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Enabling Effective ISO 9000 Adoption through Employee Early Involvement

*A study of a construction company undergoing
an ISO 9000 adoption*

Master of Science thesis in the Supply Chain Management Programme

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Abstract

The purpose of this master's thesis is to understand the effect of employee early involvement during the ISO 9000 adoption process in an SME (small and medium-sized enterprise), in terms of enablers and intention of ISO 9000 adoption. This will be investigated through a case study of employee perception of the quality management system standard ISO 9000 and how this perception changes during the design phase of the implementation at a Swedish ground engineering company. Data was collected through the use of a survey based on previous research on the area of ISO 9000 benefits and difficulties, intention and motivation as well as a pre-study at the case company. The survey was administered through semi-structured interviews with the employees at the company that took place at two occasions for each employee, one interview before the design of the management system related to their positions and one interview after.

The study found that the employees' perception of the standard became more positive during the course of the study in terms of benefits, difficulties and motivation and that these factors were positively associated with the intention to implement the standard. An increase in intention to implement the standard during the process was seen in some of the employees. The hypothesis that the association between the benefits, difficulties and motivation and intention would increase was not substantiated. The situation at the company in general featured both positive and negative factors that could influence the effectiveness of the implementation. Employee early involvement in the design of the management system as well as basing the system on the existing processes were found to be the most beneficial aspects of the workshops used to perform the design. However, the fact that the pressure to become certified mainly stemmed from the parent company was seen as an indicator that the certification would not achieve as large internal benefits as would be possible if the motivation had been more focused on the internal performance improvements.

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1. Introduction

This chapter gives an introduction to the topic by first presenting the case company and ISO 9000. This is then followed by the purpose and the corresponding research hypotheses as well as the delimitations and the disposition of this report.

1.1 Background

ISO 9000 has since its inception spread around the world to hundreds of thousands of organizations and become the most accepted and sought after management system (Poksinska, 2010). In this master's thesis report, a case company seeking to become certified according to the management system standard ISO 9001:2015 will be studied. The case company, covered in this report, is a ground engineering company that is part of one of the world's largest ground engineering groups. However, in this branch of the group there are only 27 employees, out of which 13 are based at the office which is covered by this study. The case company performs ground engineering work as well as offering different services in this field. Since the case company wants to become certified according to ISO 9001:2015, it is modifying its management system in order to comply with this standard's requirements. Because of the large size of the company group, it does not have a uniform management system used by all companies in the group. This is due to the decentralised structure of the group and that each company works in their own way as well as the differences between the different markets covered by the group.

Prior to this research, the case company had already gathered much of the information needed in order to create a modified management system. This information is what the case company today calls "the old management system", and it has never been fully implemented due to not being presented in a useful manner and not being fully compliant with the standards that they seek to be certified against. This is the reason for the case company to seek to modify this management system. The design phase of the new management system, which is an early phase of an ISO 9000 adoption (Boiral, 2011), is also the only phase during which the authors of this thesis report will be part of. This participation will take the form of workshops with employees during which information will be collected that will form the basis for a set of handbooks for the processes at the company. This method is referred to as employee early involvement and will be further described in Section 3.5.

The background to why the case company wants to design, implement and certify a management system in the first place is mainly due to internal demands from top management.

Before the start of this study, some of the employees were not fully aware of what responsibilities and tasks their position exactly implied, mainly because of the tasks being very scattered and that some of the positions have been filled internally when they suddenly have become vacant. By providing a map of all existing processes in the company, the design of a new management system is believed to give the employees a better view of their functions at the company.

Previous research, e.g. Brown et al. (1998), have shown that the motivation behind getting the certification may have an impact on the benefits achieved through the certification. A certification just to fulfill external pressure from customers is less likely to result in perceivable improvements than a certification that involves employees and has the aim to improve internal efficiencies (Brown et al., 1998). Poksinska et al. (2002) also argue that the benefits derived from the certification and the certification process are related to the reason that initiated the drive for the certification. The motivation behind the decision made by the case company is, thus, of interest to investigate to try to determine the potential effects of their certification. Poksinska et al. (2002) also state that management commitment and participation is needed for the credibility of the certification project in the eyes of the employees, and that employee commitment is needed for a successful implementation of ISO 9000. This leads to an interest in investigating the commitment towards the certification at the case company and which actors that are showing this commitment. In this study, this has been investigated by summarizing these factors into *enablers* for a successful ISO 9000 adoption and what these enablers result in as the *intention* to become ISO 9000 certified.

Another interesting issue is the fact that some companies adopting ISO 9000 are more affected in regard to their rhetoric and talk rather than the action of the company (Heras-Saizarbitoria & Boiral, 2015). It has previously been stated that the standard affects the way actors say that they work more than it affects the way that the actors work (Heras-Saizarbitoria & Boiral, 2015). However, Poksinska et al. (2002) states that almost 90 per cent of the ISO 9000 registered organizations agreed that the registration had added value to their organization by improving overall performance.

1.2 Purpose

The purpose of this master's thesis is to understand the effect of employee early involvement during the ISO 9000 adoption process in an SME, in terms of enablers and intention of ISO 9000 adoption.

In addition to this, the case company's current situation regarding the ISO 9000 adoption will be investigated in relation to the potential effectiveness of the complete ISO 9000 implementation.

1.3 Research Hypothesis

The hypothesis of this master's thesis research is that the perceived benefits and difficulties as well as motivational factors, i.e. the enablers, for becoming ISO 9000 certified will change over time, i.e. change while the employees are exposed to ISO 9000 by working with it, and thereby affect the intention to become ISO certified.

The benefits and difficulties with an ISO 9000 certification which employees perceive should be dependent on their knowledge of ISO 9000. The knowledge of ISO 9000 is believed to grow the more the employees get acquainted with the standard. We therefore hypothesise:

H1: Employee early involvement has a positive influence on the enablers.

Furthermore, it is believed that employees will be more positive toward implementing ISO 9000 if they have more positive attitudes towards the potential benefits and difficulties of implementing the standard, i.e. the intention is dependent on the enablers. We therefore hypothesise:

H2: The enablers are positively associated with the intention.

Due to the hypotheses of positive influence of employee early involvement on the enablers and of enablers' positive association with intention, it is believed that the intention to adopt ISO 9000 will increase with employee early involvement. We therefore hypothesise:

H3: Employee early involvement will increase the intention to adopt ISO 9000.

Finally, the association between the enablers and the intention is believed to increase due to the employee early involvement. We therefore hypothesise:

H4: Employee early involvement has a positive effect on the association between enablers and intention.

A visualisation of relationship between the enablers, intention and the hypotheses is presented in Figure 1.1. Here one can see H1 connecting E₁ and E₂, which is the hypothesis that employee early involvement has a positive influence on the enablers, thus, change E₁ into E₂ as a result of the workshops. H2 connects E₁ with I₁ as well as E₂ with I₂, since it is hypothesised that the enablers are positively associated with the intention, thus, E and I will be high at the same time or low at the same time. H3 connects I₁ into I₂, since it is hypothesised that employee early involvement will increase the intention to adopt ISO 9000, thus, change I₁ into I₂ as a result of the workshops. And finally, H4 connects the association between E₁ and I₁ as well as the association between E₂ and I₂, since it is hypothesised that the association between enablers and intention is positively affected by employee early involvement.

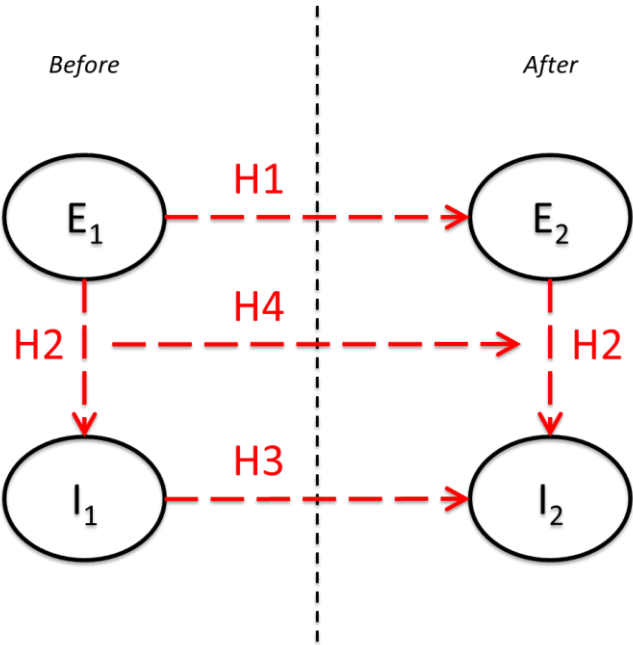


Figure 1.1. Visualisation of the hypotheses

1.4 Delimitations

During this master’s thesis research, a number of delimitations have been made in order to make it manageable within the frames of a master’s thesis. First of all, the duration of the time spent at the case company was limited to 15 weeks, out of which only 9 weeks were full time working weeks. This have likely limited the potential amount of change in the employees’ perceptions of ISO, since this is a relatively short period of time for building awareness and skills in a complex area as management system standardsthis kind of study. Furthermore, the limitation in duration also meant that the authors only were able to participate during a part of

the design of the management system. However, it is likely that the employees have changed their perception of ISO even after the design of the management system.

Since the case company is an SME, per definition, the generalisability might be limited to this kind of companies. As there are only 13 employees at the case company's office, they are working relatively close together, which, in turn, might homogenise each employee's opinion and perception of ISO to a higher degree than at a large company. This might be the case since the distance between the general employee and the manager driving the implementation is greater at a large company.

Even though the main method of interaction between the case company and the authors has been the workshops described in Section 3.5 in this report, the effectiveness of designing a management system through workshops is not covered by this report. The reason for this is that the workshops were set up by the case company, and any optional method was therefore never considered.

Finally, the sample size covered by the survey was limited to five respondents. Since the employees who were to be covered by the survey were those who were responsible for any process covered by the workshops, the sample size was not chosen, but derived from the responsible employees. This sample, which was given by the case company, was then the same used for the interviews.

1.5 Disposition

The disposition of this master's thesis is the following. First, a theoretical framework compiled of former research on the vicinity of ISO 9000 is presented in Chapter 2. In this chapter, the general characteristics of ISO 9000 is described, followed by commonly perceived benefits and difficulties. This is followed by literature covering the different reasons why an organisation would decide to adopt ISO 9000 and the impact this reason has on the effectiveness of the ISO 9000 implementation. This is followed by the different strategies that can be used throughout the implementation of ISO 9000, which includes identifying and enhancing success factors, identifying and avoiding pitfalls and a method for categorising managers and employees involved in an ISO 9000 implementation.

Secondly, the methodology of the master's thesis research is presented in Chapter 3. Here, the approach used for constructing the theoretical framework is presented, followed by the method used for conducting workshops with the employees as a part of designing the ISO 9000 compliant management system. The construction of the survey and the method used when

conducting the survey is then presented, followed by the approaches used during the data analysis. The comparison of the empirical data collected through the the survey and the theoretical framework, is subsequently described.

In Chapter 4, the empirical results of the survey are presented and analysed. This is done by first categorising each employee covered by the survey and then presenting the identified changes. The categorisation and the changes are then analysed for each employee respectively. Finally, the association between the enablers and the intention is investigated.

Chapter 5 contains a discussion of the findings, where findings are compared to the literature and any unexpected findings or contradictions or confirmations of the literature are presented.

Finally, Chapter 6 contains the conclusions, limitations and the managerial implication, i.e. the answers to the research hypotheses are provided and the recommendations to both future researchers and the case company are given.

2. Theoretical Framework

The theoretical framework describes the area in which this study is set. A short explanation of the ISO 9000 standard is provided in Section 2.1. followed by Section 2.2 in which the reasons for adopting the standard is explored. Recommended approaches towards implementing the standard are presented in Section 2.3 and finally a framework for categorisation of employees in Section 2.4.

2.1. ISO 9000

In the following section, the ISO 9000 standard will be briefly described, together with the concepts that forms its basis. Some of the desired consequences of an implementation will also be described, together with some of the not desired consequences of an implementation.

2.1.1 What it is

ISO 9001:2015 is part of the ISO 9000 family, which has been constructed to provide guidance and tools for organizations who want to “ensure that their products and services consistently meet customer’s requirements, and that quality is consistently improved” (ISO, 2015a). The ISO 9001:2015-standard sets out the criteria or the requirements for a quality management system, based on the following seven quality management principles

- Customer focus
- Leadership
- Engagement of people
- Process approach
- Improvement
- Evidence-based decision making
- Relationship management (ISO, 2015b).

Through the use of these principles, and ISO 9001:2015, consistent good quality on products and services is ensured (ISO, 2015a). ISO 9001:2015 is designed to be able to be used by any company or organization, regardless of size and industry, and over one million companies in over 170 countries has been certified according to it (ISO, 2015a). The core of the ISO 9000 quality management systems has been described as being the requirements that lead to the enabling of the Plan-Do-Check-Act method (Rusjan & Alic, 2010).

The first version of the ISO 9001 standard was launched in 1987 and it has since then gone through four revisions with the latest being launched in September 2015 (ISO, 2015a).

With the latest revision, the standard is putting greater significance on other stakeholders than only the contractual customer, with actors such as regulatory bodies, consumers etc. with the overall goal to be able to achieve conformity of produced products and services (ISO, 2015a). The process approach has since the revision in the year 2000 been an important part of ISO 9001 and will continue to be so with the latest version (ISO, 2015a). ISO 9000 has since its inception spread around the world and become the most accepted and sought after quality management system (Poksinska, 2010).

2.1.2 Benefits and Difficulties

The fact that the number of ISO 9000 certified organizations worldwide has grown rapidly is a confirmation of the success of the standard as well as the positive impact the standard has on the adopting companies (Boiral, 2012a). This positive impact of the standard has also been confirmed in several studies since the introduction of the standard (ibid). However, this view has also been disputed by other studies, with some even denying the positive impact that ISO 9000 would have on organizations (Boiral, 2012a). Some of the perceived effects of ISO 9000 can be seen as quite adverse for the adopting organizations and has led to managers refraining from renewing certification as can be seen in the decrease in the total number of certifications in some regions (Boiral, 2012a).

Sampaio et al. (2009) classifies the benefits of an ISO 9001 certification into external and internal categories where the external benefits are related to marketing and promotional improvements and the internal benefits are related to improvements in organizational matters. A further category, improvements in product quality, has earlier been reported from firms with ISO 9001 certifications (Withers & Ebrahimpour, 2001). However, these improvements in product quality are not certain to be a direct result of the implementation of a management system (Sampaio et al., 2009).

Another way of categorizing the benefits of ISO 9001 is to classify them by the use of the balanced scorecard approach (Rusjan & Alic, 2010). This approach assumes that the objectives of the quality management system are linked to the strategic goals of the company. Based on this the classification that is used for the strategic goals, e.g. balanced scorecard (BSC), should also be feasible for the classification of the objectives and related benefits of the quality management system. Using the BSC approach, benefits are divided into groups based on four perspectives: customer, process, learning and development and financial. Out of these groups, the fourth group is mainly a consequence of the three other.

In Boiral (2012a) a systematic review was conducted in which 111 papers were examined to shed light on the topic of impact of ISO 9000. The impacts studied in these papers were categorized based on their impact on operational effectiveness, with the categories being operational benefits, managerial and strategic benefits, difficulties and pervasive effects and contingency factors. To further clarify, the categories were divided into internal and external aspects. The review shows that the most commonly cited impacts are the operational benefits which reflects the purpose of the standard as being meant to improve the practice of quality management in the implementing organizations. An interesting aspect mentioned in Boiral (2012a) is the profiling of most studies conducted to measure impacts of ISO 9000 implementation, as being quantitative studies based on mailed questionnaires sent to quality managers of certified organizations in a specific area. To shorten the extensive list of benefits only the benefits mentioned in more than 10 papers are included in Table 2.1 while no such limitation was used for the adverse effects included in Table 2.3.

Table 2.1. Internal impact of ISO 9000 certification (Boiral 2012a). The second column indicates the number of articles in which the item in question was investigated and the third column indicates the share of these articles in which ISO 9000 was found to have a positive effect on the organizations. Adapted from Boiral (2012a).

Internal impacts	Number of papers	Positive impact (%)
Productivity	32	93.7
Product quality	30	90
Operational efficiency	27	96.3
Nonconformity	27	100
Cost reduction	25	92
Waste reduction	20	90
Documentation management	19	100
Cost of non-quality	14	85.7

Table 2.2. External impact of ISO 9000 certification (Boiral 2012a). The second column indicates the number of articles in which the item in question was investigated and the third column indicates the share of these articles in which ISO 9000 was found to have a positive effect on the organizations. Adapted from Boiral (2012a).

External impacts	Number of papers	Positive impact (%)
Customer satisfaction	38	94.7
Customer service	22	95.5
Complaint reduction	21	80.9
Supplier relations	18	77.7
Delivery	14	64.2

Additional improvements that were found in other studies included *definition of the personnel's responsibilities and obligations* (Rusjan and Alic, 2010; Sampaio et al., 2009) *decreased need for auditing, increased transfer and dissemination of knowledge, improved environment protection possibilities and satisfaction of regulations* (Rusjan and Alic, 2010).

A study by Singh et al. (2006) showed that the difference between manufacturing companies and service companies in terms of benefits achieved was quite substantial. The largest benefit among the service companies was the improvement in the documentation that the ISO-certificate led to while two of the largest benefits to the manufacturing companies were the improved response to customers' needs and improved flexibility to change volume of production. The latter of these manufacturing benefits has obviously not been as important to service providers as it has been to manufacturing companies.

With the ISO 9001 being updated every seventh year the benefits of implementation are bound to be affected (Rusjan & Alic, 2010). However, researchers have previously assumed that the benefits of earlier editions are at least retained in newer editions (Rusjan & Alic, 2010).

The most commonly stated problem with the implementation of ISO 9000 is the increased bureaucracy (Boiral, 2012a). The same study also revealed that relatively few of the studies examining the impact of ISO 9000 implementation on companies included difficulties that

could be encountered due to the implementation. One example of difficulties is the costs of the certification, which some claims to exceed the benefits gained in certain situations (Boiral, 2012a). The problems mentioned in Boiral (2012a) are presented in Table 2.3.

Table 2.3. Negative impact of ISO 9000 implementation. The second column indicates the number of articles in which the item in question was investigated and the third column indicates the share of the articles in which ISO 9000 was found to have a negative effect on the organizations. Adapted from Boiral (2012a).

Impact	Number of papers	Negative impact (%)
Bureaucracy	15	100
Mobilization	10	100
Costs of the system	7	100
Superficial integration	5	100

Negative views that have been expressed in earlier literature include that an ISO 9000 certification had a negative impact on the quality practices of adopting companies (Poksinska et al., 2006). This would be due to the standard encouraging so called “quality by inspection” which would lower the morale of the employees and increase costs and rate of errors. For SME’s’, ISO 9000 has been viewed in a negative light since it has been claimed to only increase the paperwork and documentation and not improve, for instance, the productivity. These issues hold true for both manufacturing companies and service companies which have been shown to face the same difficulties with the standard (Singh et al., 2006).

Difficulties that were not mentioned in Boiral (2012a) include *worsened quality practices* (Poksinska et al., 2006; Tang and Kam, 1999), *increased costs* (Poksinska et al., 2006; Kasperavičiūtė-Černiauskiė and Serafinas, 2016), *lowered morale* (Poksinska et al., 2006), *loss of flexibility* (Kasperavičiūtė-Černiauskiė and Serafinas, 2016; Tang and Kam, 1999) and *complexity within the company* (Kasperavičiūtė-Černiauskiė and Serafinas, 2016).

2.2 Motives Affecting ISO 9000 Adoption

As mentioned previously, ISO 9000 has become a success with certified adopters in over 170 countries (ISO, 2015a). However, the reason for this successful diffusion has rarely been investigated during the early 2000's (Poksinska, 2010). One reason would obviously be the benefits that are supposed to be associated with an implementation of ISO 9000 and another the competitive disadvantage that a company suffers when not certified (Poksinska, 2010). Some of the identified reasons and motives for adoption of ISO 9001 will be presented in this section along with their consequences.

2.2.1. Why is ISO 9000 Implemented?

Research has shown that the most common reason for implementing ISO 9000 is to satisfy customer requirements and that the most desired outcome of the implementation is the certificate in itself (Poksinska, 2010). An earlier survey had found that the most important factors behind seeking certification were wishes to improve the quality processes within the company and improving the company image (Poksinska et al. 2002). This was claimed to be in contrast with previous studies which had shown that the most important factor behind certification was "customer pressure". A study of manufacturing firms in the US also showed that the main reason behind an ISO 9000 adoption was a desire to improve competitiveness through quality management and the communication of quality results which also indicated that customer and regulatory compliance are only of secondary importance to the organisations (Anderson et al., 1999). These conflicting views are reflected in Boiral (2011) where the two popular approaches to ISO certification that exists are discussed. The first is that the standard is perceived as only a commercial certificate without any significant internal value added and the second that the standard is the basis for a system which the organization wishes to use for in-house improvement.

The certificate in itself does not provide the certified organization with a competitive advantage, but it does give non-certified companies a competitive disadvantage (Poksinska, 2010). The possibility of gaining a competitive advantage is still a benefit that is of importance in motivating the certification among companies in the UK, and is claimed to be achieved in slightly more than half of the companies (Stevenson and Barnes, 2002). However, escaping the competitive disadvantage that not certified companies end up with due to customers finding suppliers in lists of ISO 9000-certified companies is another cited reason for certification (ibid).

2.2.2 Effects of Motivation

There is a general consensus in the literature that the motivation behind the implementation of ISO 9000 will influence what effects the implementation will result in (Poksinska, 2010; Sampaio et al., 2012). This view is reinforced by Brown et al. (1998) who claims that employee involvement in documenting the system as well as motivation not only coming from external pressure will lead to a management system with a better chance of leading to improvements. The fact that companies that seek the certification only for external reasons are more likely to fail the certification or to receive fewer benefits from it is the basis for the recommendation that the first priority of a manager should be to ensure that the motivation is internally oriented, rather than externally (Psomas et al., 2010). A quantitative study by Boiral and Amara (2009) shows that the internal motivation as well as the managerial motivation behind a decision to adopt ISO 9000 affects the success of the adoption, with higher motivation leading to more effective configurations.

Companies in one study primarily viewed the standard as a tool for documentation and not as a mean to manage the processes of the companies (Poksinska et al. 2006). This issue led to the companies not achieving the internal benefits that could have been possible if the standard had been perceived and dealt with differently, as a documentation system is rarely considered a factor that can influence productivity or product quality. The focus on the documentation instead of the underlying activities led to greater difficulties when trying to improve or change the processes. Implementing improvements through changing documentation, and by that hoping for improved employee practises, instead led to a perception of controlling and enforcement of new practises (ibid).

Organizations pursuing a certification in order to improve internal quality work will achieve higher overall benefits than other organizations, while organizations pursuing a certification just in a response to customer pressure will reap benefits in that particular area but not improve the internal procedures or the quality of the processes (Poksinska et al., 2002). This was also shown in a study of Greek SMEs in the food industry where the benefits achieved were affected by the motivation for the certification with motives related to external factors leading to external benefits such as “improvement of the company’s position in the market” (Fotopoulos et al., 2010). The same applied for internal benefits with benefits such as “company’s quality improvements” being achieved if the motive for the certification was similar.

Having management clearly explaining the reason for a certification to employees was believed to be of importance by people with experience in ISO-certified organizations (Boiral, 2011). It was shown that some of the employees working in ISO-certified organization did not know whether the ISO certification at their organization was related to environment, quality or some other area. Other employees did not know of the objectives of the certification or that the outspoken objectives even existed. Both of these issues indicated the weak internalization that the ISO-certifications had had in these organizations and thus the low impact on performance that could be expected from it. As it was now, the certifications and underlying work in these organizations were perceived as only the creation of label to put on the companies. The employees are generally believed to need to understand the objectives that are supposed to be achieved with the certification and what their roles are in order to reach these set objectives. The employees should therefore be presented with the idea of the certification, how it will affect their work and how they will benefit from it (ibid).

A concept related to the motivation of implementation is degree-purchasing syndrome (DPS) which is known from education where it is used to describe the belief among students that the acquisition of a recognized degree is more important than the acquisition of certain knowledge or skills (Boiral, 2012b). This view is used to examine and explain the attitude of managers and employees towards an ISO certification as the certification is often seen as an end in itself, and not as a means of improvement. Parallels that can be drawn from education to ISO certification include the often last-minute and procedure-orientation preparation that takes place in many organizations before an audit and the procrastination of students before an exam (ibid).

