one of the problems is the worker of the pillars are identified the gas and deviation and initiate the team who will interest to work with. But we haven’t been measuring the competence, how long will work on BKOM. So, now we are establishing a system to find the gap base on the competence.
• I think the whole will be 10 years, the have different level to work with. I think that is cultural things that are hard to force the Swede to take the steps …
• No, we don’t have any time limit for BKOM, it just keep running, continuous solve problems
• When we start this project, we don’t have a time limit. They don’t feel the urgency
• Maybe the manager doesn’t want to change it with a time limit. So just let it over and over again!

7. Challenges for future?
• Risk backing before, keeping enthusiastic right now with BKOM; continues working; wellness for this project. Update the new way; initially it is double load, lots of discussion, report. But it already change a lot “transformation”
• We should measure the team result half year. But we don’t get that much data to analysis. Today we still see the KPI as our main goals, but we have those small gaps, how to solve them
• Now, is what can I improve right now. Operators align the line ….How can we control and improve; from this shift to learning to other and teacher other shift? Systematically learning with each other, culture

8. What did you learn?
• We were not a good at explaining initial on the “why to implement it”. When you tells them for change, “why should we do it”? See the benefit by them. The importance of communication is quite important!
• The thing we really learn, steering group should believe the BKOM. I believe that this is really problems. They tell us should do, but they didn’t work on that! We should have the same view for the BKOM…
• Better to do something than to do it perfect. We learn a lot along the road.
• We haven’t seen too much yet, we will see more people be interested in this. If you are interested in this, you will be more positive for you working. The overview of the process, look after also.
• We have learned the pictures better than just the text. We have learned a lot from team works.