DPS in ISO certified companies is, among other factors, characterised by the certification being seen as an organizational degree that provides access to certain market without having any connection to internal practices (Boiral, 2012b). Among students, DPS leads to more superficial integration of knowledge and low interest in learning, with claimed equivalent in ISO implementation being perfunctory implementation, low employee involvement and daily practices not matching ISO requirements. The consequences of this issue include that the value of an ISO certification decreases which is detrimental to the organizations that have actually integrated the standard (ibid).

2.2.3 Internalization

A differentiation between tacit and explicit embedded knowledge in management control systems is made in Nair and Prajogo (2009). Explicit knowledge is expressed as the knowledge that can be stored and transmitted through formal and systematic ways while tacit knowledge is the knowledge that is embedded among the users of the system. Four different modes of transforming information into knowledge is mentioned of which the internalization is of particular interest to the implementation of the ISO 9000 standard as it is the process of absorbing both tacit and explicit information and transforming it into knowledge. This is related to ISO 9000 as it depicts the adoption of the underlying practices of ISO 9000 by managers and decision makers in their daily tasks, i.e. adapting the daily practices and operating procedures to the requirements of the ISO 9000 standard (Nair and Prajogo, 2009). This internalization has been argued to be necessary to achieve performance benefits.

Two motives or reasons for implementation of ISO 9000 is presented in Nair and Prajogo (2009). The first reason is the improvements that ISO 9000 should lead to in terms of streamlining of processes as well as improvements in the documentation of processes. Since this will give improvements in the functional as well as process competence of the company these motives are called functionalist drivers (Nair and Prajogo, 2009).

The second reason for implementing ISO 9000 is the enhancement of the quality image of the company that an adoption should lead to. A company could also be influenced by external entities such as customers and competitors towards implementing ISO 9000. Since these motives often are based on macro-institutional foundations they are referred to as institutionalist drivers (Nair and Prajogo, 2009).

A study of small and medium sized Australian companies found that the only drivers that were significantly associated with internalization of ISO 9000 among high performing companies were functionalistic while low performing companies' internalization was, in addition to the functionalist drivers, also significantly associated with institutional drivers (Nair and Prajogo, 2009). Firms were found to implement and internalize the standard to improve quality, establish a systematic management approach that leads to improvements and to enable better control of operations. However, some differences were found between high performing firms and low performing firms. High performing firms internalize ISO 9000 to build a quality management system that enables operations improvements while low performing firms

internalize ISO 9000 in a strive for the same improvements while also seeking legitimacy in the eyes of the institutions exerting pressure on them.

The only drivers that were important for the internalization of ISO 9000 in high performing firms were functionalist drivers (Nair and Prajogo, 2009). High levels of functionalist drivers were found to lead to high levels of internalization, while mixed motivation led to firms not fully being able to realize the possible benefits, since they could not properly put the system in place. This goes even further as the only drivers that are responsible for the internalization of ISO 9000 in high performing firms are functionalist drivers. The internalization was also shown to be associated with operational performance which in turn was associated with business performance.

Most of the research that has been done on ISO 9000 adoptions has considered the adoption to be completed with a successful certification. However, a new view where the adoption is considered more heterogeneous between different firms is gaining ground (Heras-Saizarbitoria, 2011). This difference in adoption has been argued being basis for the differences in impact that ISO 9000 has on companies. The internalization of ISO 9000 is claimed to make the difference in obtaining better operational and business performance. This is backed by the statement that practises that are only implemented to reach the formal certification but not internalized lead to difficulties in them having effects on a company. For managers, this should give understanding of how implementation is not to be considered being an end in itself and how it is the internalization that should be the goal in order to reach optimal result from the adoption.

2.3 Strategy for ISO 9000 Implementation

In this section, strategies used during the implementation of ISO 9000 will be described, together with pitfalls and success factors that have been found to occur during the implementation.

2.3.1 Success Factors

According to Ivanova et al. (2014), both practitioner and academic literature has focused primarily on the reasons for adoption and the performance effects of adoption instead of a more implementation focused approach, which this section focuses on.

Figure 2.1 shows the roadmap for successful implementation of ISO according to Boiral (2011) and recommendations for each step in blue (with arrows marked with “+”) and potential

pitfalls in red (with arrows marked with “-“). Ivanova et al. (2014) states that the implementation of an ISO standard is consistent with the implementation process of an administrative innovation and that they share some stages during the implementation phases. The following stages are described by Ivanova et al. (2014) based on a literature review:

1. Decision to adopt
2. Strategic planning
3. System design
4. Deployment.

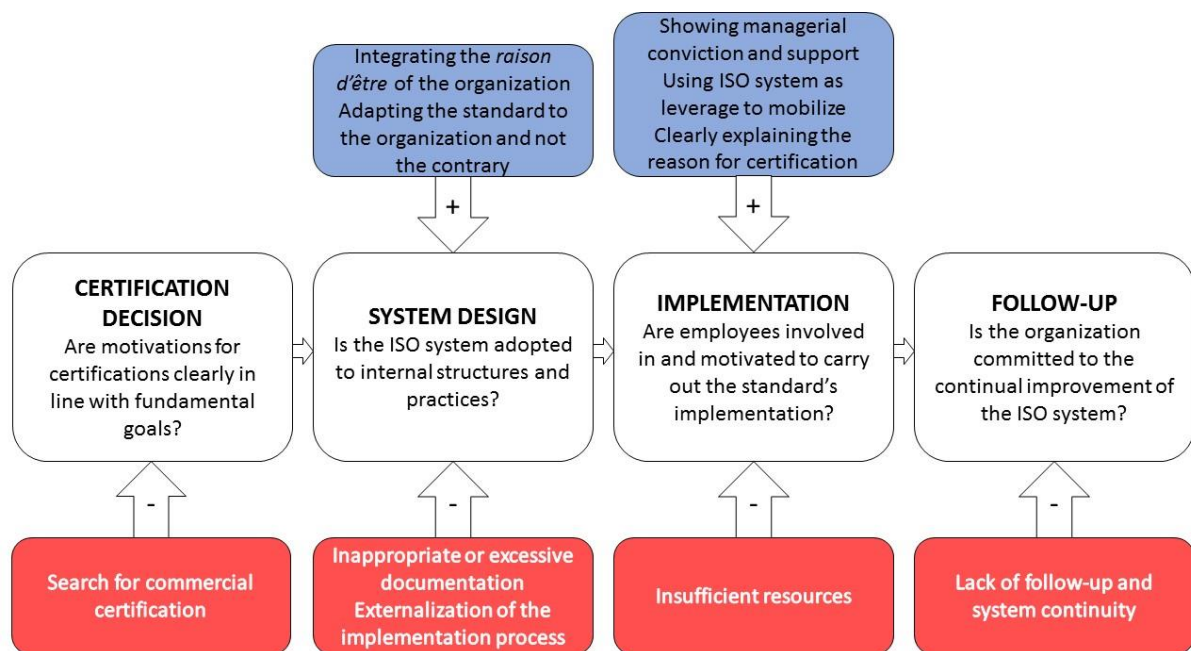


Figure 2.1 Roadmap towards implementation. Adapted from Boiral (2011)

The stages presented by Ivanova et al. (2014) are similar to the roadmap presented by Boiral (2011), with the exception that Ivanova et al. (2014) includes a stage of strategic planning and Boiral (2011) includes a stage of follow up. Crucial success factors were also investigated by Boiral (2011), and the most commonly occurring were grouped into five main categories with “Showing managerial conviction and support” and “Clearly explaining the reason for certification” among the five categories.

The recommendations and pitfalls provided by Boiral (2011) are based on surveys with representatives from ISO 9001 or ISO 14001 certified organizations while Ivanova et al. (2014) provides key success factors for implementation of ISO 9001/ISO 14001 based on case studies

at ten American companies with either ISO 9001 or ISO 14001 certifications. The two studies reached results that were in many ways similar, out of which the issue of adapting the ISO-system to existing procedures was one. It was recommended that the adopting organization, during the stage of system design, base their management system on existing procedures and thereby adapt ISO to the company and not the contrary (Boiral, 2011; Ivanova et al., 2014). By doing so, the ISO practices becomes better integrated with the operations of the company. This is achieved through consulting the employees during the implementation, which also helps raising employees' support for ISO (Boiral, 2011). That the system is designed around existing processes was the critical question being raised for the system design-stage (Boiral 2011; Ivanova et al., 2014)

Ivanova et al. (2014) state that there is an inconsistency in the general literature covering the effectiveness of ISO implementation. In brief terms, they mean that this is due to that in general the studies made in the literature compares adopters with non-adopters by measuring factors that are dependent on many other factors than just the ISO adoption. Further, the general literature compares the adopters' average performance with the non-adopters' average performance. This method hides the reasons behind the variation within one of these groups (Ivanova et al., 2014) They also mean that the general literature does not cover the actual process of the implementation, not even the order in which the different standards are implemented, for example ISO 9001 and ISO 14001, which they mean might have an effect on the effectiveness. As a reaction to the above and apart from the courses of action described by Boiral (2011) and Ivanova et al. (2014), Ivanova et al. (2014) have created a framework through which they try to explain the factors of an effective implementation. Their framework consists of the three following pathways:

1. "incentives pathway, i.e., by providing the right incentives;
2. integration pathway, i.e., by designing the system around existing processes; and
3. information technology pathway, i.e., by using information technology" (Ivanova et al., 2014).

These three pathways include eight propositions. A few of these propositions are:

- "Internally driven adoption decision enables top management support.
- Internally driven adoption decision enables design of the system around existing processes.

- Top management support towards the standard fosters positive attitudes among employees towards the standard.
- A system designed around existing processes enables positive employees' attitudes towards the standard.
- Employees' positive attitudes towards the standard enables employees' involvement.
- Employees' involvement enables the effectiveness of the implementation" (Ivanova et al., 2014).

In addition to the pathways presented by Ivanova et al. (2014), Psomas et al. (2010) identifies five critical areas for an effective ISO 9000 implementation that should be considered by managers in service companies wishing to become certified. The areas are the following, in descending order of importance:

1. The internal motivation of the company, i.e. a desire to improve the internal environment.
2. The attributes of the company, i.e. the existence of suitable infrastructure, facilities and equipment.
3. Employee attributes, i.e. employees trained in the requirements of the standard that take part in the certification process.
4. The requirements of the quality system, i.e. suitable conditions in terms of financial resources, time etc.
5. The attributes of the external environment, i.e. the pressure from customers and competitors and the involvement of authorities.

The first priority of a manager should thus be to ensure that the motivation is internally oriented, rather than externally. The reason for this is the fact that companies that seek the certification only for external reasons are more likely to fail the certification or to receive fewer benefits from it (Psomas et al., 2010). From a different perspective, Briscoe et al. (2005) identifies four issues that managers should address in order to increase the probability that an ISO certification leads to increased competitiveness:

1. Assuring that a real need for change exists
2. Establishing a quality culture
3. Performing a compelling and thorough analysis of the ISO support infrastructure
4. Making ISO practices a part of the company's quality routine.

According to Briscoe et al. (2005), it is better to make adequate preparation instead of rushing into an implementation. Rushing will likely have an adverse effect on the results of the certification, especially if the earliest stages of the implementation is rushed. “There is no quick fix to inferior quality”.

In order to visualise the relationship between the barriers and problems that might arise during certification and the successful increases in performance, Boiral and Amara (2009) introduce a matrix of the effectiveness of an ISO 9000 certification has been presented in Boiral and Amara (2009). The first axis measures the traditional aspects of ISO 9000 adoption, such as quality improvements and cost reduction. ISO 9000 certifications are sorted into either a high or low value on this axis, i.e. high or low performance on traditional aspects. The second axis measures barriers and other implementation problems, such as lack of employee and management commitment, encountered during the certification, where certification is either given the value of having a high or low intensity of barriers and problems. This matrix leads to four configurations of certified organizations which are presented in Figure 2.2.

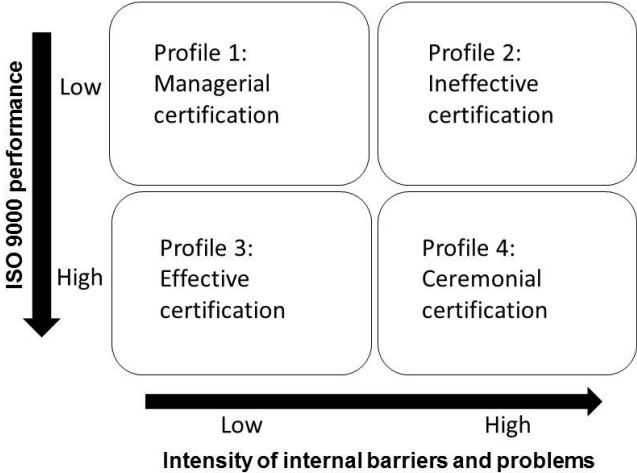


Figure 2.2. Effectiveness matrix. Adapted from Boiral and Amara (2009)

It has been shown that the traditional performance measures of ISO 9000 implementation are not enough to fully assess a given implementation (Boiral & Amara, 2009). Other aspects, such as increased amount of paperwork, must be included as well. Of the four configurations, only organizations which succeeded in implementing according to Profile 3 appeared to have genuinely effective configurations. However, only a quarter of the studied companies achieved this configuration, with the most common configuration being Profile 1: managerial

certification representing 28% of the studied organizations. A Profile 1 certification does not lead to internal problems, nor does it lead to performance improvements. Cases of Profile 1 could be caused by customers not desiring certification and the certification thereby not having any effect on the commercial performance. It could also be the case that the standard simply does not lead to any product quality or internal performance improvements.

To increase the effectiveness of the certification, Ivanova et al. (2014) mention the importance of having the management system being based on already existing processes within the adopting organizations during the system design-phase. Designing the management system on existing processes lead to a better integration of the standard. This has been argued to lead to benefits, e.g. a design that is not based on existing routines will be difficult to follow and it will be perceived as just being extra work for the employees (Ivanova et al., 2014). Brown et al. (1998) add that it is positive to have the employees involved in the developing of the documentation for the quality management system, since the employees will not be working in accordance with the system unless they are involved in the development. In a survey with 133 ISO 9000 certified organizations it was shown that all 70 organizations with fewer than 50 employees involved the employees in the implementation process (Brown et al., 1998). The same organizations involved external consultants in 56 % of the cases and staff from headquarters in 14 % of the cases (ibid). The approach taken towards ISO 9000 might have an impact on the result according to Brown et al (1998). With more involvement from the employees in documenting the system and the pressure not only coming from external parties the resulting system is more likely to be effectively implemented and lead to improvements.

In a case study of a small Greek winery's implementation process of a quality management system (QMS) the top management identified the important processes for the QMS for which documentation was produced that presented the important aspects of the processes (Aggelogiannopoulos et al.,2007). This documentation should answer a number of questions for each process, e.g. "What is required to be done?", "How will it to be done?" (Sic) and "Who has the authority?". In addition to this, work instructions were produced, which was needed for the control of the processes. The level of detail is described as being dependent on the skill of the workers and the complexity of the processes to be done. In the case of the Greek winery a quite detailed manual was needed due to the low skill level of the workers. How these manuals were produced or by whom is not mentioned by Aggelogiannopoulos et al. (2007). Another case study, made by Baric et al. (2007), describes the development and implementation of a quality management system at a hospital department. The first step was the development

of a series of standard operating procedures with purpose, responsibility, general description, resources and documentation requirements.

2.3.2 Pitfalls

In addition to the above-mentioned stages and factors to be considered for a successful implementation, Boiral (2011) describes some challenges that companies might encounter during its certification period. The most common challenge mentioned by the interviewed company representatives were “Inappropriate or excessive documentation” and “Lack of follow-up and system continuity”. According to Aggelogiannopoulos et al. (2007) a number of organizations have reported problems during the implementation phase of a ISO 9000 family quality management system. The most common problems are related to the documentation process, lack of knowledge and experience of ISO 9000, lack of time and resources, top management and personnel commitment and the creation of system ownership. In a description of a case of a small Greek winery the problems related to knowledge and experience were solved by having the employees take part in external and internal training programmes which touched on areas such as ISO 9000 vocabulary, the role of documents, responsibilities and benefits that were to be derived from the implementation (Aggelogiannopoulos et al., 2007). A drawback with this was a high cost caused by the training, which became a large part of the total certification cost.

The commitment as well as the cooperation of the workforce is needed for an effective management system implementation (Aggelogiannopoulos et al., 2007). To achieve a sufficient level of commitment and cooperation, management can show the benefits that can be expected from an implementation and how it will affect the company on the large scale, e.g. reduce the number of defect products, increase customer satisfaction and improve internal communications (ibid).

The study of employees’ perception of the effects of ISO 9001 implementation has, despite the important part that employees has in ISO 9000 implementation, received limited attention (Marde, 2015). Marde (2015) lists three reasons for this:

1. The standard is supposed to lead to improved work environments for the employees and when managers believe that this has been achieved they assess that no more attention needs to be put on this.
2. Focus on objective criteria when evaluating the effects of the implementation instead of assessing the perception of the employees.

3. Low degree of participation of the employees in quality decisions.

The degree of knowledge of the ISO 9001 certification is correlated to the perception of the certification with a higher degree of knowledge leading to a better perception (Marde, 2015). The workers are generally the people with the lowest knowledge of the ISO-standard and thus also the people with the worst perception of ISO 9001.

2.4 Employee Categorisation

An answer to the limited attention described by Marde (2015) is the categorization of managers and employees by Boiral (2003). Boiral (2003) groups managers and employees tasked with implementing and maintaining an ISO certified management system into three separate groups according to their opinions and attitudes towards the implementation of the standard: ceremonial integrators, quality enthusiasts and dissidents. The study contributes by showing the relatively modest support for ISO 9000 among employees in organizations; where the standard is in many cases regarded as an “iron cage from which many employees attempt to escape” (Boiral, 2003). Boiral (2003) also states that the method generally used in articles, where a manager is interviewed, is biased, since the manager often is optimistic and tries to legitimise their choice of implementing ISO. Another bias caused by this method is that the perception of the standards is generally seen as homogenous within a company, however, this article has identified that this is generally not the case, hence the three groups of people. Boiral (2003) also found that neither the size of the company nor the type of standard made any large difference to the respondents’ answers. Boiral (2003) states that the fact that the quality enthusiasts are only a third of the respondents indicates that it is hard to get the support and commitment from the employees. Boiral (2003) states that ISO is becoming a tool for differentiating, hence improving their image and competitiveness. See Table 2.4 for a summary of the characteristics of each category described by Boiral (2003).

Table 2.4. Characteristics of employee categories (Boiral, 2003).

Category	Characteristics
Quality enthusiasts	<p>About 33% of the respondents.</p> <p>50% of the respondents in the industrial sector.</p> <p>20% of the respondents in the service sector.</p> <p>Believe ISO 9000 to work well as a tool for implementing effective quality management.</p> <p>But believe that it is not enough with only the standard, more actions need to be taken. They are aware that one can pass the certification without providing particularly good quality. It is of great relevance how the system is implemented.</p> <p>Being convinced of the importance of quality management for the effectiveness of the implementation.</p>
Ceremonial integrators	<p>About 40% of the respondents.</p> <p>Believe the adoption is done to meet external demands of such a standard.</p> <p>Do not generally perceive the standard to be a useful tool for the company.</p> <p>They feel like they did not choose the standard and “now we are trying to live with it”.</p> <p>Believe it is, above all, a marketing tool.</p> <p>Try to implement the system in a superficial way and change as little as possible in their daily work.</p>
Dissidents	<p>20% of the respondents.</p> <p>Were clear in their disagreement with and opposition to the standard. Did not even try to build up a facade or superficially implement in any way.</p> <p>Perceive the standard to negatively affect management. One reason is perceiving reduced flexibility.</p> <p>Do not perceive the advantages to be certain, to a degree where it will not be beneficial to implement the standard.</p>

3. Methodology

In this chapter the methodology on which the research is built, is described.

3.1. Scientific Method and Theoretical Model

The nature of the relationship between research and theory differs from study to study, with the most common distinction being between inductive theory and deductive theory (Bryman and Bell, 2003). In this study, hypotheses were deduced based on previous research. The hypotheses were translated into operational terms which in turn were put to test using empirical data. As such, the research is classified as deductive based on the definition by Bryman and Bell (2003): “An approach to the relationship between theory and research in which the latter is conducted with reference to hypotheses and ideas inferred from the former”.

The study was based on four formative constructs, each measured through three to six indicators and one reflective constructs, which was measured through four indicators. A model of the construct is seen in Figure 3.1. As a formative construct, the individual items that were used for each latent variable, were not supposed to be dependent on each other. An understanding of the employees’ attitude towards the adoption was hoped to be achieved through questions regarding the most common benefits and difficulties described in the literature regarding ISO 9000 adoptions and the perception of the standard at the company. The construct Motivation was added based on the found theory that suggested that certain kinds of motivation would be more beneficial for the intention to implement the standard than other.

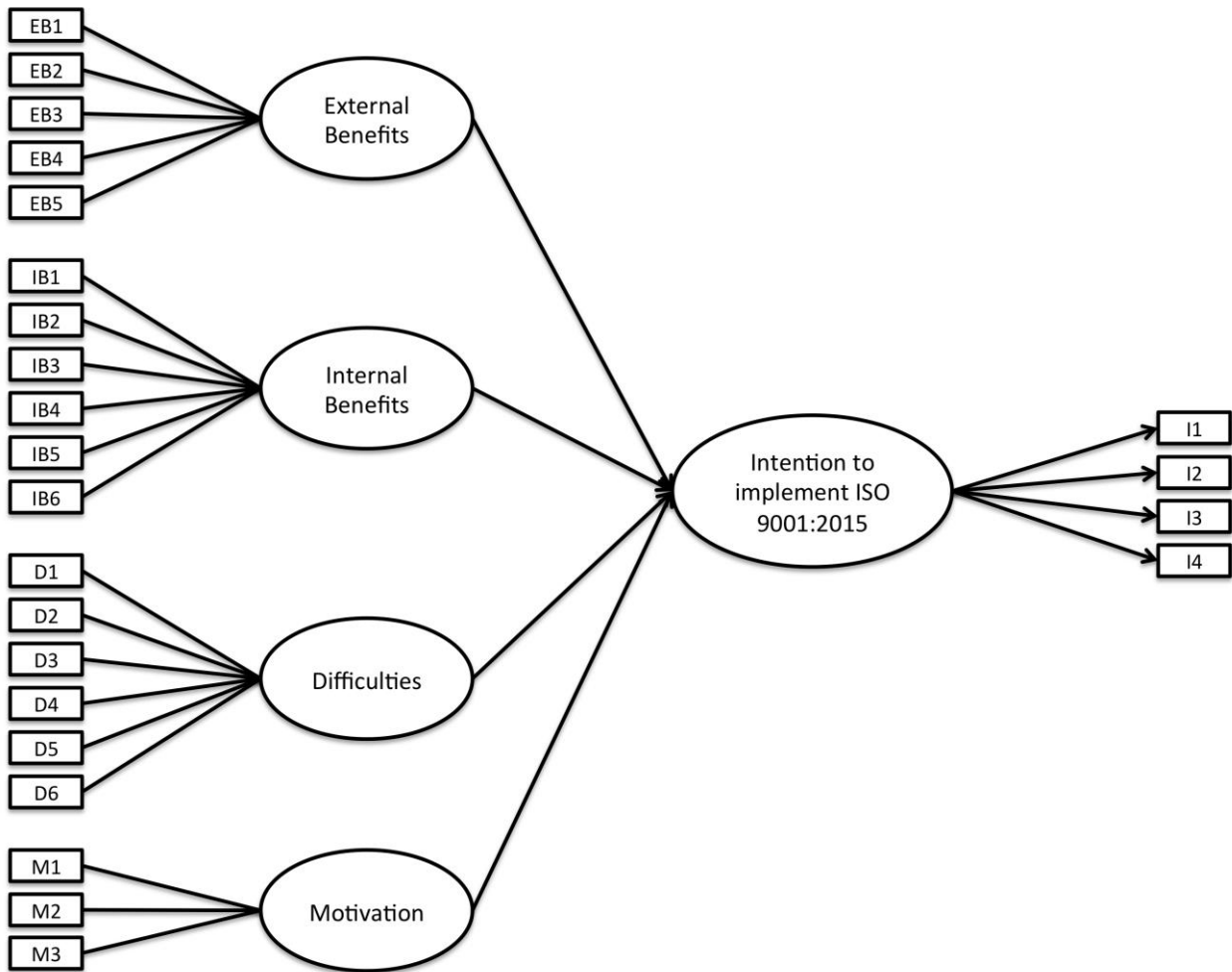


Figure 3.1. The formative construct of the survey

3.2 Research Strategy

Qualitative and quantitative research were combined in this study in the regards that both qualitative and quantitative data were collected from the performed survey. The different sets of data were not used in order to analyse the same issue, but instead used as complements. The qualitative data were used to classify the employees and determine the change that each individual showed as they were interviewed, while the quantitative data were primarily used to find an association between the constructs enablers and results. Combining qualitative and quantitative research is a somewhat controversial topic and arguments have been made against it based on that quantitative and qualitative research are two separate paradigms and that research methodologies carry epistemological commitments (Bryman and Bell, 2003). However, through the technical version of combining qualitative and quantitative research brought forward by Bryman and Bell (2003), the two methods were viewed as compatible and are therefore used in this study to complement each other.

3.3 Literature Review

To find a suitable area of research for this report, to guide the course of it and to position it among the existing literature in the field, a literature review has been conducted and presented in Chapter 2. The literature review was also conducted in order to create framework that can be used to analyse the results presented in Chapter 4. During the construction of the review the goal was to provide a framework that could provide answers to the hypotheses. This approach towards the literature review is in line with what Bryman and Bell (2011, p. 93) describes as recommendable, in order to make the review become more substantive.

The literature was conducted by using different sets of keywords in mainly three online search engines, which are Summon provided by Chalmers Library, Web of Science and Google Scholar. The most commonly used keywords were:

- Develop management system
- Develop management system ISO 9000
- ISO 9000 benefits
- ISO 9000 drawbacks
- Intention to adopt ISO 9000
- Motivation to adopt ISO 9000
- SME ISO 9000

The first filter used on the results provided by the search engines was to only show journal articles. In order for the journal articles to be of relevance and not being obsolete, articles of a maximum age of 20 years has been preferred. After this sorting out, a search for interesting titles and abstracts was conducted. If an article was found to be of use to the report, the impact factor of the journal in which it was published was checked and the article would be approved if the impact factor was equal to or above 1. An impact factor of 1 was used as a rule of thumb, in order to try and ensure quality and relevance in the field. However, should the article be considered to be useful to the report even though its journal's impact factor did not reach 1, it could still be used if the main author of the article was considered to be influential within the field of the article. After this each article was read through in more detail and its relevance to this report was once again examined. Finally, all articles that were considered to be useful to the report were summarised, and the summaries were used to build up a skeleton of the framework. A summary of the literature search can be seen in Figure 3.2.

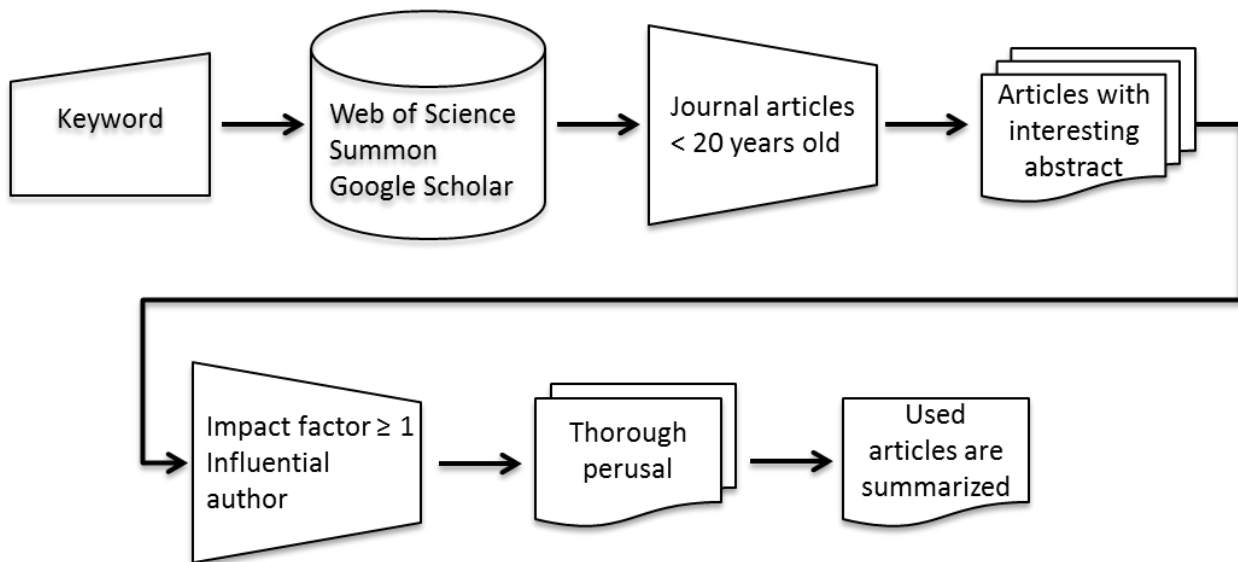


Figure 3.2. Visualisation of the search path used during the literature review

3.4 Participatory Research

Participatory research is a research method, which primarily differs from conventional research in “the alignment of power in the research process” (Cornwall and Jewkes, 1995), in that the local people, instead of the researchers, take part in research process stages such as problem identification, data collection, interpretation and analysis (ibid). The usage of the findings forms the basis of the distinction between conventional and participatory research, and questions such as “by whom are the research questions formulated?” and “by whom will the findings be used?” are used to determine whether the research is participatory or conventional.

The participation of the local people can be classified with increasing level of participation as contractual, consultative, collaborative or collegiate (Cornwall and Jewkes, 1995). Theoretically, participatory research should be situated at the collegiate level, however, participatory research rarely, or never, reaches these ideal cases and instead studies that are entirely scientist led, designed, managed and with contractual levels of participation pass as participatory (Cornwall and Jewkes, 1995). The latter is a trait shared with conventional research as most conventional research is contractual. The issue that differentiates participatory research from conventional research is thus not the method itself but the methodological contexts of the applications. One common difference is that while conventional research is often based on rigid linear designs, participatory research is often characterised as flexible, reflexive and iterative. An additional difference between the two is the view on the method that is used

in the research. In participatory research, the method is seen not only as a mean to reach the desired end of a study but also as a possible end in itself (Cornwall and Jewkes, 1995).

The workshops performed during this master's thesis research has been performed in accordance with this research method. The following section describes the procedure used for the workshops in detail.

3.5 Workshops

The workshops have been performed in order to create handbooks for each department at the case company, as well as process overviews. The purpose of the handbooks is to support the employees at the case company in both the daily and rarely occurring tasks, as well as supporting new employees during their introduction. These handbooks and the process overviews, which are filled out, will also serve as documentation of the different aspects of a process that are required by Section 4.4 in the ISO 9001:2015 standard to be decided and documented. The ISO 9001:2015 standard does not specify how the management system should be documented and producing handbooks is the method chosen at the case company. Creating the handbooks and the included process overviews is, thus, one important step for the case company in their process of becoming ISO certified, as they are each department's part of the management system.

The workshops, which have played an essential role in the interaction with the case company, have all been conducted in a predetermined and standardised manner. This was done in order to reduce the risk of different employees facing different kinds of interaction, i.e. in order to keep the interaction as uniform as possible. If not a standardised procedure had been used, the results from the conducted survey would have been even more dependent on the specific interaction with that respondent. The workshops described below have been divided into three steps. Each step might consist of more than one session being performed at different occasions. The workshops have been conducted according to the next paragraphs and are visualised in Figure 3.3.

Step 1

During step 1, extraction and listing of different tasks for each employee, by reviewing their respective job description, initiated the workshop. Tasks that were missing were added and tasks that were no longer performed were removed. The listed tasks were then ranked in regard to their importance and how large part of the daily operations they constituted. The ranked list of activities represented the order, in which the different tasks were to be covered

during the workshop. The listed tasks were then mapped as flowcharts, if possible, on a whiteboard or similar. Through an iterative process, the steps and their order were examined until they were considered to give a good representation of what was being mapped and the level of detail was satisfying. Each step of the tasks was also explained in more detail to a level that was considered satisfying. The level of detail was considered satisfying when it was enough for a newly employed person, with similar background as the current employee, to be able to perform the task with only the description at hand. It should be emphasised here that it was not the intention of the researchers to in any way improve the different tasks that were discussed. The workshops were only used to describe exactly how the different tasks was done today.

Simultaneously, at least one process overview sheet was filled in for the tasks. By filling out the process overview sheet, the employee needs to think through the resources, competencies, methods and documentation that are needed to perform the tasks, how to know if the task was performed successfully, the purpose of the performed tasks and what other processes outside their tasks that they interact with. To see the template used for the process overviews, see Appendix 3. After this step, having been finished, after one or more sessions, the actual workshop was finished. It should also be stated that this session is the longest regarding the amount of time being spent on it, and in some cases step 1 has been spread out over more than one occasion, due to the time required to cover all tasks for that department. Following the meeting with the responsible employee and the CEO, all data was compiled into digital flowcharts, written descriptions of tasks and process overviews, by the workshop leaders.

Step 2

During the process of compiling the data, it was often found that parts of the data needed to make a complete handbook were either missing or unclear. These missing or unclear data resulted in a list of questions, which initiated step 2 of the workshop. Step 2 of the workshop was an iterative step, where either questions, regarding missing and unclear information, were asked to the responsible employee or feedback was given by the same person. This was then followed by refinement or correction of the handbook and its corresponding material, resulting in a new draft of the handbook. The corrections that had been made were then followed by additional questions from the workshop leaders or feedback given by the responsible employee, followed by yet another draft. This iteration continued until the material had reached the desired level of detail and accuracy.

Questions were in general asked during a shorter session with the responsible employee and the workshop leaders, and were mostly of a specific nature. On some occasions, shorter and less complex questions were asked via email. Feedback was in general given as a result of the workshop leaders requesting it from the responsible employee. The workshop leaders would then hand over the current draft of the handbook in paper form, giving the responsible employee a number of days to review and consider any changes to the entire or parts of the handbook. The feedback could regard anything from corrections in task descriptions to layout improvements, e.g. in what order the tasks were presented. Since the handbooks are created in order to be helpful to the employees working according to it, this kind of feedback is of great importance to the development of each handbook. Therefore, the feedback was always reviewed by the responsible employee in person during a separate session, where the feedback was explained.

It should also be noted that on some occasions there have been more informal meetings, such as asking a small number of specific questions or receiving very short feedback, in between the previously described sessions. This means that not all interaction was arranged in a formal way.

Step 3

During step 3, the final draft of the handbook was presented to the responsible employee at that department and the CEO. During this session, any final modifications were done and recommendations on how the employees could continue working on it in the future were discussed. Shortly after this session, the finalized version was handed over to responsible employee as well as the CEO, and the workshop for that particular department was considered finished.

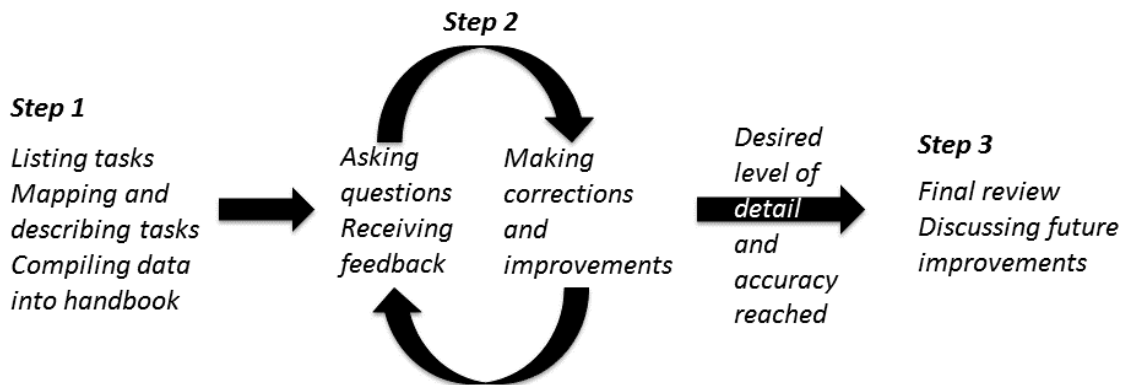


Figure 3.3. A visualisation of the different steps of the workshops.

Participants during step 1 and step 3 were employees responsible for the specific department, the CEO and two workshop leaders, who also are the two authors of this report. Involved in step 2 were the responsible employees and the two workshop leaders. The reason for the CEO not to be part of step 2 is that the questions asked and the feedback given during this step were of a very specific nature, whereas the CEO possessed a more general knowledge of the different departments and their processes. For a visualization of the participants, see Figure 3.4. Note that the proportions between the different parts of the columns do not correlate with the performance or importance, or any other factor for that matter, of that actor participation in that step. It solely is a matter of a binomial value where the actor is either participating or not participating.

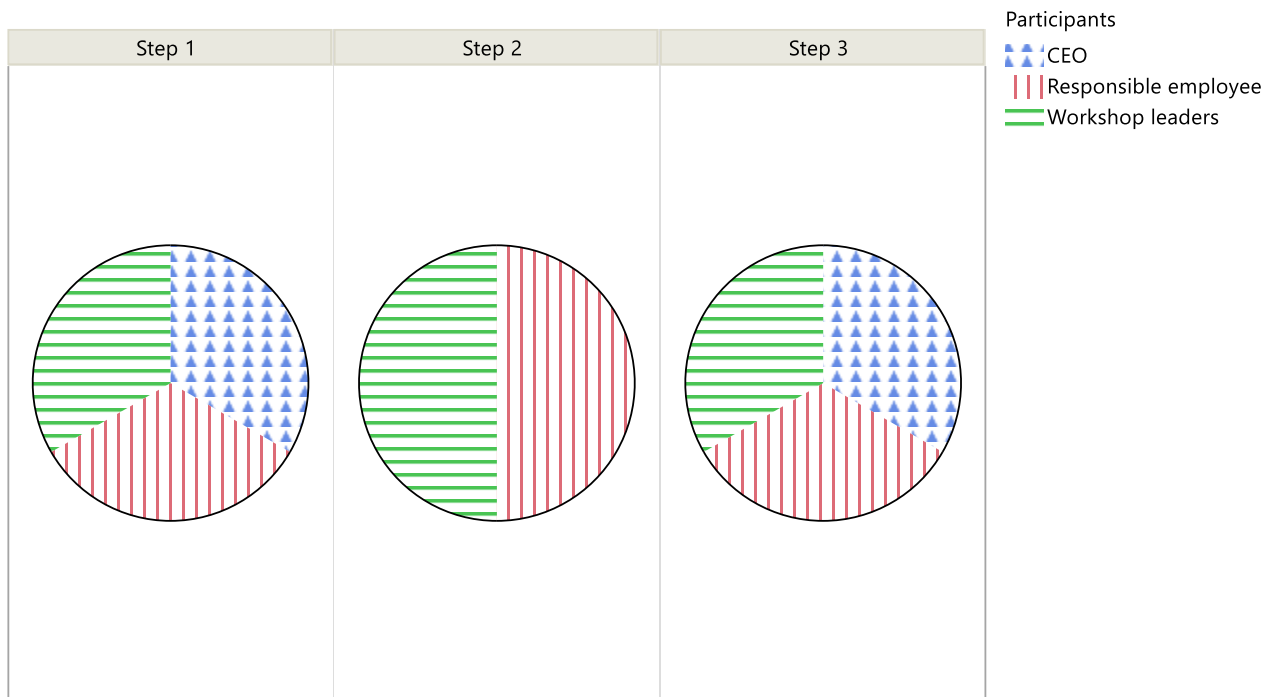


Figure 3.4. Showing the participants during the different steps of a workshop

3.5.1 Example - Administration and Office Management

In order to provide the reader with an idea of what the process of developing these handbooks can look like and to simplify the re-enactment of these workshops, a description of the procedure of the making of the handbook for the Administration and office management department follows below.

Step 1

The development of the handbook for the Administration and office management department was initiated by the workshop leaders conducting a meeting with the employee responsible for that department as well as the CEO. The session started off by reviewing the job descriptions for the positions at the department and extracting all tasks that were to be performed and written. The tasks were then discussed among all participants at the meeting, and the tasks that no longer applied to that department were removed and any missing tasks were added. This resulted in a list of all the tasks that were to be covered in the handbook, and these were then ranked in the order they were going to be covered during the workshop. In this case, the ranking was done in accordance with the tasks' part of the total workload of the department.

When the listing and the ranking of the tasks were done, the responsible employee was asked to describe each of the tasks, one by one. For the tasks that this was possible, this started by mapping the different tasks as flowcharts on a whiteboard. At the same time as the flowcharts were constructed for each task, the procedure of each flowchart was described verbally by the responsible employee, and notes were taken by the workshop leaders. When mapping and describing each task and the steps of each task, what had previously been described was continuously reviewed and discussed by all participants at the meeting, in order to ensure that this gave an accurate description as well as a desired level of detail of the tasks.

During the mapping and describing of the different tasks, the workshop leaders had started working on a first draft of the process overview used to describe the department in accordance with the requirements in ISO 9001:2015. This draft was then filled out further with the help of the responsible employee for the department as well as the CEO. When the process overview was filled out, the first session of constructing the handbook was finished.

Step 2

When the first session had been finished, the two workshop leaders transcribed all information gathered during the first session by drawing digital flowcharts along with writing down the description of each task and transcribing the process overviews from the drafts previously created. During the process of transcribing all data, a number of questions arose, regarding both missing and insufficient data. These questions were then asked and discussed during a second session together with the responsible employee at the department. Minor changes were done during the second session and the more extensive changes were done afterwards, after which all data was compiled into a first draft of the handbook. This draft was then handed over to the responsible employee for about three days, during which the employee reviewed it and wrote down feedback. The feedback regarded both accuracy of the data and the order the data was presented in, and was went through and discussed during a third session. Similar to the previous session, minor changes were done instantaneously and the more extensive ones were done at a later time.

Step 3

The corrections made after the previous session's feedback, resulted in the final draft of the handbook. This draft was then presented and once again gone through during a meeting with the responsible employee at the department as well as the CEO. Apart from a few final improvements that were made in the handbook, the way forward with improving the handbook

was discussed as well as how the employees, working with this document and its different parts, hereafter should approach and use it. After this final session, the finalised, first version of the handbook was handed over to the responsible employee, who would then start working according to it.

3.6 Survey

In order to answer the research question and to investigate if any change in the perception of ISO could be identified, data needed to be collected throughout the research. This was done through the use of a survey (Appendix 1). Since the research hypotheses include the notion that the employees' perceptions of ISO, and therefore also their intention to adopt ISO, would change during the time they worked with ISO during the design phase of the new management system, the authors decided to conduct two points of measurement for each respondent, one right before the first occasion of the workshops held with the employee and a second point of measurement shortly after the authors' work with that employee was ended. This was done in an attempt to decrease the risk of any other factor affecting the employees and changing their perception of ISO. The course of the survey is described in Figure 3.4.

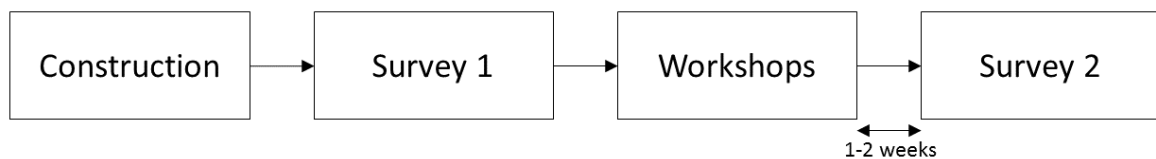


Figure 3.4. The course of the work with the survey

To collect the data needed for this research, a survey was conducted at the case company. The survey was conducted through semi-structured interviews and provided the authors with both qualitative and quantitative data. This data was then used as the foundation to draw conclusions about the employees' perceptions and attitude towards ISO and how that may have changed over time.

3.6.1 Construction of Survey

Since it is relatively simple to show any existence of change in quantitative data compared to qualitative, it was decided that a questionnaire where the respondent could grade each statement was going to be used. However, since the case company is rather small and the sample included in the survey therefore only constitutes of five employees, it would be difficult to get any statistically significant change unless the change was very large for a relatively large

number of questions. Since the authors, prior to constructing the survey, suspected that change would only occur on a smaller number of questions and would not be generally radical, it was decided to also gather qualitative data through the survey. As described by Bryman and Bell (2011), this mixed methods research would then allow the authors to triangulate the data and to provide a better foundation for the analysis of the data. Further benefits with using mixed methods is that the survey is not solely reliable on quantitative data, and any change in the quantitative data could be confirmed by comparison with the qualitative data.

Constructing the questions for the survey was done based on the literature review. During this part of the literature review, the authors were, first of all, investigating whether or not a similar survey had been previously conducted and presented in any journal article. This was mainly done in order to get reference points on how these survey questions preferably could be formulated. Secondly, articles covering the different benefits and difficulties associated with ISO adoption as well as different motivational factors and the underlying intention to ISO adoption, were reviewed. This review led to the choice of the systematic review of Boiral (2012a) as a base for the benefits and difficulties that were included in the survey, as it was deemed encompassing enough.

During the final stage of the literature review, the authors also conducted a prestudy in order to cross-check whether or not the questions derived from the literature study were reasonable. The prestudy was conducted on a random set of employees at the case company. The prestudy was in the form of an open interview during which the authors asked for imaginable benefits, difficulties, intentions and motives for an ISO adoption. The prestudy reaffirmed some of the questions that were found in the literature, and also led to the addition of some new questions. Results from the prestudy is presented in Appendix 4.

After having completed the literature review for the survey and the prestudy, the questions were compiled into a questionnaire. The questions were grouped into five categories: external benefits, internal benefits, difficulties, motivation and intention. The questions were answered through a Likert scale ranging from '1 to 5' with '1' signifying full disagreement and '5' full agreement. The groups were divided into enablers and results; external benefits, internal benefits, difficulties and motivation were classified as enablers while intention was classified as the result.

3.6.2 Conduction of Interviews

Each point of measurement of the survey was conducted through a semi-structured interview, where the authors read out the statements one by one from the questionnaire and for each statement asked the respondent to grade their answer from 1 to 5, in accordance with the previously described scale. In connection with grading each statement, the authors would also ask the respondent to give a motivation to the grading. Further, if any topic that was considered to be of interest to the survey was brought up, the respondent was asked to elaborate on that. The quantitative data collected using Google Forms and the qualitative data was recorded. After each interview, the recording was reviewed and the main points of each motivation and explanation was transcribed. The respondents were not shown their initial scores during the second interviews.

3.7 Data Analysis Method

The data collected through the survey was used for primarily two purposes; categorising each respondent according to the classification system presented by Boiral (2003) and to identify any change in the respondents' perceptions of the standard and adoption of it.

In order to investigate the changes on an individual level, each respondent was analysed as a separate case. For each case, the respondent was first categorised as a quality enthusiast, ceremonial integrator or a dissident according to Boiral (2003), which was based on the qualitative data from the first interviews of the survey. Potential issues with this situation was analysed based on the theoretical framework. Changes in the qualitative data from the first to the second interview were investigated and their potential for influencing the implementation was analysed. When doing this only changes that represent an opposite perception of the adoption or might have a different impact on the adoption was considered a significant enough change to be covered. By doing this, any insignificant changes, which are irrelevant, are avoided. Based on the second interview, an additional classification of the employees was made. The individual findings were summarized into a common analysis of all respondents from which implications for the company was derived.

The survey data, which was collected through Google Forms, was analysed using a combination of Microsoft Excel 2016 and JMP Pro 12. JMP was primarily used to construct graphs and figures while most calculations based on the data was made using Excel.

3.8 Reliability and Validity

Reliability refers to whether the results of the study are repeatable (Bryman and Bell, 2003). Three factors that are involved when determining whether a quantitative measure is reliable or not, are stability, internal reliability and inter-observer consistency (Bryman and Bell, 2003). Stability is concerned with to which degree a measure changes over time. In this study, the purpose was to study change over time and it was therefore important to have a stable measurement. With unstable measurements, changes would not have been able to be attributed to changes in the employees' perception. Stability was ensured through the choice of survey questions which is described in Section 3.6. Internal reliability refers to whether measures that make up an index or a score are consistent, e.g. if scores on different questions in a questionnaire are related to each other. The final factor, inter-observer consistency (also referred to as internal reliability in qualitative context), refers to the risk of inconsistency that can arise when multiple observers need to use their subjective judgement when taking decisions, for instance translating data into categories (Bryman and Bell, 2003). This aspect was a concern during this study as two people were doing the classifications of the employees and analysed the changes that the employees displayed. To combat the risk of inconsistencies, both authors read each other's work and frequently discussed the findings.

The reliability of the qualitative result was analysed using the two aspects external and internal reliability. External reliability refers here to the whether the study could be replicated, which often is difficult in qualitative research (Bryman and Bell, 2003). However, a replication of the study should be possible through a future researcher adopting a similar social role as the authors of this study. Internal reliability is, as noted earlier, a similar notion to inter-observer consistency, and was treated in a similar way. The overall reliability of the study is considered to be quite limited, which is seen as a consequence of the chosen method.

Validity refers to the issue whether a measure of a concept really do measure the concept (Bryman and Bell, 2003). A distinction is made in qualitative research between internal validity and external validity. Internal validity relates to whether there is a good match between the observations of the researcher and the produced theory while external validity relates to the generalisability of the findings (Bryman and Bell, 2003). Due to the long time spent at the case company and the thereby extensive knowledge achieved through interaction with the people in the studied sample, the internal validity is assessed to be good. The external validity on the other hand is assessed to be insufficient based on the limited sample size.

In quantitative research, a distinction is made between a number of different types of validity, e.g. face validity, concurrent validity and predictive validity (Bryman and Bell, 2003). In this study, a triangulation with the qualitative data was used to cross-check the findings of the quantitative study, as mentioned in Bryman and Bell (2003), which showed that the quantitative study resulted in the same findings as the qualitative study.

4. Results and Analysis

This chapter is divided into five cases and presents the essence of the empirical data gathered in the survey, i.e. the answers to the questions in the survey (see Appendix 2), as well as the authors' experiences at the case company. Each case is initiated with a categorisation of each respondent according to the groups presented by Boiral (2003). This is then followed by a presentation of all identified changes in perception. The impact of the categorisation and corresponding changes on the potential effectiveness of the adoption is then analysed. The abbreviations that have been used throughout the presentation and analysis of the data are explained in Table 4.1 below. This is then followed by the quantitative result that is presented in Figure 4.1.

Table 4.1. Coding system. Abbreviations used in the text

Abbreviation	Description
EB1, EB2... EB5. IB1, IB2... IB6. D1, D2... D6. M1, M2, M3. I1, I2, I3, I4.	<p>Is used to refer to a question where the letters indicate the category of questions and the numbers indicate which question in that category is referred to.</p> <p>EB: external benefits IB: internal benefits D: difficulties M: motivation I: intention</p> <p>For example, EB5 represents the fifth question regarding external benefits.</p>
E.g.: M1-1, IB3-1, EB2-1.	<p>Is used to refer to an answer to a specific question and during which interview. The part of the code in front of the dash is the question code and the number after the dash represents which of the two interviews the answer is from. For example, IB3-1 represents the answer to the third question regarding internal benefits during the first interview.</p>

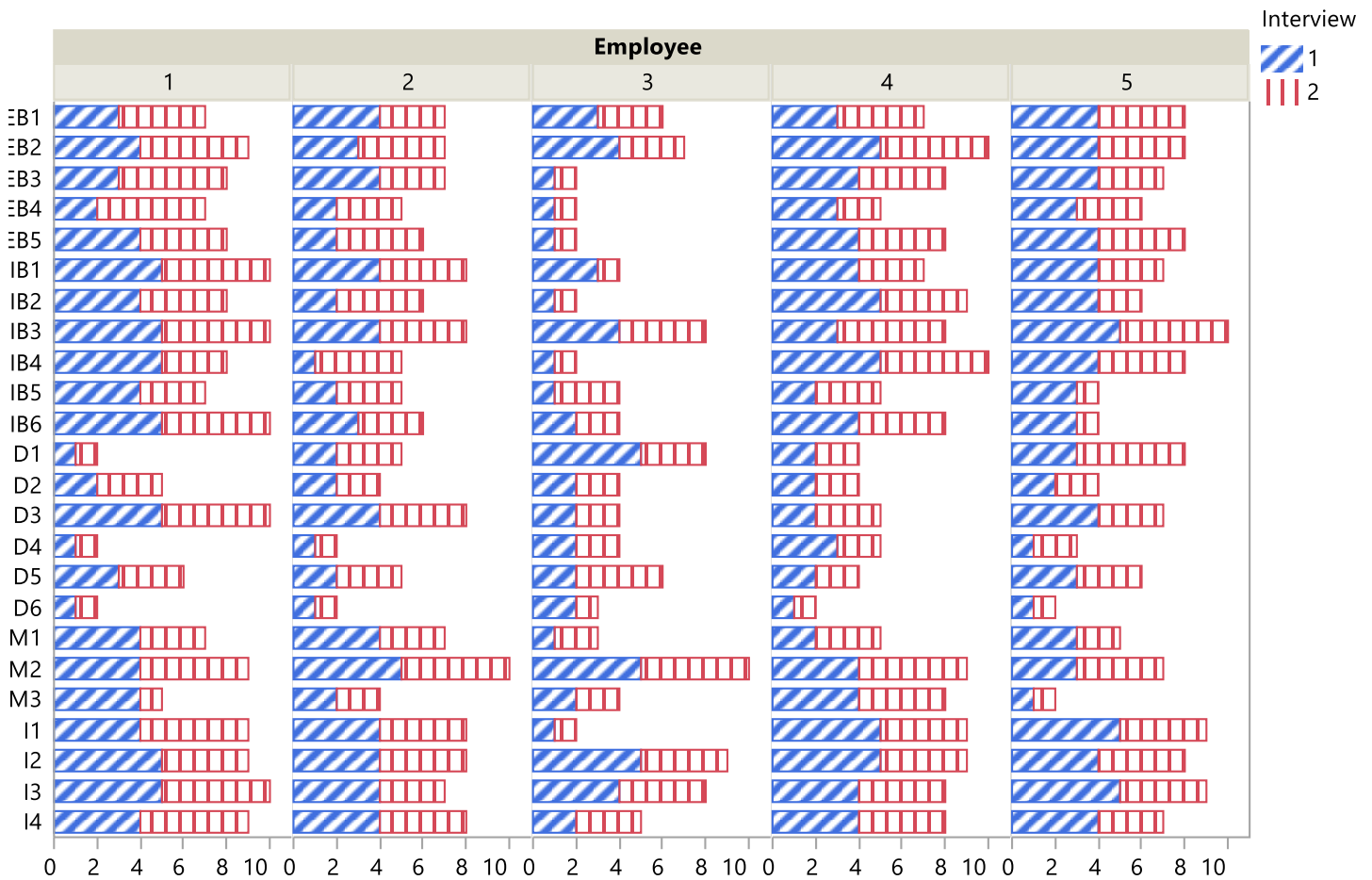


Figure 4.1. The result of the survey. Each column shows the answers of one employee each, and each row represents each question. The two interview occasions are represented by different colours and patterns

4.1 Case E1

In this section the case covering respondent E1 is presented.

4.1.1 Categorisation

E1 distinguished themselves from the rest of the employees through only having been at the case company for one week by the time of the first interview and having recently worked at a company with both ISO 9000 and ISO 14000 certifications. The first led to some uncertainties during the first interview regarding the background to the decision to implement ISO 9000:

“I have been here for far too short time to have an idea of that, to be honest. /.../ It is possible that there might be someone who pressures, it is possible that there are some jobs that we cannot take, and then we’re pressured. I believe that there might be wishes, so I will have

to agree on it. I believe that the parent company might also pressure us on doing it here in Sweden.” (M1-1)

“I have been here for far too short time to know the structure in the company or the wishes. I think there probably is. If I only get to guess, I believe that there are two reasons for it. I believe that the reason is that one wants to show it to the outside to be able to take shares, i.e. be able to take part in turnkeys where it is demanded as a must, and the second reason that I also believe in, and I believe these two go hand in hand, is that the management wants to go through with this. I believe that these two are equally strong. One is about business and the second is about ‘we have this requirement on us and then we must do it’.” (M3-1)

The previous experience with ISO 9000 and the surrounding structure seemed to have left a positive mark and instilled E1 with optimism, as seen in the comments to E1’s desire to work with ISO and that ISO would bring value to E1:

“Yes, I want to. I think quality assurance is good, I think it’s good to follow the regulations etc., which it includes, even if that is not only 9000 but also environment and that bit as well, I think it’s good. /.../” (I1-1)

“I assume that, in my way of working. /.../ I do not know what it will do for my way of working here... I cannot know it today, but I hope so. “(I4-1)

This optimism could also be seen in the assessment of the benefits that the case company would get with the certification. Examples of the benefits that E1 saw with the implementation includes improvements in productivity and quality assurance, which would lead to a higher quality.

“Yes, I agree completely [with improved productivity]. /.../ Because one should analyse and reach a common opinion. It means that you will not sit and build the same things each time. You will not sit and fight in each respective corner and do it in different ways but have a straight and good method.” (IB1-1)

“Yes, I think so. I think it [the quality] is high today, but I still agree, since we will assure the quality in a better way.” (IB2-1)

The answers to the motivational questions indicates that E1, like the ceremonial integrators of Boiral (2003), was primarily concerned with the pressure that was being put on them from external parties and did not believe that there was much demand for it within the company, except from the management. However, E1 actually saw potential for improvement

through implementing the standard, as indicated by the high scores that most of both the internal as well the external benefits got, which is a characteristic of a quality enthusiast. Other characteristics of ceremonial integrator, such as not believing that the standard would be a useful tool and trying to avoid any changes in their daily work were not applicable to E1 which indicates that E1 is a quality enthusiast.

4.1.2 Changes in Perception

After having participated in the workshops, E1 have shown change in perception in a number of areas. Even though, E1 only having been employed for one week at the time of the first point of measurement, most of the changes are not considered to be due to the respondent having been employed for a longer time when the second interview was performed. This is due to that most of the changes have been identified in areas of a more general nature, i.e. are not company specific.

According to E1’s answers, changes in the content were identified in the perceived effect ISO 9000 will have on market share (EB1), company ability to protect the environment (EB4), satisfaction of governmental policies (EB5), increased quality of products and services (IB2), resources spent on audits (IB4), the economic viability of the implementation of the system (D5), pressure from top management to adopt ISO 9000 (M2), the internal demand to adopt ISO 9000 (M3) and E1’s willingness to work with ISO 9000 adoption (I1). In Table 4.2 the corresponding answers to each of these questions are presented.

Table 4.2. The discovered changes for E1.

Question	Before workshop	After workshop
EB1	“An ISO certification is good in the sense that you are following something that has been generalised. That one increases their documentation and follow up. I think that is perceived to be positive. But in the end, one knows that in business money is decisive.”	“I believe that it will increase and above all strengthen the ones we already have, make us stronger as a company, and I also believe that we will gain new market shares.”
EB4	“The environment is included, but is not as strong. Doubtful. You simply do not have as strict requirements in 9000 as in 14000.”	“Yes, I believe so.”

EB5	<p>“I believe that we are doing this today. But in case we are not, I think that thanks to the structure we will create and spread out in the organisation, this will be dealt with and prevented.”</p>	<p>“This is a very difficult issue, since it is entirely dependent on an individual level of the employees. Laws, regulations and morale are about something personal.”</p>
IB2	<p>“Yes, I think so. I think it is high today, but I still agree, since we will assure the quality in a better way.”</p>	<p>“Yes, I think so. I think that once the standard is embraced throughout the company it will improve. Ultimately, shortcut or not shortcut? The internal compass is where the decision is made.”</p>
IB4	<p>“It should be so clear that you do not feel insecure and do not have to check more than what we are presenting.”</p>	<p>“No, I do not think so. I believe that audits will still be important. This is just a documentation and a way of showing how we are working, controlling how we are working, and audits will and should always occur. You still have to perform audits and reviews.”</p>
D5	<p>“System design costs, it costs to be part of it and to be compliant. Of course, there will be costs. On the other hand, it is hard to say something against it yet, because we do not know what we can benefit from it. Whether or not it will be a cost or profitable, time will tell.”</p>	<p>“Initially, yes, but not in the long run. Obviously, all follow-up and documentation will increase the costs. What is the economic benefit in this? That we are doing it right, from the beginning. So, on the other hand we can save money that otherwise would have been wasted.”</p>
M2	<p>“I think that there at least exists a wish for it, but I do not know whether or not they are pressuring us into it.”</p>	<p>“Yes, I think so. There exists an internal pressure within the entire company group that we should have this.”</p>
M3	<p>“I think there probably is.”</p>	<p>“No, I do not think so [laughter]. I have a very hard time imagining that. Internally, I think that, of course, there likely is someone or a few who want to do this. But in general, people think it is troublesome with new things, with change.”</p>

II	<p>“/.../ I am not familiarised enough to know the flexibility when working with it. I am used to working by a structure that is built upon it, but then other people already had valued and designed it.”</p>	<p>“I think it is good. I believe in a common view, not only when it comes to our way of working, but in general. Both when it comes to the quality in ISO 9000 and when it comes to the environment in ISO 14000.”</p>
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When regarding an increase in market share, E1 stated that money is the decisive factor in projects. After the workshops, E1 believed that the market shares would increase and in particular strengthen the already existing ones. Hence, E1 is regarded to believe more strongly in this after the workshops.

About the case company’s ability to protect the environment, E1 believes that some attention to the environment is included in ISO 9000. After the workshop, the answer had changed into being a definite statement indicating a strong belief in an increase. Hence, E1 changed into being more convinced about this.

When asking about the company’s satisfaction of governmental policies, E1 originally stated that the structure in the company, resulting from the ISO 9000 compliant management system, will help improve this. During the second interview, E1 believed that this is a highly individual matter and states that there will always be room for individuals to act on their own judgement. Therefore, E1 is regarded to have changed into believing less in this having to do with the new management system.

Like the previous, E1 changed into consider the quality on the company’s products and services to be an individual matter. E1 originally answered that the improved quality assurance will improve it. Subsequent to the workshops, E1 answered that they believed that, in the end, it will be an individual issue.

When regarding the potential benefit of decreasing customer resources spent on audits, E1 originally stated that the clarity of the new management system should help improve this. However, during the second interview, E1 said that they believed that auditing still will be of importance to the customers. Thus, E1 does not seem to believe as strongly in this subsequent to the workshops.

When discussing the potentially increased costs that the adoption might result in, E1 is not sure whether or not the increased costs will be compensated by the increased efficiency.

However, during the second interview, the same costs were discussed but E1 expressed a stronger belief the adoption being profitable. Hence, E1 changed into expressing a stronger belief in the profitability of the adoption.

E1 also showed a change in their perception of the pressure from top management to adopt the management standard. Before the workshops, E1 did not believe there to be any pressure, but rather a wish from top management. However, after the workshops E1 clearly stated that they sensed a pressure from above.

The change in answer in the previous question is reflected in the answer regarding the internal pressure to adopt ISO 9000. E1 originally stated that it was possible that an internal demand existed. During the second interview, E1 expressed the opposite opinion, i.e. that an internal demand more or less did not exist.

On the question asking whether or not E1 wants to work with ISO 9000, E1 clearly expresses their willingness during both interviews. Before the workshops, E1 also mentioned that the willingness was dependent on whether or not the flexibility of the system was set by someone else or not. Since E1 thought that this was going to be set by someone else, it was hard to estimate the effectiveness of the adoption. After the workshops, E1 was instead stating that they regarded it to be beneficial for the system that it was based on everyone's gathered view on quality.

4.1.3 Analysis

Regarding the categorisation of E1 and the possible impact on and contribution to the effectiveness of implementation that can be derived from this, there are a number of points that can be discussed. First of all, generally E1 has a good attitude towards ISO 9000, as E1 perceives many of the potential benefits, by scoring highly on these in the survey as well as seeing high value in the structure that the system will bring. These aspects indicate that E1 has a high willingness to work in accordance with ISO 9000 and will contribute to a successful adoption. This is also confirmed when E1 answers question I1. However, even though E1 has high motivation to achieve a successful adoption, E1 does not perceive the majority of the co-workers to share this motivation. Instead, E1 perceives that most of the pressure and motivation to adopt ISO 9000 to come from top management and some customers. These motivational aspects are, however, likely to have a large impact on the internalisation and the effectiveness of the implementation (Heras-Saizarbitoria, 2011; Poksinska, 2010; Sampaio et al., 2012). As stated by Brown et al. (1998) as well as Nair and Prajogo (2009), mainly experiencing a pressure

from top management might affect the way the system is implemented negatively, leading to lower internalisation and, in turn, a less effective implementation. As there should be a balance between internal and external demand for the adoption (Boiral & Amara, 2009), where the internal demand should be the strongest (Brown et al., 1998; Boiral & Amara, 2009; Nair & Prajogo, 2009; Psomas et al., 2010), E1 would benefit from experiencing more willingness and motivation from their colleagues as well as not being as heavily exposed to top management pressure.

The changes in opinion that E1 has shown after participating in the workshops, can tell whether or not the impact on E1 is positive or negative. The enablers regarding market share, protection of the environment, perceived costs of the system, satisfaction of governmental policies, the quality of products and services and audits are hard to evaluate individually, but they can give an indication of how willing the respondent is to adopt ISO 9000. Since there are both positive and negative changes among the previously mentioned, these can be said to balance each other out. However, as explained above, since the two items ‘pressure from top management to adopt ISO 9000 and the internal demand of adopting ISO 9000’ are likely to have a large impact on the internalisation and the effectiveness of the implementation (Heras-Saizarbitoria, 2011; Poksinska, 2010; Sampaio et al., 2012; Brown et al., 1998; Nair & Prajogo, 2009; Boiral & Amara, 2009; Psomas et al., 2010), the direction of E1, regarding the underlying pressures for certification, is negative. This means that taking actions to increase the internal motivation and decrease the perceived external and top management pressure would affect the entire adoption and not only E1 alone.

The result of the state of the enablers is the individual’s intention to adopt ISO 9000. For E1, the intention did not change much over time, except for E1’s uncertainty about the involvement in the design being eliminated. As this was perceived to be a decisive factor for how willing E1 was going to be working with ISO 9000, this can be regarded as the main reason behind E1 still strongly wanting to work with ISO 9000, despite the increase in perceived external pressure and decrease in internal demand. This is in line with Brown et al. (1998) and Ivanova et al. (2014), who both state that a critical factor in order to reach employee compliance to the system, i.e. reaching high internalisation, is to involve the employees in the design phase of the system. Therefore, this stands as a confirmation of the success of the methodology used to perform the workshops, as early employee involvement in the design is one of the main elements of the workshops.

Since no major changes were identified in E1's statements, the original categorisation that E1 is a quality enthusiast still stands. However, the fact that E1 perceived themselves to be highly involved in the design of the system, which increased their willingness to work according to the standard even more, represents a small but significant improvement. This aspect was not covered by the survey but was instead mentioned by the respondent on their own accord, showing an example of an enabler that was not covered by the survey. E1's new classification is visualised in Figure 4.2 below.

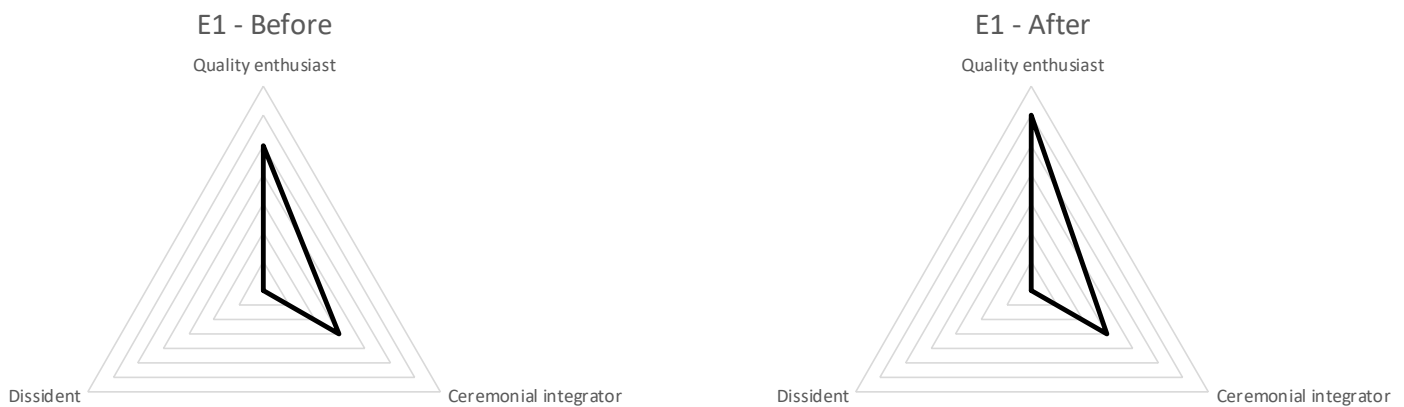


Figure 4.2. The classification of E1, before and after the workshops

4.2 Case E2

In this section the case covering respondent E2 is presented.

4.2.1 Categorisation

E2 believed that the certification was based on external demands, with some pressure from customers if the company would want to grow, as seen in the comments to the customer pressure.

“I think so, that it increases. Especially at larger projects, so if we are to grow and develop we will have to take that step. I do not think that we would have done it if no customers demanded it.” (M1-1)

However, the main pressure was the pressure that was being put on the company by the top management.

“It is them [top management] that have really decided that we should do it, we do not have a choice there. But, that is how I have perceived it.” (M2-1)

To manage the quality of the products through the implementation of the standard did not seem to be the most popular opinion at the case company.

“Well, there is probably nobody that has really thought very much about it [the implementation of the standard]. If not our customers or management had said anything we would probably have focused more on technical details, as we always do.” (M3-1).

E2 thus seemed to see the implementation as mainly an answer to external pressure, which is a characteristic of ceremonial integrators. Improvements in quality was also disputed by the respondent.

“Don’t think that [the certification] has so much to do with the quality, but there might be something small there, but feels like it is our competence that we have, like, in our technical field that is our strength, and if we change the system then it won’t change that bit that much.” (IB2-1)

The areas in which E2 believed the certification would lead to the most internal improvements were in productivity and the documentation and the clarity of processes. Regarding improvements in the clarity of processes it was stated that

“Yes, that is the expectation, as I see it. But as I said, I do not know a lot about it really. But it is my expectation with it, that it becomes a little bit clearer.” (IB3-1)

And regarding the potential for improvements in productivity:

“We have had quite high employee turnover here, and at the moment we are developing the company, where we have gone from being eight employees at the office to us being thirteen or fourteen right now. And then we’re implementing new products, so to speak, so there are a lot of new things going on /.../ and lots of change and then it’s good to have a system to fall back on where everybody knows /.../ these guidelines to work by. /.../ Regardless if it’s ISO or not, it’s good to have a somewhat structured system.” (IB1-1)

E2 saw the certification as leading to improvement in the documentation handling as indicated in the answers regarding external actors’ image of the company and customer satisfaction respectively.

“I partly think that will have an effect, but it is above all what you do on site that matters. And how you handle all the papers and the volumes of quality documents that are to be handed

over. Whether or not we are certified according to ISO might not be the most important aspect, but rather how you behave on site and handle the customer touch points and so on.” (EB2-1)

“I believe that we will implement a system that is quite good that you quickly can access paper, so that it will go a little bit, it will be a lot of work in the beginning to get it through when we eventually have we have most of the paper that is demanded ready which enables us to send them a bit faster than we have done earlier, which makes the customer pleased. And that it will be a uniform system is something that I definitely believe that we can take advantage of.” (EB3-1)

E2 also made remarks about having wanted to implement some similar system at earlier times.

“Do not see any concrete value with it, in addition to that I think that it can help a little bit, I feel that some of the parts that we will sit down with can still be important and I have thought about it for some years but not really had to, had time to or prioritized it. It is in a way good that we don’t have a choice, that we have to sit down and structure certain things that I have felt have needed to be structured since I started here really, but as I said on a decent level so that it’s not too structured. I have tried a few times but, as I said, I am relatively alone at what I am doing so it is more structuring my own way of working [laughs], but hopefully we will become some more in my department and then it will be nice to have something, will be easier to implement things and so on.” (I4-1)

E2 had a quite positive view of the standard, and believed that the certification according to the standard would bring benefits while at the same time being convinced that the decision to implement was taken just to satisfy the external demands for a certification. That the system would mostly influence the documentation management was something similar to what was mentioned by Poksinska et al. (2006) as being detrimental to the internal benefits that could be achieved through the certification. This was in part seen as E2 did not believe that the quality of the products of the company would be affected with the implementation of the quality management system. Based on this E2 is assessed as being a ceremonial integrator. However, indications that E2 would be a quality enthusiast existed, including a belief that the certification would actually bring some internal benefits. That E2 had previously tried to implement a similar system also indicated a stronger commitment for the quality work than an archetypical ceremonial integrator would have.

The ambiguity of the employee is illustrated in the rather low scores on both measures in the classification.

4.2.2 Changes in Perception

From the answers provided by E2 in the survey, changes in E2's perception were identified in the perceived effect on the external image of the company (EB2), increased customer satisfaction (EB3), satisfaction of governmental policies (EB5), increased quality of products and services (IB2), clearly defined responsibilities and procedures (IB3), reduced resources spent on audits (IB4), worsened quality practices (D6) and E1's willingness to work with ISO 9000 adoption (I1). The answers which changed over time is presented in Table 4.3 below.

Table 4.3. The discovered changes for E3

Question	Before workshop	After workshop
EB2	<p>“I partly think that will have an effect, but it is above all what you do on site that matters. And how you handle all the papers and the volumes of quality documents that are to be handed over. Whether or not we are certified according to ISO might not be the most important aspect, but rather how you behave on site and handle the customer touch points and so on.”</p>	<p>“The more professional with diplomas, and all that, you have, of course it looks better. Especially for the customers, who think these things are important, such as Skanska. That is what I think”</p>
EB3	<p>“I believe that we will implement a system that is quite good that you quickly can access paper, so that it will go a little bit, it will be a lot of work in the beginning to get it through when we eventually have we have most of the paper that is demanded ready which enables us to send them a bit faster than we have done earlier, which makes the customer pleased. And that it will be a uniform system is something that I definitely believe that we can take advantage of.”</p>	<p>“I think customer satisfaction is very dependent on the personal interaction with the customer and so on, and therefore this is possibly not related to what system you are using, but you do a good job.”</p>

EB5	<p>“We are following the regulations that exist. It is much about protective equipment and the environment, so I do not think it will... /.../ I do not think that the bar is raised [when implementing ISO 9000] regarding compliance with governmental policies and such, yet.”</p>	<p>“Yes, I think so. A little bit more since we will spend some time and learn this system, and then it probably includes that we have to keep track of this. So I think we will be more updated on what is current and so on. /.../ I think it will be a bit more structured now, since we will have a system and something to follow. In the end, this includes certain requirements and then I think it will be a bit more controlled.”</p>
IB2	<p>“Don’t think that [the certification] has so much to do with the quality, but there might be something small there, but feels like it is our competence that we have, like, in our technical field that is our strength, and if we change the system then it won’t change that bit that much.”</p>	<p>“I think so. /.../ It feels like we will get some increase in quality, once we have this in place.”</p>
IB3	<p>“But it is my expectation with it, that it becomes a little bit clearer. And then we are very small, so we cannot have a too distinct division of labour, or whatever it was you called it. Of course, you can have some kind of framework within an area, but all of a sudden you might have to do something completely different. So you cannot just say ‘no, that is not in my work description so cannot do that’. Since we are such a small company, sometimes you have to get your hands dirty or help with the financials even though it actually is not included in your tasks.”</p>	<p>“I hope it will. It feels like it will. I have seen the document that you have created [refers to the handbooks created for their department], and it felt like it got clearer, a bit more distinct. And it should be the same for everyone else. So finally, *** [mentions one of his colleagues] knows what to do during the days, so that feels good. [laughs]”</p>
IB4	<p>“I do not think... either they already have ISO themselves and have a way of working, so then it does not matter whether or not we have ISO. I do not think it says in their work descriptions</p>	<p>“Yes, maybe a little bit. After all, one has obtained the certification because of something, so it is our expectation that we will get something out of it. Otherwise we should not have done it,</p>

that ‘we do not have to check these actors as much, because they have ISO’, but it will be the same level of revision. And if they do not have ISO, I do not think that would make any difference.”

so one definitely has to believe in that. /.../ If we are compared with Carl’s Digging and Excavating [referring to a small firm], maybe there are some things that you need to look into a bit more. However, if we now have this system, we are probably following it.”

D6 “Maybe there is a risk that we have to spend more effort on doing some things, which gives less time left to what is truly important. But I guess that is something we can impact during the design. Tricky question. I am also thinking about a later stage, that we for example might have to conduct a risk analysis every time, which in a way is very good. But in some projects, you might just feel that the risk is very low, but when we are working according to ISO we still have to do it. Maybe, those 15 minutes could have been spent on something that is of importance to this project. But no.”

“No! Better, I think. More order, better quality. That is what I see before me.”

I4 “Do not see any concrete value with it, in addition to that I think that it can help a little bit, I feel that some of the parts that we will sit down with can still be important and I have thought about it for some years but not really had to, had time to or prioritized it. It is in a way good that we don’t have a choice, that we have to sit down and structure certain things that I have felt have needed to be structured since I started here really, but as I said on a decent level so that it’s not too structured. I have tried a few times but, as I said, I am relatively alone at what I am doing so it is more structuring my own way of working [laughs], but hopefully we will become some more in my department

“Yes, I think so after all. It feels like I will be able to improve my own efficiency, once I start working according to ISO. Hopefully. Just spending the time on defining processes and so on that can be something good in the long run.”

and then it will be nice to have something, will be easier to implement things and so on.”

When asked about any improvement in external image of the case company, E2 originally stated that the decisive factor is how the interaction with the customer is handled. E2 then changed into giving a more definite answer that the diploma in itself will contribute to this. Hence, E2 has increased their belief in improved external image.

Regarding increased customer satisfaction, E2 first said that the increased document handling, resulting from the new management system, will improve this. During the second interview, E2 stated that this is disconnected from the standard, but dependent on customer interaction. Thus, E2 has decreased in belief of the standard affecting customer satisfaction.

On the question whether or not compliance with governmental policies will be increased, E2 originally stated that this would not be affected, since they already complied with them. However, E2 believes that the increased structure and control instilled by the management system will improve this. Thus, E2 believes more strongly in an increase of compliance of governmental policies after the workshops.

When asked about an increase in quality of products and services, E2 thought that this was only dependent on their technical knowledge, i.e. disconnected from the standard. However, after the workshops, E2 thinks there will be an increase once the management system is used throughout the company. Thereof, E2 changed their answer in a positive manner.

On the question asking about clearly defined responsibilities and work descriptions, E2 expressed a wish for this during the first interview. This wish was then granted as E2 regarded the produced handbook for their department to fulfil this. Thus, E2 regarded the responsibilities and work descriptions to be more clearly defined than before.

Regarding decreased customer need to audit the company's processes, in the first interview, E2 thought that the customers would continue auditing regardless of whether or not any standard was used by either part. During the second interview, E2 expressed that they expected the standard to give them some kind of advantage and mentioned an example where the case company should get an advantage to a very small and non-certified firm. Thus, there is a positive change in the answer.

When asked about the risk of getting worsened quality practices, E2 expressed a concern about the system not focusing on the most important issues, which could result in this. However, after the workshops, E2 was convinced that more order resulting from the system would lead to better quality. Hence, the answer changed in a positive way.

And finally, the question about ISO 9000 bringing the respondent high value, E2 first answered that it was mainly about structuring the work. During the second interview, E2 thought that ISO 9000 would be able to help him improve his own efficiency. Thereof, E2's belief in this is regarded to have increased.

4.2.3 Analysis

The fact that E2 in general has a positive attitude towards and perceive different benefits, such as increased procedure clarity, increased productivity, increased document handling and increased external image, is reflected in E2's willingness to work according to ISO 9000 and that E2 has regarded the design of a management system to be important for a long time. This internal demand and drive from the employees is highly valued by Heras-Saizarbitoria (2011), Poksinska (2010) and Sampaio et al. (2012) who state that the source of the demand or pressure behind the adoption has a large impact on the effectiveness of implementation, where internal demand is affecting the adoption in a positive manner. It also goes in hand with Psomas et al (2012), who regard the internal demand as a success factor for an effective implementation in their pathway. However, even though E2 shows motivation towards the adoption, the fact that E2 sees top management and customer pressure as the greatest drivers towards the adoption, has a negative impact on the effectiveness of implementation (Brown et al., 1998). Brown et al. (1998) states that the motivation should mainly be internal, which is also supported by Nair and Prajogo (2009), who state that in order to reach full effectiveness any institutional drivers should be next to negligible. Also, the fact that E2 does not want the standard because of the potential quality improvements drives E2's contribution towards to a large part covering the external benefits of the adoption (Fotopoulos et al., 2010). Fotopoulos et al. (2010) supports this by stating that if the standard is adopted in order to reach external benefits, mainly external benefits will be achieved.

In order to reach a high effectiveness of implementation, E2 would be able to contribute more when being less exposed to external pressure, such as top management and top management as well as raising internal demand (Nair & Prajogo, 2009). Also, since E2 can somewhat be regarded as limited to mainly contributing to external benefits, higher

effectiveness of implementation would be possible if E2 desired more internal benefits (Fotopoulos et al., 2010).

When regarding the changes that E2 has in their answers to the enablers, there are some changes that in themselves does not affect the effectiveness of the adoption, but they give an indication whether or not the willingness is increasing or decreasing. In E2's case these changes are the perceived increase in external image, compliance with governmental policies, improved quality of the company's products and services and reduced customer need to perform audits and, in addition, a decrease on the question that the adoption would lead to increased customer satisfaction. Since there are significantly more positive than negative change, this indicates that E2's willingness has increased.

There are also two answers that changed, which have a more significant impact on the overall effectiveness of the adoption. When regarding the questions about the more clearly defined responsibilities and work descriptions and the potentially worsened quality practices, before the workshops, the fact that E2 expressed that he had certain wishes and fears for the adoption indicates that the workshops fulfilled the expectations and gave E2 the possibility to mitigate the risks. In this way, E2's positive attitude towards the adoption and the features of the workshops instil a higher level of employee involvement (Ivanova et al., 2014), which in turn will enable higher effectiveness of implementation (ibid). Brown et al. (1998) also supports this, since the involvement increases the employee compliance with the management system after its implementation, i.e. the internalisation and the effectiveness of the implementation, which in turn would enable the management system to lead to improvements. Therefore, this change shows that E2 has moved further away from the degree-purchasing syndrome presented by Boiral (2012b), which also is an indication that the effectiveness of the implementation has increased.

The change in the enablers are reflected in the change of the result question, i.e. that ISO would give E2 high value. As all of the changes identified, with one exception, were positive, the change in perceived value to E2 is self-explanatory. The fact that E2 perceives the management system to help themselves improve, indicates that they have perceived a high degree involvement. This was described above to be beneficial to the effectiveness of the adoption.

The essence is that E2 has been affected in a way that is very beneficial to the success of the ISO 9000 adoption. To sum this up, E2 has changed their answers to the degree that E2 is

perceived by the authors to be more of a quality enthusiast than a ceremonial integrator. This is in particular derived from the increased perceived benefits, the perceived higher degree of involvement and the belief in the management system enabling internal improvements.

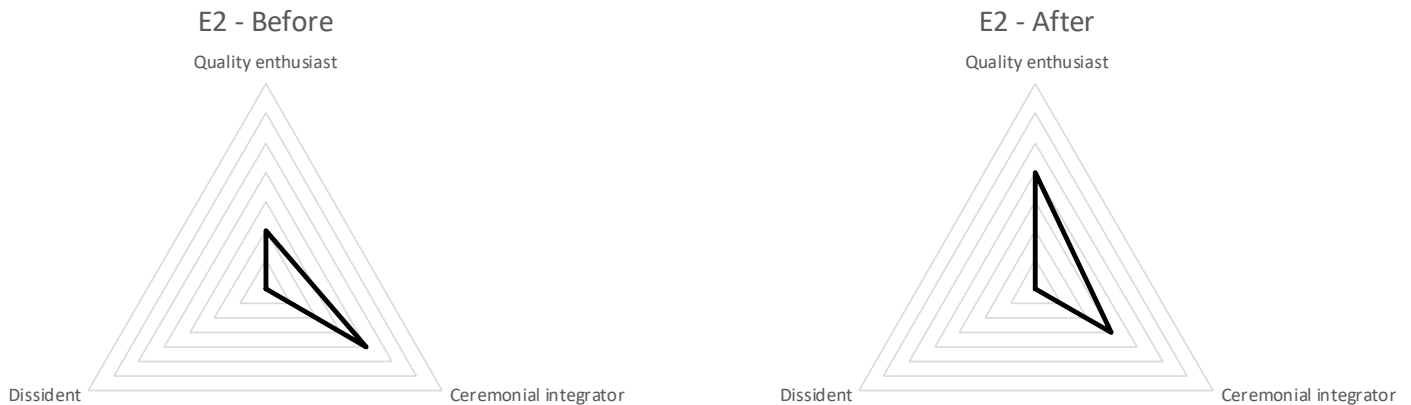


Figure 4.3. Classification of E2, before and after the workshops

4.3 Case E3

In this section the case covering respondent E3 is presented.

4.3.1 Categorisation

E3 had a quite negative view of the improvements that would follow on an implementation. E3 was of the opinion that the company would be quite unaffected by the implementation which was made the clearest when commenting on the possibility of increased employee motivation:

“No, I do not think so. I believe that people will work as usual, I do not believe that this ISO certification will be world-shaking to our company. We will do the same things, keep doing the same things as we are doing now, everybody will probably have to work the same way as they are doing now. I sort of do not think that it will change anything in our way of working. I do not think that the machine operators will shout “Yay, we have gotten an ISO certification!” I do not believe that, I do not believe that they will do it here at the office either, except for [the CEO].” (IB5-1)

E3 showcased a somewhat negative attitude towards working with the standard, that seemed to stem from a shortage of time combined with an increase in work duties. To the question about whether they wanted to work with ISO, E3 answered:

“I feel like I have never worked with it before and I feel like I have enough to do as it is. I feel like it is a bit ‘outside’, cannot put words on why. I do not really feel that I would actually like to work with it, but that I have been chosen.” (I1-1)

A factor that should be noted here is that E3 had actually been chosen by the CEO to be responsible for the management system, a task E3 had no earlier experience doing. Regardless of this, E3 did believe that the certification would be of value to the company:

“Yes, it feels like it, it seems like it is to [the CEO] and England. They think that it is important that we become ISO certified. I agree completely with it [that it would be of value of the company].” (I2-1)

The value that the certification would bring did, however, not seem to be derived from the value that the management system would bring to the company. The management system was instead deemed to mostly just be a prerequisite for the certification, as seen in the comments regarding the value of the management system.

“Well this was difficult, it feels like, well it is only a part of the ISO certification, the management system. It is also of great value since it changes. It is important to the company to have a good management system to, above all, become certified. /.../ Since I believe that the certification in itself is important to the company, I believe that this is also important since it is included as a part in the certification, we need to have a management system or we will not become certified.” (I3-1)

As to why the standard was being implemented, E3 believed that ISO 9000 was due to pressure from the top management.

“Yes, I think that is correct. I am almost 100 that it is correct. It is probably because I have heard that they come from England and want us to become ISO certified.” (M2-1)

Based on these answers it can be seen that E3 is a typical ceremonial integrator, matching almost every characteristic of such an adopter. The traces of resistance towards implementing the standard which was seen in E3 seemed to almost entirely be based on the extra time and effort that E3 would have to put on maintaining the management system. This was not compensated by any reduction in other responsibilities and was implemented during a time of extra heavy workload being put on the employees, which could explain some of the aversion that was displayed.

4.3.2 Changes in Perception

E3 did not display any fundamental changes between the two interviews but some minor differences were noted that are displayed in Table 4.4. Some of the changes are further commented on below.

Table 4.4. The discovered changes for E3

Question	Before workshop	After workshop
IB1	“Yes, maybe. Because we might get more jobs and that means that we have a higher productivity. Maybe. It is difficult to tell, I do not know. But it might have a positive effect that we get jobs that we might not have gotten otherwise.”	“No, I do not think so. We are trying to be as productive as we can already. This is really difficult, but I cannot really see that it will increase the productivity.”
IB3	“Yes, I might believe that. That it might. That we get this what we are doing now written down. So that we in plain terms can read, perhaps, what each and one is supposed to do and not do.”	“Yes, it is written down now. But it is what we do. It is what we do, and have done before. It got written down. But it is possible that if someone new comes, that it is clear what they are supposed to do. /.../ What is written down now, that you have produced, that is information that we have provided you with, so we know how we are supposed to work and the approach. It will not have any effect with the current staff. But if someone new comes, then it is very simple. If someone quits and will be replaced by someone else that will take over all tasks, and it is not certain that it will happen, but then it exits in plain language.”
M1	“No, I do not believe that is true at all. That is what I believe. /.../ Well, it is because we have been pressured by the parent company to get an ISO certification, I guess. That is what I believe.”	“Yes, some might do it. But it is first and foremost the top management in the parent company that pressures us to be ISO certified. So, it is not true at all. /.../ It is not since the customers desire it primarily /.../ but it is, if I have understood it correctly, it is because

England wants everybody to be ISO certified.”

- M3 “Yes, the top management that is. In fact, I do not know since I believe the discussion about ISO certification had started already before I began working here, and that the goal actually was to have it done last year and that got postponed. What I believe is that there has been pressure from England that we should get an ISO certification because many others [in the company group] have it. I am not sure that there is anyone here that have expressed, that is at least not what I have heard but it could be that it is because external customers here want, sort of thinks that we should have an ISO certification, think that it would be good for them that we have an ISO certification.”
- I3 “Well this was difficult, it feels like, well it is only a part of the ISO certification, the management system. It is also of great value since it changes. It is important to the company to have a good management system to, above all, become certified. /.../ Since I believe that the certification in itself is important to the company, I believe that this is also important since it is included as a part in the certification, we need to have a management system or we will not become certified.”
- I4 “Not in the position that I am in, I do not believe that is neither positive nor negative if we have it or not.”
- “Yes, maybe. I do not really believe that there is a desire here. There is not really anyone that has time for it. Everybody wants little to do with it since it means time. So, I do not think so, but it would be in the long run that, e.g. E4 that does tendering, if he gets asked all the time when doing tendering then it can be quite annoying. It is very nice then if one have an ISO certification. But internally, I do not think it matters.”
- “Yes, but cannot tell why.”
- “No, I do not think so. /.../ One will continue to work as if nothing had happened either way. Unless they have plans to change the way we are working, but we do not know that. It does not have any value to me, there

might be in other areas that this, the people in tendering, they might get fewer questions and counter-questions, it might mean more to them.”

The initial comment regarding increases in productivity seems to indicate that there were possibilities to increase sales through the certification and that these higher sales would lead to higher productivity. This could be caused the company not having enough projects to occupy the staff. That the processes at the company would be done with higher productivity did not seem to be believed, as it was not mentioned during the first, nor the second, interview.

The changes in M1 and M3 indicate that E3 had realized that some of the customers could want the company to become ISO certified, and that the tendering because of this could be easier for the employees responsible for it. This was also mentioned in the answer to I4 during the second interview. Despite this not having anything to do with the workshops, it can be assumed that the respondent did develop a somewhat more positive attitude towards the certification, or at least saw that it would bring some additional benefits to the rest of the employees.

4.3.3 Analysis

E3 showed quite limited support for the certification during the first interview and primarily saw it as something that had been forced upon them by the parent company. An organization having this sentiment during an implementation is less likely to gain benefits from the implementation (Brown et al., 1998; Psomas et al., 2010; Poksinska et al., 2002; Fotopoulos et al., 2010) and have a higher risk of failing the certification (Psomas et al., 2010). The former is also what E3 believed, i.e. that the implementation would not lead to any improvements to speak about. This indicates that E3 will not be a contributing factor in the potential successes of the implementation. The degree-purchasing syndrome could to some extent be seen here as the respondent did not seem to believe that the certification would have anything to do with internal practices. In addition to the certification through DPS not having an impact on the internal procedures, DPS has the adverse effects of decreasing the value of the certification for all implementing organizations (Boiral, 2012b), which would also affect the case company.

This attitude towards the implementation remained relatively unchanged during the time between the two interviews. The changes that are expected to have positive consequences

(given the classification of Boiral (2003)) includes the greater certainty that was seen in the improvements to procedure clarity and clearer responsibilities as well as the seemingly new belief that the certification would be beneficial to the work of other employees. The latter also led to the belief that some of the co-workers would be interested in acquiring the certification. The potentially beneficial consequences of these changes could to some degree be counteracted by the more negative view on productivity that was shown during the second interview. Larger positive changes could have indicated that E3 was moving towards being more of a quality enthusiast, but the absence of these leads to the conclusion that the assessment of E3 as a ceremonial integrator after the first interview still holds true.

An issue that could have a larger impact is the thought that the certification could be beneficial to other employees. This could influence E3 into having a more positive attitude towards the certification. If this would happen, it could be a sign that E3 was actually moving towards being a quality enthusiast as not seeing the standard as something that brings value to the company is characteristic for a ceremonial integrator. Internal demand for an implementation is also mentioned by a number of authors (Poksinska, 2010; Sampaio et al., 2012; Brown et al., 1998; Boiral and Amara, 2009) as being important for the success of an implementation which would mean that the implementation would have a chance to be more successful if E3, and the rest of the employees, perceived more demand for it at the company.

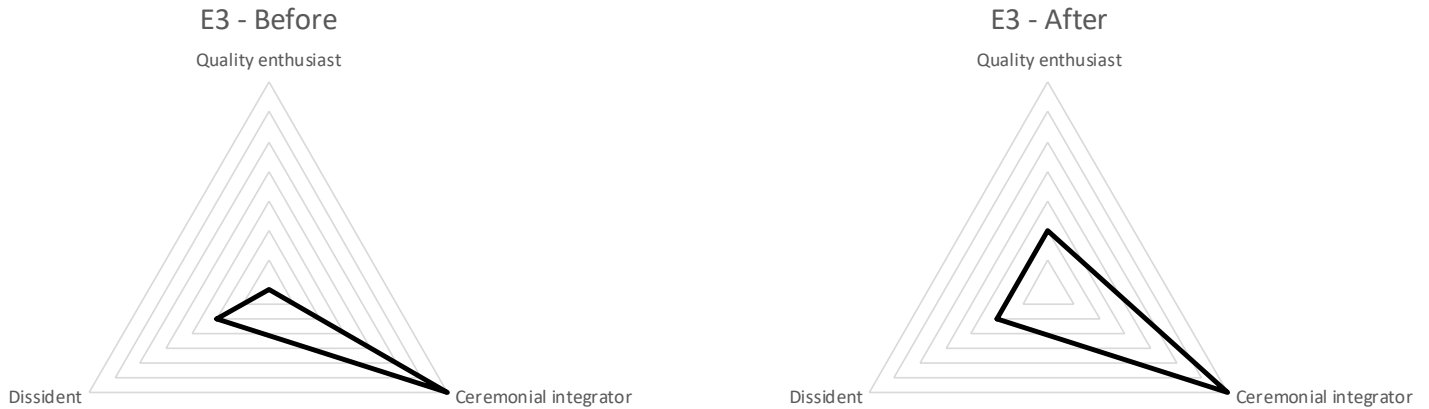


Figure 4.4. Classification of E3, before and after the workshop

4.4 Case E4

In this section the case covering respondent E4 is presented.

4.4.1 Categorisation

E4 saw potential for improvements through the implementation of ISO 9000 in a number of different areas at the company e.g. productivity, quality and training of new employees as noted below.

“It will increase my productivity, with me doing a lot of tendering. Instead of writing in every tender that we are working in a similar way as an ISO certification, very often they want proof of it and they want a table of content of what our quality plan includes and what our environmental plan includes, now instead we can say that we are certified from the start. Some other people have the same problem that they are tendering and such, to be able to say that we are certified would simplify here in Sweden but even when..., well we sometimes have projects abroad and that stamp is quite important there.” (IB1-1)

Regarding increases in quality:

“Yes, I believe with more in this with services or with documentation and follow up and similar that it will improve.” (IB2-1)

Regarding potential for knowledge dissemination:

“If you have everything in a thick folder then you can find everything there and it is easier to find, and then it is easier to teach and easier to give it to someone as well.” (IB6-1)

Many of the external benefits that E4 believed would apply to the company were primarily concerned with the notion that the company would be seen as more serious with the certification, while the product quality was believed to remain quite unchanged.

“It is a little bit of our niche that we are trying, we cannot have the same meter price as our competitors so we are instead trying to be a bit more serious through having collective agreement, having employee handbooks and HR and such and we have quality follow up, we are certified, we have CE marked machines and similar that they do not. So, we are trying to compete in that way instead of just lowering the price, lowering the price.” (EB2-1)

“In the same way as they see that it is a serious company, they will also believe in us more with our documentation and the entire part with quality and environment. /.../ The product itself will maybe not be better but the follow up on it and the documentation of it will be better.” (EB3-1)

It was in regards to the effect that the certification would have on the morale at the company mentioned that some problems with morale had occurred during the early stages of the implementation.

“I have noticed some initial problems with some but in the long run I do not believe that there will be anything whatsoever. So, I am somewhere between a two and a three there, since I do know of some problems now at the start to get everybody on board on the same line.” (D4-1)

The motivation behind the decision to strive for the certification was explained as being mostly based on the pressure that was being put on the company from the parent company.

“I want us to become ISO certified, but not because the customers are pressuring us to do it, but more that it is the parent company that pressures us and I am also pressuring us because we need to be part, that is certify us in Norway, according to Sentral Godkjenning and such, then you get a stamp there as well that makes it easier on all projects. An ISO certification would simplify getting it [the certification in Norway] considerably. Then we would also get that stamp that simplifies at the third stage.” (M1-1)

“That is the case, our management pressures all parts of [the parent company] to become certified. So that the entire parent company has the certification to the smallest branch.” (M2-1)

E4 also mentioned that there was an internal demand for the certification.

“That is also the case, at least from my part and [the CEO’s] part.” (M3-1)

Why E4 wanted the certification was further explained with:

“It is good to work with a system that is global, or that everybody knows of. It is dumb to have any other system that you have to explain every time. ISO is well known.” (I1-1)

E4 not only saw the certification as the beneficial consequences of the implementation of the standard, but also the management system.

“We have tried to work according to an ISO management system, but we have sometimes made detours from it and then it is better that we say that we should be certified now and work according to this full time. So, no, get certified and not just follow a system in accordance with... It is of course the case that when we are certified we will follow the management system but if we are not certified and only follow a management system, which we use as a template, but I want the entire package. /.../ We want to follow the system, it is not only the stamp that is important but it is the system itself and the simplicity in it that we see as beneficial.” (I3-1)

Based on the mentioned answers, it can be assumed that E4 saw benefits that extended beyond just marketing, e.g. the improved documentation and follow up that would lead to improved quality. However, the mentioned improvements that E4 would experience, in particular the easier tendering, would probably fall under marketing. E4 seemed to believe that the system was primarily implemented to satisfy the demands of the parent company, but did also state that some people at the office wanted the certification as well (i.e. E4 and the CEO). E4 can thus be assumed to not view the certification as only something that is being forced upon the company. E4 also seemed to believe that the ISO certification was the first step that should be taken in order to reach further certification or diplomas. Based on these assumptions, E4 is classified as primarily being a quality enthusiast. The attitude towards the standard immediately eliminates the possibility of E4 being a dissident, and E4 also consistently has higher thoughts of the standard than a ceremonial integrator would have, thus leaving only quality enthusiast as a viable option.

4.4.2 Changes in Perception

E4 saw some changes in perception, of which most was a moderation of the earlier positivity regarding the certification. Some positive changes were however explicitly stated as being caused by the workshop. The statements that were assessed as showing the largest change in opinion are presented in Table 4.5 and further commented on below.

Table 4.5. The discovered changes for E4

Question	Before workshop	After workshop
EB4	“Yes, now we are getting it on paper, so sure. /.../ I am often reflecting on the environment but not exactly the ISO certification versus the environment.”	“No, we protect the environment as well as we can at the moment. We have machines that run on diesel, so we produce a lot of emissions but they will not be lowered because of the ISO certification.”
IB1	“It will increase my productivity, with me doing a lot of tendering. Instead of writing in every tender that we are working in a similar way as an ISO certification, very often they want proof of it and they want a table of content of what our quality plan includes and what our environmental plan includes, now instead we can say that we are certified from the start. Some other people have the same problem that they are tendering and such, to be able to say that we are certified would simplify here in Sweden but even when..., well we sometimes have projects abroad and that stamp is quite important there.”	“No, I believe that it will remain similar. /.../ That is, we have a high productivity per employee right now and some things might improve and become a little bit easier and some other things will take more time than they do today so all in all I believe that it would remain on about the same. /.../ It is the planning itself that will take more time, from contracting to start of project. But on the other hand, we will be better prepared when the project starts and we will not need to answer so many questions and similar that clients get to demand from us.”
IB3	“Hopefully, that is nothing that I know. /.../ It remains to be seen.”	“Yes, now that I have been part of it a little bit more, I especially believe that the site manager role will be more defined. Because it has been a little bit like ‘What am I supposed to do?’ when a newly hired arrives. /.../ It usually takes half a year or similar before that person is comfortable in the work tasks and similar. This will improve.”
D1	“No, I do not think at all that I will have more to do on the administrative part. So, that statement is not correct.”	“In the short term, yes, in the long term I believe that it will decrease. Because at the moment we must write a lot of forms and templates must be developed and a lot of this is on me. So I will really

have to do administrative things. But later when that is finished, the site manager will for instance have his forms and similar and I will not need to do anything for them, and they can do it instead.”

- M1 “I want us to become ISO certified, but not because the customers are pressuring us to do it, but more that it is the parent company that pressures us and I am also pressuring us because we need to be part, that is certify us in Norway, according to Sentral Godkjenning and such, then you get a stamp there as well that makes it easier on all projects. An ISO certification would simplify getting it [the certification in Norway] considerable. Then we would also get that stamp that simplifies at the third stage.”
- “Yes, that is one aspect of it. /.../ Sure, there are some companies that practically demand it but they usually say ‘or a similar system’, which we have managed earlier. But it will come to a point where they say ‘we only work with ISO certified companies’ or with some kind of certification. So, sure it is a little bit of pressure but that is not main for us right now. /.../ They [the customers] want to see it, there are an increasing number of standards, or not standards but certificate. BREEAM for example, the project should reach excellent status. They measure certain things, and they measure a lot of quality and also environment aspect and material and such and then an ISO certification would make it easier to reach such a goal.”

The connection to the protection of the environment had not been considered earlier by the respondent, but they still considered that the standard would have potential to affect the company’s environmental performance. However, by the second interview it was no longer believed that the standard would have any effect on the environmental performance. An opposite train of thoughts seem to have occurred regarding the increase in administrative work or the employee. Initially it was believed that it would remain the same but after the workshop it became apparent that some administrative work was needed during the implementation which would be compensated when it was up and running. A more positive change was seen in the answers to IB3 where an expectation of a benefit became more likely through the workshop.

The personal productivity increase that was mentioned during the first interview was not stressed to the same degree during the second workshop during which the standard seemed to be assessed to be somewhat of a trade-off, with improvements in some areas and worse performance in other. An additional change was that the pressure of the customers was elaborated on more during the second interview. However, the main pressure was still assessed to be the top management of the company.

4.4.3 Analysis

E4 seems to be a driving force behind the implementation and is committed to it in order to reach a number of benefits related to the own working environment. However, the benefits are mainly related to external issues or marketing and the company might thus risk missing out on some of the internal benefits that are possible with a successful implementation, since the achieved benefits will depend on the motives behind a decision (Fotopoulos et al., 2010). E4 primarily believed the implementation to be motivated by top management and customer pressure, which can have detrimental effects on the implementation (Brown et al., 1998; Psomas et al., 2010; Poksinska et al., 2002; Fotopoulos et al., 2010). It was also noted that E4 saw internal motivation for the implementation from both their own part as well as from the CEO. However, the support from the other employees did not seem to be overwhelming based on the answer to M3-1, which otherwise would have been positive for the company since the higher management and internal motivation, the higher success of the adoption (Boiral and Amara, 2009).

Throughout the course of this study, E4 remained positive towards the implementation and seemed to, in some areas, have gotten a better understanding of what the implementation would entail for the company. One instance of this was the positive change regarding the responsibilities and procedure clarity, which was also directly attributed to the workshop by E4. The change in perception of productivity increases was interesting since the initial increase in productivity was based only on being able to flash the certification to potential customers while it during the second interview had shifted towards being more concerned with internal matters such as planning and execution. During the second interview, similar external aspects were touched upon during other questions, e.g. M1, which shows that they were not completely forgotten. As the benefits achieved through an implementation are related to why the standard is implemented (Poksinska et al., 2002; Fotopoulos et al., 2010), this could be an indication that the probability of improvements in planning has increased, since they might motivate E4 to work towards the standard.

The pressure from the customers became more pronounced during the second interview, and it was assessed as being ever increasing. This increased external pressure could have adverse effects on the implementation as external pressure being the main factor behind an implementation generally has adverse effects on the result of an implementation, as mentioned by Brown et al. (1998), Psomas et al., (2010), Boiral and Amara (2009) and Poksinska et al. (2002). Another troublesome factor was the problem with morale among the employees mentioned during the first interview, indicating in vague terms some resistance that was believed to decrease over time, an opinion that remained the same to the second interview. E4 should, overall, have a positive impact on the performance of the implementation given the still present support of the implementation.

To sum this up, E4 has changed their answers in both positive and negative ways, however, the change into being more concerned with internal matters is of largest significance for the success of the adoption. Thus, E4 is perceived by the authors to have slightly increased in the classification as a quality enthusiast and remains unchanged for the rest.

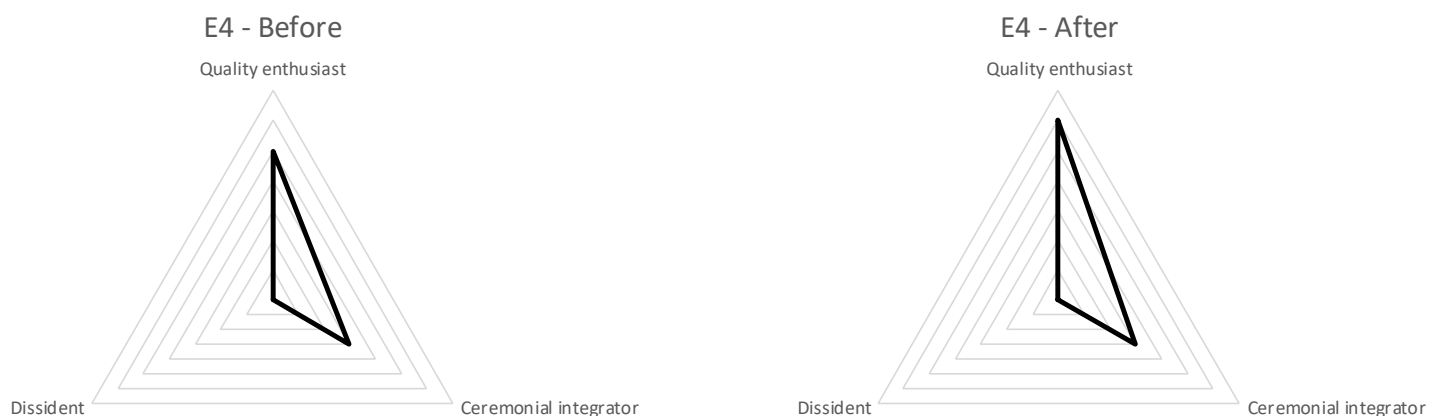


Figure 4.5. Classification of E4, before and after the workshops

4.5 Case E5

In this section the case covering respondent E5 is presented.

4.5.1 Categorisation

E5 had positive experiences with ISO 9000 from an earlier employment and had expectations on a similar performance from the implementation at the case company.

“It turned out very good at the other company I was at. So, I believe that this could be really good. I do not want to be responsible for anything, that is not what I am saying with this, but I can follow it.” (I1-1)

The company was believed to improve in areas related to both internal matters as well as external. Some of the external changes that the certification was perceived to lead to were larger market share and higher customer satisfaction.

“We work with quite a lot of larger companies and they want to include it, so then it is automatic; if we do not have it we do not get any jobs. But it is the smaller companies that do not care and that is why I do not value it as a five [the score], since they will take jobs or give us jobs regardless.” (EB1-1)

What the customers would see as positive with a certified company was explained further on as being based on a structure and routines.

“They know that there is a structure in the company, /.../ that there is more thought behind what we do, and that there are routines and rules in a different way.” (EB2-1)

These routines and structures would in turn lead to improvements in customer satisfaction, through e.g. delivering on time.

“I believe it [that the customer satisfaction will increase], if we actually follow what we are planning on doing. /.../ That is that we follow our routines and that we maybe deliver everything on time, /.../ that we get a better flow within the company and then it becomes a faster flow to finished products. That is what I hope is the meaning of ISO, that we get a correct flow in the company.” (EB3-1)

Internal improvements that E5 believed would be achieved included increased productivity at the office as well as increased possibilities for self-improvements and the aforementioned routines.

“It depends on how one look at it, if one only look at the people driving the drilling rigs, I do not believe that they will work more efficiently, /.../ but I do believe that the total productivity within the company will increase, since we have better order.” (IB1-1)

“That is exactly what we feel, that there are not structures everywhere, which we do not really know ‘What do we do in this situation?’. A lot thanks to it being so many newly hired here which leads to a lot of the routines disappearing. It is difficult if it is not written down but now it will be written down and then it will be easier to get it good and hopefully the worker will also get a better awareness of constant improvements, so that they can improve their own way of working. I have experienced an ISO certification earlier so I know that it turned out that way.” (IB3-1)

E5 displayed some uncertainty regarding why the standard was being implemented, with the only option presented in the survey that was entirely ruled out being the internal demand for it. Below are the comments to the customer demand, top management demand and internal demand respectively presented.

“It is just that some does it and some does not.” (M1-1)

“I do not know if they do or not. Maybe they do. I am actually not sure.” (M2-1)

“That is not true at all. /.../ Nobody here requests it.” (M3-1)

Based on the enthusiasm displayed towards the standard and the improvements that are believed to follow with the implementation, E5 is assessed as being a quality enthusiast. The quality improvements were in this case primarily concerned with the setting of the routines at the company which had been seen at the previous employer and was also expected at the case company.

4.5.2 Changes in Perception

The identified changes in the perception of E5 are presented in Table 4.6 and are further commented on below.

Table 4.6. The discovered changes for E5

Question	Before workshop	After workshop
IB2	“Now it feels like I am giving you the same answer to all questions, because ‘yes, it does’. Because things will get more tangible how it is supposed to be, and then we will get a more uniform image or they will get a more uniform image from an outside perspective.”	“No, I do not think it has to do with this. We still have to do our job. It does not matter whether or not we are ISO certified when we are going to mix some cement into the ground, so I do not think that part will improve. Possibly the paperwork during the end of a project, but I do not think the performed task at site will improve. Those who are operating the machinery do not care about an ISO certification. I do not think so.”
IB5	“That is completely dependent on each individual. For some it is a 1[survey scoring] and for some it is a 5, so that is actually very hard to answer. Some	“No! I definitely do not think so. I just do not think it is like that, so there is no more explanation.”

might even think that there is a deterioration. It depends.”

- IB6 “Right now, I do not really know what this will result in, I mean what we will get once this is finished. I do not really know. I mean if I will be informed about what conclusions you have reached for the yard, or if that will still stay within that department. But that is also depending on in what direction [the CEO] leads us, what [the CEO] thinks should be done. But that will probably be something that one will comprehend, since there will be more discussions about the company and the structure.”
- “No, I do not think so either. I am so negative today. [laughs slightly] No, but I do not think so. I do not know why either. But ISO is not that kind of carrot they need in order to want to get educated. So, I do not think so. [one of the authors points out that dissemination of knowledge also includes internal dissemination of information and experiences between different projects] No because of us complying with ISO, I do not think so. I think we will do this, but not as a result of complying with it.”
- M2 “I do not know if they do or not. Maybe they do. I am actually not sure.”
- “To be honest, that I have no idea about. But I think they do, so I will score a 4 [survey scoring].”
-

Changes in the contents of the answers was identified in four questions. For these four questions, E5 had a more negative view of the standard during the second interview, with particularly lower opinions of the potential internal benefits compared to the first interview. Despite only changing in four questions, E5 had the largest decrease in total score between the two interviews out of all employees. One example of these internal benefits in, which a decrease in opinion was apparent was quality. During the first interview this was noted as being positively affected by the implementation, while it during the second interview was not believed to be affected. Similar changes were seen in the motivation and knowledge dissemination, which both were expected to increase during the first interview but were expected to remain unchanged during the second interview. An additional change was the small but tangible increase in belief that the parent company was pressuring the case company to become ISO certified.

4.5.3 Analysis

Since E5 was positive to the implementation of the standard at the company and believed that several benefits would be achieved through it, E5 should have a positive influence on the implementation at the case company (Fotopoulos et al., 2010; Ivanova et al., 2014). This is explained by Fotopoulos et al. (2010), who states that expected benefits influences the actually achieved benefits. Also, a positive attitude towards an ISO adoption is stated by Ivanova et al. (2014) to increase the involvement in the adoption, which in turn increases the effectiveness of implementation. E5 also perceives a number of external benefits, which also contribute to E5's motivation to become certified. However, the fact that E5 does not perceive the customers to demand the certification, means that E5's contribution to the adoption of ISO 9000 will enable not only external benefits (Poksinska et al., 2002). The significant amount of potential benefits perceived by E5 is reflected in E5's motivation. This internal motivation is of great importance during the adoption, since it affects the effectiveness of implementation (Boiral & Amara, 2009; Brown et al., 1998; Psomas et al., 2010; Sampaio, 2012). However, not perceiving this internal demand from co-workers has the opposite on the effectiveness (ibid). Still, regarding top management pressure to be the dominant driving force decreases the internalisation of the system (Nair & Prajogo, 2009), which in turn is detrimental to the success and effectiveness of the adoption (Brown et al., 1998; Heras-Saizarbitoria, 2011).

In order to maximize E5's contribution to the adoption of ISO, an increase in perceived internal demand from their co-workers would be beneficial (Brown et al., 1998; Psomas et al., 2010). Also, diminishing the perceived pressure from top management would have a positive effect. Boiral and Amara (2009) supports this by stating that there should be a balance between internal and external demand, however Nair and Prajogo (2009) even claim that the external pressure should be next to imperceptible.

The changes that were seen in E5's answers were more negative opinions in a number of matters. The achieved benefits will, as mentioned earlier, to some extent depend on the expected benefits, and lower expectations could thus lead to worse performance of the future implementation (Fotopoulos et al., 2010). Even though the changes in perceived impact on the quality of products and services, employee motivation and dissemination of knowledge give an indication of the willingness, they do not directly affect the effectiveness of the implementation. However, they could decrease E5's motivation, which could decrease E5's involvement in the adoption (Ivanova et al., 2014), and in turn reduce the effectiveness of implementation (Boiral & Amara, 2009).

The change in top management pressure, however, has a more direct and significant impact on the effectiveness of the implementation (Poksinska, 2010; Sampaio et al., 2012), and an increase in this area can therefore be detrimental to this (Brown et al., 1998; Nair & Prajogo, 2009). This change therefore shows that E5 is changing in a negative manner in an area significant to the final result of the implementation. Hence, diminishing the perceived top management pressure should be a high priority for E5.

Despite only having changes that affect the classification negatively, E5 is still considered a quality enthusiast. This is the case, since the number of changes are few, in spite of the magnitude of the changes, and that E5 still is regarded to be very positive towards the standard.

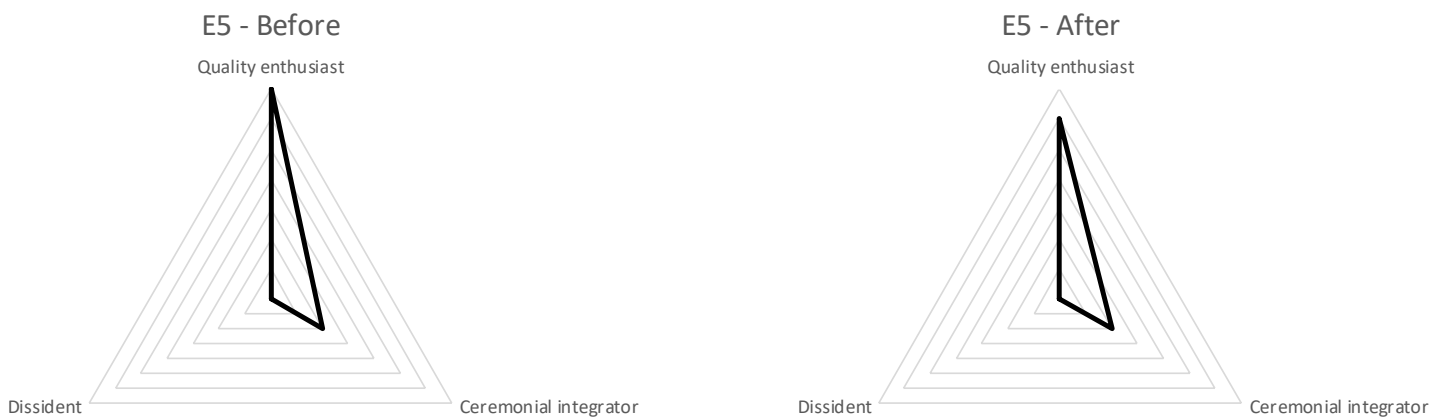


Figure 4.6. Classification of E5, before and after the workshops

4.6 Association between Enablers and Results

A score for each employee, providing a representative value for the enablers, was constructed which was based on the assumptions that external and internal benefits would have a positive effect on the intention to adopt ISO 9000, while the difficulties would have a negative effect on the intention to adopt ISO 9000. Further, internal motivation is considered to have a positive effect on the adoption, whereas external motivation, i.e. pressure from customers and top management, is considered to have a negative effect on it. Consequently, the score was calculated by adding the averages of internal benefits and external benefits for each respondent and interview and subtracting the average of the difficulties from this sum, and finally adding the internal motivation and subtracting by the average of external, as shown below.

Score of enablers

$$\begin{aligned} &= (\text{average of internal benefits}) \\ &+ (\text{average of external benefits}) \\ &- (\text{average of difficulties}) \\ &+ (\text{internal motivation}) \\ &- (\text{average of external motivation}) \end{aligned}$$

These scores were then compared to the intention to adopt ISO 9000 for each employee and the result is presented in Figure 4.7. As can be seen in Figure 4.7, indicated by the trendlines, there is a strong association between the intention and the score representing the enablers for both the first and second interview. The slope of the trendline also indicates how much intention can be expected from a specific value of the enablers, and as the slope is decreasing this indicates a stagnating increase of the intention, rather than increasing returns. However, whether or not this change is significant can be argued.

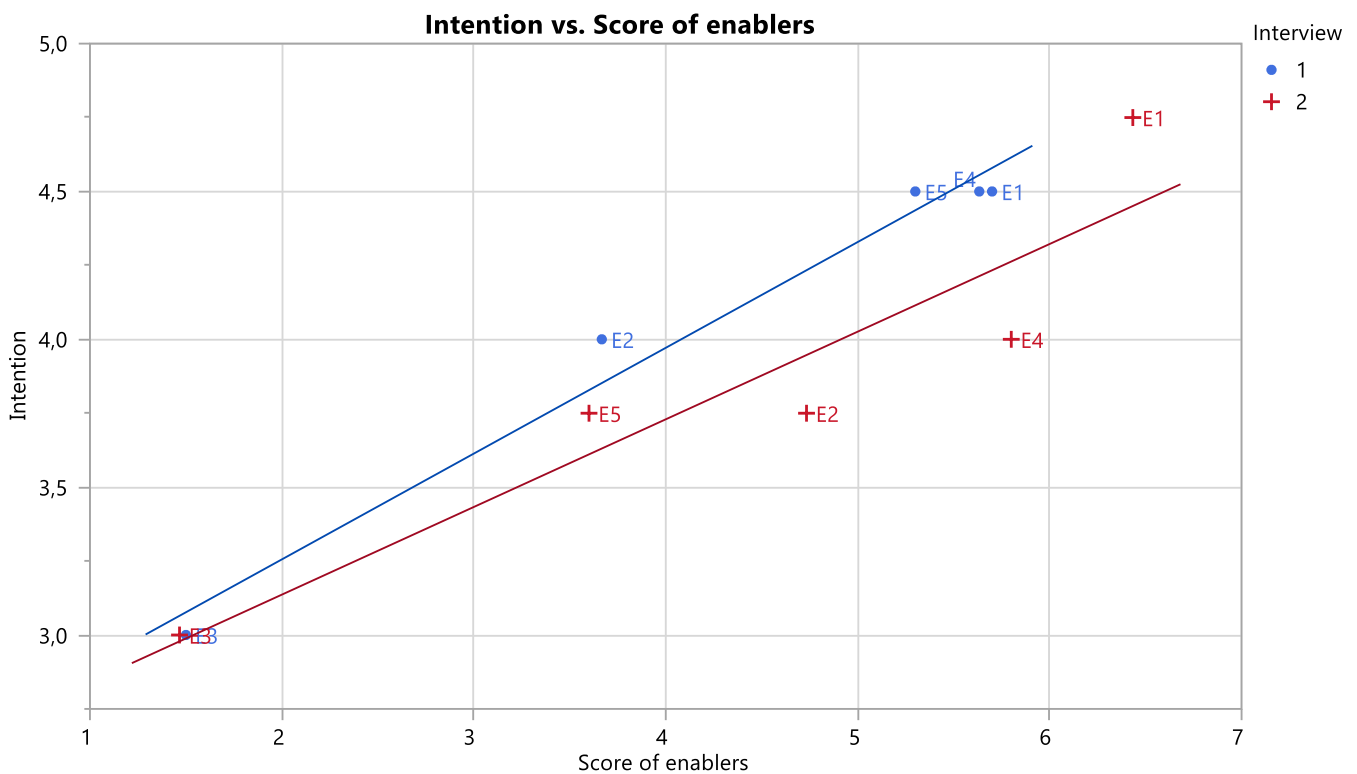


Figure 4.7. Intention per score for each employee and interview occasion with trendline

5. Discussion

In this chapter the findings of the study will be compared to the literature in order to find and discuss any unexpected findings and confirmations or contradictions. The disposition of the chapter was adopted from Chapter 2, from Section 2.2 and forward.

5.1 Effects of Reason and Motivation

The answers from the respondents clearly showed that the main reason behind the certification was the pressure that was put on the case company from the parent company. This pressure was in turn believed to primarily be derived from customer pressure on the parent company and other marketing issues. These findings match the thesis being put forward by Poksinska (2010), that the most common factor behind implementation among organizations in general is customer pressure. It was also indicated that the most coveted effect of the implementation, given this motivation, was the certification in itself. Although there was some pressure being exerted on the case company itself by the customers it was not of the same magnitude as the pressure exerted by the parent company.

Internal motivation, presented as the most critical of the critical area by Psomas et al. (2010), has thus not been successfully instilled in the case company. With the current focus the certification is first of all less likely to succeed and, secondly, in the case of success less likely to produce as many benefits as otherwise would be reached (Psomas et al., 2010). At least one employee expressed the belief that nothing would change with the implementation of ISO 9000. This could be seen as a sign that the management system was perceived as what Poksinska et al. (2006) referred to as “a tool for documentation” or a tool for marketing. Having some way of handling documentation and improving the marketing is certainly not bad, but ISO 9000 has the potential to be more than this to the adopting company. If this view was widespread in the company, the system could have difficulties in producing benefits for the employees (ibid). The resistance to change that was mentioned by some respondents could perhaps have been helped if the motivation to implement had been more internal. There seemed to be a trend towards the employees being more convinced that it is the top management that desires the certification, with four out of five strongly agreeing during the second interview compared to only two out of five during the first. If it truly was a change in these opinions, the trend would indicate that the employees are becoming more sceptic of the internal benefits. This was also indicated by the employees dampening their expectations of productivity increases.

Introduced by Boiral (2012b), the degree-purchasing syndrome could to some extent be seen among the employees – the focus of the implementation was put on the certification and it was seen as a tool that could help accessing certain markets. However, other aspects were not seen at the case company, e.g. low involvement of the employees in the implementation was not seen, as the employees had an active role in the design of the management system. According to Brown et al. (1998), the high involvement of the employees should then have a positive effect on the management system's potential to lead to improvements within the case company. However, the degree to which the daily practices will match the requirements in the standard remains to be seen.

5.2 Internalization

The data from the survey showed that the employees assessed the motivation, behind the implementation of ISO 9000, to be primarily derived from the pressure that the parent company is putting on the case company. This seemed to be the case already during the first interview sessions and got more obvious during the second sessions. This indicates that the motivation for the implementation can be considered to be external, institutional drivers (Nair & Prajogo, 2009). This kind of motivation has been shown to be detrimental to the positive effects that a certification could lead to (ibid). However, there were also some indication that the employees at the company had some positive expectations on the certification, e.g. four out of five wanted to work with ISO 9000 and they all believed that both the certification and the management system behind the certification would be of importance to the company. This would mean that there are some functionalist drivers behind the decision to adopt ISO 9000 as well. This combination of functionalist and institutionalist drivers was in Nair and Prajogo's (2009) research found to be a characteristic of low performing firms implementing ISO 9000, since it was harder for these companies to put the system into place. These mixed drivers indicate that the case company will be unable to fully implement the system as intended and thereby not achieve the operational performance benefits and the business performance benefits that otherwise would be possible. To have averted this or to avert this, top management should have made clear that the goal with the certification was to adopt the underlying practices of the standard and not just adhering to the demands from top management.

Despite the external pressure being the by far most popular reason for implementation among the respondent, there still were respondents who showed uncertainty regarding the reason for implementation. This indicated that the employees had not been provided with sufficient information regarding this. Such a lack of information could, according to Boiral

(2011), lead to low levels of internalization and the certification being perceived as only a label. This attitude was also apparent among a couple of respondents during each point of measurement, who saw few internal benefits with the certification.

5.3 Success Factors

Most of the issues handled during the time of the study was related to the system design stage in the roadmap of Boiral (2011) during which the involvement of the employees was considered to be one of the most important success factors. The design of the management system at the case company was almost entirely based upon the employees' perceptions of the operations, thereby matching the recommendations. This way of working at the case company had two distinctive positive features. Firstly, the employees were involved in the design of the management system which enables positive employees' attitude towards the implementation (Ivanova et al., 2014) and secondly, the design being based on the existing processes meant that it did not become disconnected from internal practices (Boiral, 2011). This indicates that the system will receive more support from the employees and be better integrated than if the design had been conducted entirely by an external consultant. Employees taking part in the design of the system is also part of the third critical area for ISO 9000 implementation of Psomas et al. (2010). However, the training that they should have received in order to understand the requirements of the standard seemed quite absent, as shown by the uncertainty regarding what the standard entails, which was indicated by some respondents.

Some problems were encountered regarding the case company's organizational environment for the implementation of the quality system. Especially, time was a constraint according to some respondents, which was not only evidenced by the actual answers during the interviews, but also the difficulties some respondents had with finding time for the interviews and workshops. However, this is understandable at an office with only 13 employees, since there are not many people to spread out any additional workload on.

Assessing the effectiveness of the implementation based on the matrix of effectiveness of an ISO 9000 certification in Figure 2.2, is not possible since the implementation has not yet been completed. However, there are already a number of factors indicating on the future outcome of the case company's implementation. To start with, the intensity of internal barriers and problems seems to be low. Indication of this can be seen in the answers to the "Intention" part of the survey where only one respondent said that they did not want to work with ISO while the rest were positive towards implementing it. Other problems might occur during the future

implementation which would alter this. The “ISO 9000 performance” is also still to be decided. As mentioned earlier, internal performance increases are more likely with an internal motivation forming the basis for a certification, which is not the case at the case company. However, the metric “ISO 9000 performance” also takes into consideration any commercial performance improvement that could be caused by the certification with such improvements probably being in focus at the case company (Boiral and Amara, 2009). The survey gave indications that no projects had been lost due to not having an ISO certification but that the importance of certifications and similar diplomas was growing. This could mean that the commercial performance would initially remain the same, due to the lack of customer demand for a certification, but eventually lead to improvements as customers become more and more interested in certifications. This assessment of the future state of the case company in terms of ISO 9000 implementation makes it fall into the group that the largest percentage of companies fall into; “managerial certification” in Boiral and Amara’s (2009) matrix of the effectiveness of an ISO 9000 certification. However, as the certification has the prospect of providing the case company with improved commercial performance when demand for certifications increases, the configuration could reach the coveted configuration “effective certification”.

5.4 Pitfalls

Problems related to documentation, mentioned by both Boiral (2011) and Aggelogiannopoulos et al. (2007), and problems related to follow-up, or lack thereof, are difficult to assess at this early stage of implementation. The lack of knowledge and experience with ISO 9000 can on the other hand be assessed. Two of the respondents mentioned earlier encounters with ISO 9000 at other work places, and both of them had positive views of ISO 9000 from these experiences. None of the other employees said that they had been in contact with ISO 9000 earlier, but were also not asked about it. During one of the questions, one of the employees mentioned that they did not know what ISO would mean for the company, while the rest did not mention anything of their knowledge about the standard. The impression of the researchers was that the general knowledge of the standard was quite low at the start of the workshop and that it did not improve to any great extent during the time of the study. Indications of this included that no mentioning of any training of the employees was made, and that most of the answers were described as being beliefs surrounded by uncertainty or that the respondents in some cases were unable to motivate their answers. This is not an unheard-of predicament, as lack of knowledge is mentioned in the literature as one of the most common problems among organisations adopting ISO 9000 (Aggelogiannopoulos et al., 2007).

6. Conclusions and Future Work

Throughout the results and the analysis chapter, some insights into the case company regarding the change in intention and the current state were provided. In this chapter, the conclusions drawn from the results and analysis chapter are presented. The conclusions drawn on the changes in perceived benefits and difficulties, as well as the correlation between each of these and employee intention, are presented. This is followed by limitations of the study and recommendations on how companies in similar situation should act.

6.1 Conclusions

The purpose of this study was to understand the effect of employee early involvement during the ISO 9000 adoption process in an SME in terms of enablers and intention of ISO 9000 adoption. To answer this, four research hypotheses were constructed. The first hypothesis was:

H1: Employee early involvement has a positive influence on the enablers.

An overall positive change of the enablers has been identified for four out of the five respondents after having taken part in the workshop and only one respondent indicated negative change, Hypothesis 1 is thus supported. The second hypothesis was:

H2: The enablers are positively associated with the intention.

Through the quantitative data an association could be discovered, where the trendline gave clear indications that higher scores on the enablers led to higher scores on the intention. Hypothesis 2 is thus supported. The third hypothesis was:

H3: Employee early involvement will increase the intention to adopt ISO 9000.

An overall positive change of the intention has been identified, through qualitative data, for two out of the five respondents after having taken part in the workshop and no change was identified for the remaining three respondents. Hypothesis 3 is thus partially supported. The fourth hypothesis was:

H4: Employee early involvement has a positive effect on the association between enablers and intention.

The positive effect on the association could have been indicated through a steeper slope on the trendline for the second round of interviews in Figure 4.7. However, such an effect could not be seen in the quantitative data as the trendline became flatter compared to the first trendline and hypothesis 4 is therefore not substantiated.

The conclusion of this study is thus that the effect of employee early involvement was improved opinions of the standard, in the form of positive changes to the questions related to the enablers. Improved opinions of the standard did in turn indicate higher intention to implement the standard. That employee early involvement would lead to increased intention was tested and found to hold true for a minority of the employees.

Regarding the second part of the purpose, i.e. the current overall situation at the case company, it was found that the case company features both some positive and some negative factors for the effectiveness of the adoption. This means that apart from continuing working on maintaining the positive factors, there are also opportunities to improve the adoption effectiveness.

The employees are overall very committed to the ISO 9000 adoption, where e.g. four out of five employees wanted to work with ISO 9000 and believed that both the new management system and the corresponding certification would be of value to the company. However, the fact that all employees covered by the survey perceived the pressure to adopt ISO 9000 to mainly come from top management, and do not perceive it to mainly be an internal motivation, might counteract this internal motivation. A decreased internal motivation will in turn have a negative effect on the internal benefits that top management wants to achieve, hence, their pressure has the opposite effect.

Another factor that might affect the adoption negatively is the lack of a clearly defined company goal with the adoption, i.e. whether the goal is a marketing tool, a tool for quality improvements or both. As long as this is not clear to the employees, who are part of the adoption, there is a risk of internal conflicts arising, being the consequence of different employees working towards different goals. In this way, the lack of a communicated goal is a threat towards the internalisation of the management system.

Finally, the resources spent by the case company on the design of the system, time seemed to be insufficient. In fact, it seems as if there was a complete lack of easement on the involved employees' daily work, in order for them to manage the design of the new management system. However, even though it is understandable that an office with only 13 employees are having trouble spreading out the extra workload on this few employees, it still stands as an issue and risks affecting the quality of the management system negatively.

The high involvement of the employees in the design phase of the management system and basing the new management system on the existing processes, have been found to have a

positive effect on the employees and the potential success of the adoption. Among the respondents, two stated explicitly that they had increased their willingness towards working with the new management system and that they believed the system to enable improvements as a direct consequence of the employee involvement. Hence, one of the pillars of the workshops - employee early involvement - is found to also be the most beneficial aspect of it.

Regarding the categorisation of the respondents, two of them were perceived to be quality enthusiasts, three of them are ceremonial integrators and none of them are to be seen as a dissident. This means that the case company does not have to handle any employees, who would oppose and counteract the adoption of ISO 9000. However, dealing with the ceremonial integrators in order for them to gravitate towards the quality enthusiasts is essential, if the ISO 9000 adoption is to reach its full potential, since the ceremonial integrators in some cases might perceive different objectives with the adoption. In a situation where they perceive different objectives, they might end up counteracting the adoption. How to make the ceremonial integrators move towards the quality enthusiasts and otherwise generally improve the adoption effectiveness is presented in Section 6.3.

6.2 Limitations

That the intention did not increase to the same extent as the enablers could be caused by the limited time span that was included in the study. More changes in opinion could perhaps have been seen if the employees had been in contact with the standard over a longer period of time. Future research into the area of the perception of employees on the topic of ISO 9000 could thus expand the time period. An enlargement that could stretch across the different stages of implementation, from system design to follow-up, would perhaps be particularly interesting. Another part in the research that could be directly affected by this is hypothesis 4, which investigated changes in the association between the enablers and intention. If the intention would require more time to change, a prolonged study would be needed to examine this hypothesis. Another aspect could be the intensity at which the employees came in contact with the standard. In this study, they participated as described in Section 3.5. and this could perhaps be altered to influence the employees' opinions more, e.g. by having an introductory course describing the standard and its possibilities as well as the overall procedure when designing a management system.

Another difficulty that might have influenced the chances of finding statistically significant changes would be the small sample size. A study at a larger organization, or a larger

study in general, would give more data that hopefully could lead to signs of definitive changes. Given a longer time period and a study with more respondents, more points of measurement could be of interest as well. Through this, both changes that occur suddenly during the implementation process as well as gradual changes occurring over a longer period of time could be traced to their origin and potential causes of them could be evaluated.

And finally, regarding the generalisability, most of the literature used in this case study has been applicable to both SMEs and large companies. However, as the case company is an SME, the conclusions derived from this case study are primarily targeted at SMEs. Still, this does not exclude the possibility of a similar study having a positive effect on a large company.

6.3 Managerial Implications

Using the presented workshops and thereby achieving early employee involvement has in this research been proven to have a positive effect on most of the cases, where the workshops were used during the early phase of an ISO 9000 adoption. Due to the characteristics of the workshop model and the high level of employee involvement, the workshops are suitable to companies where the employees who perform the different tasks also are available to attend throughout the design phase of the management system.

When the method of using this kind of workshops are used during the adoption of a management system standard, raising employee early involvement will increase the potential effectiveness of the adoption. This is possible mainly as a result of the involvement and the aspects that employee involvement bring along. In short, employee early involvement leads to a higher degree of internalisation of the management standard and higher effectiveness of implementation, which in turn will enable internal improvements and give the company high value. This means that not all benefits of using these workshops will be visible during the design of the management system, but at a later stage of the adoption. However, to obtain all of these benefits, involvement of the employees, whose processes are being depicted, is important, and at least throughout the time this is being done and implemented. In order to raise internal motivation, involvement of the employees during the decision, whether or not to adopt the standard, is preferred.

As internal motivation is an important component to reach a successful management standard adoption, there are a couple of actions in addition to employee early involvement that are advantageous to it. Internal motivation can be achieved by educating the employees in the possibilities and benefits of the standard. In addition to this education, top management needs

to be very clear and communicate the company goal, hence giving them a clearly defined goal to work towards. Furthermore, since external pressure is the main source of decreasing the internal motivation, the external pressure should be suppressed from the employees, leaving more room for the internal drivers. Both of these actions should preferably be performed prior to the decision to adopt the standard, but continuing this throughout the adoption is regarded as beneficial. For these actions to be effective, top management support is essential. Regarding disguising the external pressure, this should be performed by top management without the involvement of the employees. However, raising the internal pressure through education should be initiated by top management, who provide the resources, and then fulfilled by the employees. This can for example be done by having a few days of education, where an expert within the field is lecturing, advantageously with the together with one of the quality enthusiasts.

In addition to involving a quality enthusiast in an education event, an employee with a positive attitude towards the standard could potentially be given a greater role in the management of the management system. A prerequisite here is a willingness to take on this greater responsibility, which was not the case for at least one of the employees (E5). This employee could then be given a further education on the standard in order to maintain the system and further develop it in the future.

Finally, when it comes to resources, providing the employees and others with sufficient resources to design the management system is essential to the quality of design. As this is considered to be insufficient, where none of the employees got any easement from their daily work to participate in the workshops and produce the corresponding documents, this needs to be addressed by top management.

If the presented implications are ignored, the case company will not be able to obtain all the potential benefits that this adoption brings. Instead the risk of receiving a system with a low fit, which in turn will lead to a non-effective implementation, is high. This means that the adoption, the certification and the maintenance of the system will merely become an expense item without contributing to internal company performance.

References

- Aggelogiannopoulos, D., Drosinos, E.H. & Athanasopoulos, P. (2007) Implementation of a quality management system (QMS) according to the ISO 9000 family in a Greek small-sized winery: A case study. *Food Control*, vol. 18, no. 9, pp. 1077-1085.
- Anderson, S.W., Daly, J.D. & Johnson, M.F. (1999) Why firms seek ISO 9000 certification: regulatory compliance or competitive advantage? *Production and Operations Management*, vol. 8, no. 1, pp. 28-43.
- Baric, D., Brkic, K., Sutlic, Z., Nikic, N., Grubisic, M. & Devcic-Jeras, A. (2007) Implementation and further development of quality management system according to ISO 9001:2000 standard at the department of cardiac surgery, Dubrava University Hospital. *Business Excellence*, vol. 1, no. 1, pp. 11.
- Boiral, O. (2003) ISO 9000: Outside the Iron Cage. *Organization Science*, vol. 14, no. 6, pp. 720-737.
- Boiral, O. (2011) Managing with ISO Systems: Lessons from Practice. *Long Range Planning*, vol. 44, no. 3, pp. 197-220.
- Boiral, O. (2012a) ISO 9000 and Organizational Effectiveness: A Systematic Review. *The Quality Management Journal*, vol. 19, no. 3, pp. 16.
- Boiral, O. (2012b) ISO Certificates as Organizational Degrees? Beyond the Rational Myths of the Certification Process. *Organization Studies*, vol. 33, no. 5-6, pp. 633-654.
- Boiral, O. & Amara, N. (2009) Paradoxes of ISO 9000 Performance: A Configurational Approach. *The Quality Management Journal*, vol. 16, no. 3, pp. 36.
- Briscoe, J.A., Fawcett, S.E. & Todd, R.H. (2005) The Implementation and Impact of ISO 9000 among Small Manufacturing Enterprises. *Journal of Small Business Management*, vol. 43, no. 3, pp. 309-330.
- Briscott, J. & Fawcett, S. (2005) The implementation and impact of ISO 9000 among Small Manufacturing Enterprises. *Journal of Small Business Management*, vol. 43, no. 3, pp. 309-330.
- Brown, A., van der Wiele, T. & Loughton, K. (1998) Smaller enterprises' experiences with ISO 9000. *International Journal of Quality & Reliability Management*, vol. 15, no. 3, pp. 273-285.
- Bryman, A. & Bell, E. (2003) *Business research methods*, 2nd ed., Oxford University Press, Oxford.
- Bryman, A. & Bell, E. (2011) *Business research methods*, 3rd ed., Oxford University Press, Oxford.
- Fotopoulos, C. V., Psomas, E. L. & Vouzas, F. K. (2010) ISO 9001:2000 implementation in the Greek food sector. *The TQM Journal*, vol. 22, No. 2, pp. 129-142.
- Heras-Saizarbitoria, I. (2011) Internalization of ISO 9000: an exploratory study. *Industrial Management & Data Systems*, vol. 111, no. 8, pp. 1214-1237.
- Heras-Saizarbitoria, I., & Boiral, O. (2015). Symbolic adoption of ISO 9000 in small and medium-sized enterprises: The role of internal contingencies. *International Small Business Journal*, 33(3), 299-320.

ISO (2015a) ISO 9000 – Quality management. *ISO – International Organization for Standardization*, www.iso.org (2016-08-18).

ISO (2015b) Quality management principles. *ISO – International Organization for Standardization*, www.iso.org (2016-08-18).

Ivanova, A., Gray, J. & Sinha, K. (2014) Towards a unifying theory of management standard implementation: the case of ISO 9001/ISO 14001. *International Journal of Operations & Production Management*, vol. 34, no. 10, pp. 1269-1306.

Kasperavičiūtė-Černiauskiene, R. & Serafinas, D. (2016) The adoption of ISO 9001 standard within higher education institutions in Lithuania: innovation diffusion approach. *Total Quality Management & Business Excellence*, pp. 1-20.

Marde, S. (2015) The Contribution of ISO 9001 to Certified Companies: Manager and Employee Perceptions. *The Quality Management Journal*, vol. 22, no. 1, pp. 47-60.

Nair, A. & Prajogo, D. (2009) Internalisation of ISO 9000 standards: the antecedent role of functionalist and institutionalist drivers and performance implications. *International Journal of Production Research*, vol. 47, no. 16, pp. 4545-4568.

Poksinska, B., Jörn Dahlgaard, J. & Antoni, M. (2002) The state of ISO 9000 certification: a study of Swedish organizations. *The TQM Magazine*, vol. 14, no. 5, pp. 297-306.

Poksinska, B. (2010) When does ISO 9000 lead to improvements? *International Journal of Productivity and Quality Management*, vol. 5, no. 2, pp. 124-136.

Poksinska, B., Eklund, J.A.E., Jörn Dahlgaard, J. (2006) ISO 9001:2000 in small organisations. *International Journal of Quality & Reliability Management*, vol. 23, no. 5, pp. 490-512.

Psomas, E.L., Fotopoulos, C.V. & Kafetzopoulos, D.P. (2010) Critical factors for effective implementation of ISO 9001 in SME service companies. *Managing Service Quality: An International Journal*, vol. 20, no. 5, pp. 440-457.

Rušjan, B. & Alic, M. (2010) Capitalising on ISO 9001 benefits for strategic results. *International Journal of Quality & Reliability Management*, vol. 27, no. 7, pp. 756-778.

Sampaio, P., Saraiva, P. & Guimarães Rodrigues, A. (2009) ISO 9001 certification research: questions, answers and approaches. *International Journal of Quality & Reliability Management*, vol. 26, no. 1, pp. 38-58.

Sampaio, P., Saraiva, P. & Monteiro, A. (2012) ISO 9001 certification pay-off: myth versus reality. *International Journal of Quality & Reliability Management*, vol. 29, no. 8, pp. 891-914.

Singh, P.J., Feng, M. & Smith, A. (2006) ISO 9000 series of standards: comparison of manufacturing and service organisations, *International Journal of Quality & Reliability Management*, vol. 23, no. 2, pp. 122-142.

Stevenson, T.H. & Barnes, F.C. (2002) What industrial marketers need to know now about ISO 9000 certification. A review, update, and integration with marketing. *Industrial Marketing Management*, vol. 31, no. 8, pp. 695-703.

Tang, S.L. & Kam, C.W. (1999) A survey of ISO 9001 implementation in engineering consultancies in Hong Kong. *International Journal of Quality & Reliability Management*, vol. 16, no. 6 pp. 562 – 574.

Withers, B.E. & Ebrahimpour, M. (2001) Impacts of ISO 9000 registration on European firms: a case analysis. *Integrated Manufacturing Systems*, vol. 12, no. 2, pp. 139.

Appendix 1 - Survey

All questions, except for the first two, were answered by giving scores on a Likert scale from 1 to 5. 1 showed the greatest level of disagreement while 5 showed the greatest level of agreement. In addition to the score on the Likert scale, the respondents were asked to provide further motivation and comments to their selections.

Questions regarding external benefits (EB)

Jag tror att en ISO-certifiering kommer att...

I believe that an ISO certification will...

1. ... öka företagets marknadsandelar.
... increase the market share of the company.
2. ... förbättra externa aktörers bild av företaget.
... improve external actors' image of the company,
3. ... öka kundnöjdheten.
... improve the customer satisfaction.
4. ... öka företagets möjligheter att skydda miljön.
... increase the possibilities to protect the environment.
5. ... leda till bättre efterlevnad av lagar och förordningar.
... lead to a better satisfaction of governmental policies.

Questions regarding internal benefits (IB)

Jag tror att en ISO-certifiering kommer att...

I believe that an ISO certification will...

1. ... öka företagets produktivitet.
... increase the company's productivity.
2. ... förbättra kvaliteten hos företagets produkter och tjänster.
... improve the company's product quality.
3. ... ge ökad klarhet i våra tillvägagångssätt och ge klarare arbetsinstruktioner med tydligt definierade ansvarsområden.
... improve procedure clarity and provide clearer work instructions with clearly defined responsibilities.
4. ... minska kundernas behov av att kontrollera företagets processer, så kallade revisioner.
... decrease the customers' need to audit our processes.
5. ... öka personalens motivation.
... increase the motivation of the personnel.
6. ... öka kunskapsspridningen inom företaget.
... increase dissemination of knowledge within the company.

Questions regarding difficulties (D)

Jag tror att...

I believe that...

1. ... jag kommer tillbringa mer tid med administrativt arbete efter att företaget blivit certifierat.
... I will spend more time doing administrative work after the company has been certified.
2. ... ISO kommer att öka komplexiteten inom företaget.
... ISO will increase the complexity within the company.
3. ... en ISO-certifiering kommer leda till en minskad flexibilitet.
... an ISO certification will lead to a lowered flexibility.
4. ... en ISO-certifiering kommer leda till en försämrad moral inom företaget.
... an ISO certification will lead to a lowered morale in the company.
5. ... en ISO-certifiering kommer leda till högre kostnader för företaget.
... an ISO certification will lead to increased costs in the company.
6. ... en ISO-certifiering kommer leda till försämrade kvalitetsmetoder.
... an ISO certification will lead to worsened quality practices.

Questions regarding motivation (M)

Du tror att företaget ska bli ISO-certifierat eftersom...

You think the company will become ISO certified because...

1. ... era kunder efterfrågar det eller pressar er till det.
... your customers request it or pressure you to get it.
2. ... er ledning efterfrågar det eller pressar er till det.
... your top management requests it or pressure you to get it.
3. ... det finns en intern efterfrågan på det.
... there is an internal demand for it.

Questions regarding intention (I)

1. Jag vill jobba med ISO.
I want to work with ISO.
2. Jag tror att en ISO-certifiering är av stort värde för företaget.
I believe that an ISO certification is of great value to the company.
3. Jag tror att ett ISO-certifierat ledningssystem är av stort värde för företaget.
I believe that an ISO certified management system is of great value to the company.
4. Jag tror att ISO kommer att ge mig mycket värde.
I believe that ISO will give me a lot of value.

Appendix 2 - Transcripts of relevant survey answers

E1 - Interview 1

EB1:

“En ISO-certifiering är bra på det viset att man generaliserar någonting, som man följer. Att man ökar sin dokumentation och uppföljning. Det tror jag upplevs positivt. Sen vet man att när det kommer till affärer så är det alltid pengar med som styr.”

“An ISO certification is good in the sense that you are following something that has been generalised. That one increases their documentation and follow up. I think that is perceived to be positive. But in the end, one knows that in business money is decisive.”

EB4:

“Och där är ju miljön med men är inte lika stark. Tveksamt. Man har inte riktigt de hårda kraven i 9000 som i 14000 helt enkelt.”

“The environment is included, but is not as strong. Doubtful. You simply do not have as strict requirements in 9000 as in 14000.”

EB5:

“Jag tror att vi gör det idag, men skulle vi inte göra det så tror jag att tack vare att vi skapar en struktur som vi sprider ut i organisationen bättre, så är det någon som inte gör det så kommer den att falla in i den strukturen.”

“I believe that we are doing this today. But in case we are not, I think that thanks to the structure we will create and spread out in the organisation, this will be dealt with and prevented.”

IB1:

“Ja, det stämmer jag helt in på. /.../ För att man ska analysera och komma fram till en gemensam sak. Det innebär att du inte sitter och bygger upp samma saker varje gång. Du sitter inte och boxas i varsitt hörn och gör det på olika sätt utan man har en rak och bra linje.”

“Yes, I agree completely [with improved productivity]. ... Because one should analyse and reach a common opinion. It means that you will not sit and build the same things each time. You will not sit and fight in each respective corner and do it in different ways but have a straight and good method.”

IB2:

“Ja, jag tror det. Jag tror att [kvaliteten] är hög idag, men det stämmer jag in på. Man kvalitetssäkrar ju på ett bättre sätt så, ja.”

“Yes, I think so. I think [the quality] is high today, but I still agree, since we will assure the quality in a better way.”

IB4:

“Det är för att det ska vara så tydligt och klart så att man ska inte behöva känna sig osäker eller gå och göra mer kontroll än det som vi redovisar.”

“It should be so clear that you do not feel insecure and do not have to check more than what we are presenting.”

D5:

“Det kostar att ta fram det, det kostar att vara med i det och det kostar att efterleva det. Det är klart att det blir kostnader. Å andra sidan, det är svårt att säga något emot det ännu för man vet inte vad man kan vinna på det. Det kan vara att man ökar andelar, då får man å andra sidan in mer intäkter. Om det kommer vara en kostnad eller en vinst i det, det får framtiden utvisa.”

“System design costs, it costs to be part of it and to be compliant. Of course, there will be costs. On the other hand, it is hard to say something against it yet, because we do not know what we can benefit from it. Whether or not it will be a cost or profitable, time will tell.”

M1:

“Jag har varit här alldeles för kort tid för att ha en uppfattning om det, om jag ska vara ärlig. /.../ Det är möjligt att det kanske är någon som pressar, det är möjligt att det finns vissa jobb som vi inte kan gå in och ta, och då är vi pressade. Jag tror att det kan finnas önskemål om det, så jag får ändå hålla med om det. Jag tror att [modersbolaget] kan pressa oss också att vi gör det här i Sverige.”

“I have been here for far too short time to have an idea of that, to be honest. /.../ It is possible that there might be someone who pressures, it is possible that there are some jobs that we cannot take, and then we're pressured. I believe that there might be wishes, so I will have to agree on it. I believe that the parent company might also pressure us on doing it here in Sweden.”

M2:

“Jag tror att det finns ett önskemål i alla fall om det. Men om de pressar oss eller inte, det har jag ingen aning om.”

“I think that there at least exists a wish for it, but I do not know whether or not they are pressuring us into it.”

M3:

“Jag har varit här för alldeles för kort stund för att veta strukturen i företaget eller önskemålen. Jag tror att det förmodligen är så. Om jag bara får gissa så tror jag att det finns två anledningar till det, jag tror anledningen är att man vill visa det utåt för att kunna ta andelar, d.v.s. kunna vara med på totalentreprenader där det krävs som ett skall-krav och det andra tror jag också, och jag tror det går hand i hand, att ledningen vill dra igenom det här. Jag tror de två är lika starka. Det ena handlar om affärer och det andra handlar om ‘då har vi det kravet på oss och då måste vi göra det’.”

“I have been here for far too short time to know the structure in the company or the wishes. I think there probably is. If I only get to guess, I believe that there are two reasons for it. I believe that the reason is that one want to show it to the outside to be able to take shares, i.e. be able to take part in turnkeys where it is demanded as a must, and the second reason that I also believe in, and I believe these two go hand in hand, is that the management wants to go through with this. I believe that these two are equally strong. One is about business and the second is about ‘we have this requirement on us and then we must do it’.”

I1:

“Ja, det vill jag. Jag tycker det är bra att kvalitetssäkra, jag tycker det är bra att följa de lagkrav osv. som det också innebär, även om man då inte bara pratar om 9000 utan pratar miljö och den biten också, så tycker jag det är bra.”

“Yes, I want to. I think quality assurance is good, I think it’s good to follow the regulations etc., which it includes, even if that is not only 9000 but also environment and that bit as well, I think it’s good.”

I4:

“Det förutsätter jag i mitt arbetssätt. /.../ Jag vet inte vad det kommer göra för mitt arbetssätt här. /.../ Jag kan inte veta det idag, men jag hoppas det.”

“I assume that, in my way of working. /.../ I do not know what it will do for my way of working here... I cannot know it today, but I hope so. “

E1 - Interview 2

EB1:

“Jag tror att det kommer öka och framförallt stärka de marknadsandelar vi har, stärka oss som företag, och tror också att vi vinner någon marknadsandel.”

“I believe that it will increase and above all strengthen the ones we already have, make us stronger as a company, and I also believe that we will gain new market shares.”

EB4:

“Ja, det tror jag.”

“Yes, I believe so.”

EB5:

“Det där är jättesvårt, därför att det är helt och hållet beroende på person. Lagar, förordningar och moral det handlar alltid om personligt identifierbart.”

“This is a very difficult issue, since it is entirely dependent on an individual level of the employees. Laws, regulations and morale are about something personal.”

IB2:

“Ja, det tror jag. Jag tror att när man anammar det och kör hela vägen ut så blir det bättre. Fortfarande så blir det bättre. Genväg eller inte genväg? Kompassen i kroppen. Det är där man ändå slutar, till syvende och sist.”

“Yes, I think so. I think that once the standard is embraced throughout the company it will improve. Ultimately, shortcut or not shortcut? The internal compass is where the decision is made.”

IB4:

“Nej, det tror jag inte. Tror att revisioner och så vidare är viktigt ändå. Det här är bara en dokumentation och ett sätt att visa hur vi jobbar, kontrollera hur vi jobb, så kommer och ska revisioner alltid förekomma. Revisioner och granskning behöver man göra ändå.”

“No, I do not think so. I believe that audits will still be important. This is just a documentation and a way of showing how we are working, controlling how we are working, and audits will and should always occur. You still have to perform audits and reviews.”

D5:

“Initialt, ja, men i förlängningen, nej. Det är klart att all uppföljning och dokumentering kommer att öka kostnaderna. Vad finns vinningen i det rent ekonomiskt? Att vi gör rätt, rätt från början. Å andra sidan kan vi spara pengar som inte hamnar i något klavér som det kan göra.”

“Initially, yes, but not in the long run. Obviously, all follow-up and documentation will increase the costs. What is the economic benefit in this? That we are doing it right, from the beginning. So, on the other hand we can save money that otherwise would have been wasted.”

M2:

“Ja, det tror jag. Om vi tittar på [the parent company] finns det en intern press för att vi ska ha det.”

“Yes, I think so. There exists an internal pressure within the entire company group that we should have this.”

M3:

“Nej, det tror jag inte [skrattar], det har jag jävligt svårt att tro. /.../ jag tror att internt, ja klart att det internt finns någon eller några få som tycker att det här vill vi. Men om du ska ta rent generellt, som jag säger så tycker folk att det är jobbigt med nya saker, med förändring. “

“No, I do not think so [laughs], I have a very hard time imagining that. /.../ Internally, I think that, of course, there likely is someone or a few who want to do this. But in general, people think it is troublesome with new things, with change.”

I1:

”Jag tror att det är bra. Jag tror på en gemensam syn, inte bara på vårt sätt att arbeta här utan det är rent generellt sett. Både med kvalitén, med ISO 9000, och ISO 14000 när det gäller miljön.”

“I think it is good. I believe in a common view, not only when it comes to our way of working, but in general. Both when it comes to the quality in ISO 9000 and when it comes to the environment in ISO 14000.”

E2 - Interview 1

EB2:

“Det tror jag delvis kommer påverkas men det är framförallt det man gör på arbetsplatsen som räknas, hur man sköter alla papper... det är mycket kvalitetsdokumentation och så som ska in och om vi just är certifierade med ISO eller inte kanske inte spelar den största orsaken, utan det är mer hur man sköter sig på plats och kundförbindelser och liknande.”

“I partly think that will have an effect, but it is above all what you do on site that matters. And how you handle all the papers and the volumes of quality documents that are to be handed

over. Whether or not we are certified according to ISO might not be the most important aspect, but rather how you behave on site and handle the customer touch points and so on.”

EB3:

“Jag tror vi kommer implementera ett system som är rätt bra som man snabbt kan få tag på papper så att det kommer gå lite, det blir mycket jobb i början för att få igenom det när vi väl har det har vi de flesta av de här papper som efterfrågas klara vilket gör att vi kan skicka dem lite snabbare än vi gjort innan, vilket gör att beställaren blir nöjd. Och så att det är ett enhetligt system, så det tror jag absolut vi kan dra nytta av.”

“I believe that we will implement a system that is quite good that you quickly can access paper, so that it will go a little bit, it will be a lot of work in the beginning to get it through when we eventually have we have most of the paper that is demanded ready which enables us to send them a bit faster than we have done earlier, which makes the customer pleased. And that it will be a uniform system is something that I definitely believe that we can take advantage of.”

EB5:

“Vi följer liksom de regler som finns. Det är mycket med skyddsutrustning och miljö, så jag tror inte det kommer... jag tror inte att ribban höjs så mycket just vad gäller följandet av regler och sådär än.”

“We are following the regulations that exist. It is much about protective equipment and the environment, so I do not think it will... /.../ I do not think that the bar is raised [when implementing ISO 9000] regarding compliance with governmental policies and such, yet.”

IB1:

“Vi har ju haft ganska stor personalomsättning här, och så just nu håller vi på att utveckla företaget nu där vi har gått från att vara åtta anställda på kontoret till vi är tretton eller fjorton nu. Och så börjar vi implementera nya produkter så att säga, så det är mycket nytt som händer /.../ och mycket förändring och då är det bra att ha ett system att luta sig tillbaka mot där alla vet /.../ de här riktlinjerna att gå efter. /.../ Oavsett om det är ISO eller inte så är det bra att ha ett lite strukturerat system.”

“We have had quite high employee turnover here, and at the moment we are developing the company, where we have gone from being eight employees at the office to us being thirteen or fourteen right now. And then we’re implementing new products, so to speak, so there are a lot of new things going on /.../ and lots of change and then it’s good to have a system to fall back on where everybody knows /.../ these guidelines to work by. /.../ Regardless if it’s ISO or not, it’s good to have a somewhat structured system.”

IB2:

“Tror inte det har så mycket med just själva kvaliteten att göra utan det kanske finns något litet där, men känns som att det är vår kompetens som vi har liksom inom vårt tekniska område som är vår styrka, och om vi ändrar på systemet så kommer det inte ändra så mycket på liksom den biten.”

“Don’t think that it [the certification] has so much to do with the quality, but there might be something small there, but feels like it is our competence that we have, like, in our technical field that is our strength, and if we change the system then it won’t change that bit that much.”

IB3:

“Ja, det är väl förhoppningen, så som jag ser på det. Men som sagt vet jag inte så mycket om det egentligen. Men det är väl det som är min förhoppning med det, att det blir lite tydligare och klarare. Och sen är vi ju väldigt små så vi kan inte ha en alltför stark arbetsfördelning eller vad det nu var ni kallade det. Självklart kan man ha någon slags ramverk inom ett område men helt plötsligt måste du du göra något helt annat. Så man kan liksom inte bara säga 'nej, det där står inte i min arbetsbeskrivning så jag kan inte göra det.' Eftersom vi är ett så litet företag, måste man ibland smutsa ner händerna eller hjälpa till med finans även om det inte ingår i ens uppgifter. “

“Yes, that is the expectation, as I see it. But as I said, I do not know a lot about it really. But it is my expectation with it, that it becomes a little bit clearer. And then we are very small, so we cannot have a too distinct division of labour, or whatever it was you called it. Of course, you can have some kind of framework within an area, but all of a sudden you might have to do something completely different. So you cannot just say 'no, that is not in my work description so cannot do that'. Since we are such a small company, sometimes you have to get your hands dirty or help with the financials even though it actually is not included in your tasks.”

IB4:

“Jag tror inte... de har redan antagligen antingen har de ju redan ISO själva och då har de ju ett arbetssätt, så det spelar nog inte så stor roll om vi är ISO eller inte. Jag tror inte att det står i deras arbetssätt att 'de här behöver vi inte kontrollera lika väl, för de har ISO', utan det blir liksom samma kontroll som gäller. Och har de inte ISO så tror jag inte att det gör någon skillnad.”

“I do not think... either they already have ISO themselves and have a way of working, so then it does not matter whether or not we have ISO. I do not think it says in their work descriptions that 'we do not have to check these actors as much, because they have ISO', but it will be the same level of revision. And if they do not have ISO, I do not think that would make any difference.”

D6:

“Finns kanske en risk att man behöver göra mer på vissa saker, vilket gör att det blir mindre tid över till det som är viktigt. Men det antar jag att man får arbeta fram å andra sidan. Klurig fråga. Jag tänker även sen att man kanske behöver göra lite saker som t.ex. att man behöver göra en riskanalys varje gång, vilket egentligen är väldigt bra. Vissa projekt kanske man bara känner är så låg risk, men nu när vi har ISO så måste man göra det ändå. Den kvarten kanske man kunde ha lagt på något annat som är viktigt för det här projektet. Men, nej.”

“Maybe there is a risk that we have to spend more effort on doing some things, which gives less time left to what is truly important. But I guess that is something we can impact during the design. Tricky question. I am also thinking about a later stage, that we for example might have to conduct a risk analysis every time, which in a way is very good. But in some projects, you might just feel that the risk is very low, but when we are working according to ISO we still have to do it. Maybe, those 15 minutes could have been spent on something that is of importance to this project. But no.”

M1:

“Det tror jag, att det kommer mer och mer. Speciellt på större projekt så om vi ska bli större och utvecklas så behöver vi ta det steget. Om inte några kunder hade efterfårgat det så tror jag inte att vi hade gjort det.”

“I think so, that it increases. Especially at larger projects, so if we are to grow and develop we will have to take that step. I do not think that we would have done it if no customers demanded it.”

M2:

“Det är ju dom som har verkligen bestämt att vi ska göra det, där har vi inget val så. Men, så som jag har uppfattat det.”

“It is them [top management] that have really decided that we should do it, we do not have a choice there. But, that is how I have perceived it.”

M3:

“Ja, det är nog ingen som direkt liksom har tänkt så jättemycket på det. Om inte våra beställare eller ledningen hade sagt hade vi nog fokuserat på mer tekniska detaljer som vi alltid gör.”

“Well, there is probably nobody that has really thought very much about it [the implementation of the standard]. If not our customers or management had said anything we would probably have focused more on technical details, as we always do.”

I4:

“Ser väl inget direkt värde med det, mer än att jag tror nog att det kan hjälpa till lite, jag känner väl att de här bitarna vi ska sitta med ändå kan vara viktiga och jag har funderat på det i några år men inte riktigt behövt, haft tid eller prioriterat det. Nu har man väl inget val så det är ju bra på ett vis, så behöver man sitta ner och strukturera upp vissa saker som jag har känt har behövt strukturerats sen jag började här egentligen, men som sagt på en bra nivå så att det inte blir för strukturerat. Jag har försökt några gånger men, som sagt, just det jag jobbar med där är jag relativt själv också så det blir ju egentligen att strukturera upp mitt eget arbetssätt som gäller [skrattar], men förhoppningsvis blir vi ju lite fler inom min avdelning och då är det ju alltid bra att ha något, kommer gå lättare implementera saker och så vidare.”

“Do not see any concrete value with it, in addition to that I think that it can help a little bit, I feel that some of the parts that we will sit down with can still be important and I have thought about it for some years but not really had to, had time to or prioritized it. It is in a way good that we don't have a choice, that we have to sit down and structure certain things that I have felt have needed to be structured since I started here really, but as I said on a decent level so that it's not too structured. I have tried a few times but, as I said, I am relatively alone at what I am doing so it is more structuring my own way of working [laughs], but hopefully we will become some more in my department and then it will be nice to have something, will be easier to implement things and so on.”

E2 - Interview 2

EB2:

“Ju mer professionell med diplom och allt sådant där man har, det är klart att det ser bättre ut. Speciellt för beställare som tycker sådant här är viktigt, som Skanska och så vidare. Så det tror jag.”

“The more professional with diplomas, and all that, you have, of course it looks better. Especially for the customers, who think these things are important, such as Skanska. That is what I think”

EB3:

“Jag tror kundnöjdheten beror mycket på den personliga kontakten med beställare och så vidare, så det har kanske inte så mycket att göra med vilket system och sådär man använder, utan man gör ett bra jobb.”

“I think customer satisfaction is very dependent on the personal interaction with the customer and so on, and therefore this is possibly not related to what system you are using, but you do a good job.”

EB5:

“Ja, det tror jag. Lite mer nog att vi kommer ju lägga ner lite tid på det här och läsa på det här systemet och så vidare, och då är det säkert i där att vi behöver ha bättre koll på det där. Så jag tror att vi kommer bli lite mer uppdaterade på vad som gäller och sådär. /.../ Nu tror jag att det kommer bli lite mer strukturerat och vi har ett system och så att vi har något att jobba efter, med vissa krav på oss i slutändan och då tror jag det kommer bli lite mer uppstyrt.”

“Yes, I think so. A little bit more since we will spend some time and learn this system, and then it probably includes that we have to keep track of this. So, I think we will be more updated on what is current and so on. /.../ I think it will be a bit more structured now, since we will have a system and something to follow. In the end, this includes certain requirements and then I think it will be a bit more controlled.”

IB2:

“Det tror jag. /.../ det känns som att vi kommer att få en viss kvalitetsökning när vi får det här på rätt plats.”

“I think so. /.../ It feels like we will get some increase in quality, once we have this in place.”

IB3:

“Det hoppas jag på. Det känns så. Jag har ju sett det där dokumentet ni har tagit fram [refererar till handboken som skapats för sin avdelning] och det kändes som att det blev lite klarare, lite tydligare. Och det borde borde ju vara samma för alla. Så att äntligen vet [nämner en av sina kollegor] vad han ska göra på dagarna, så det känns ju bra [skrattar].”

“I hope it will. It feels like it will. I have seen the document that you have created [refers to the handbooks created for their department], and it felt like it got clearer, a bit more distinct. And it should be the same for everyone else. So finally, [mentions one of his colleagues] knows what to do during the days, so that feels good. [laughs]”

IB4:

“Ja, men lite kanske. Man har ju ändå fått en certifiering på grund av någonting, så det är ju vår förhoppning att det ska ge något tillbaka annars skulle vi inte gjort det, så det får man ju absolut tro. /.../ Om man jämför de med ‘Kalles Gräv och Schakt’, att det kanske är vissa saker man får titta lite extra på. Medan om vi nu har det här systemet, har man ändå ett system som man förhoppningsvis följer.”

“Yes, maybe a little bit. After all, one has obtained the certification because of something, so it is our expectation that we will get something out of it. Otherwise we should not have done it, so one definitely has to believe in that. /.../ If we are compared with Carl’s Digging and Excavating [referring to a small firm], maybe there are some things that you need to look into a bit more. However, if we now have this system, we are probably following it.”

D6:

“Nej! Bättre, tror jag. Mer ordning, bättre kvalitet. Det är vad jag ser framför mig.”

“No! Better, I think. More order, better quality. That is what I see before me.”

I4:

“Ja, det tror jag nog ändå. Det känns som att när jag börjar jobba efter det här ISO, att jag kommer kunna effektivisera mig lite själv. Förhoppningsvis. Nä, men just att lägga ner tiden på att få upp processer och sådär, på sikt kan vara bra ändå.”

“Yes, I think so after all. It feels like I will be able to improve my own efficiency, once I start working according to ISO. Hopefully. Just spending the time on defining processes and so on that can be something good in the long run.”

E3 - Interview 1**IB1:**

“Ja, kanske. För att vi kanske får mer jobb och det betyder att vi har större produktivitet. Kanske. Det är svårt att säga, jag vet inte. Men det kan ju ha en positiv inverkan att man får jobb man kanske inte hade fått annars.”

“Yes, maybe. Because we might get more jobs and that means that we have a higher productivity. Maybe. It is difficult to tell, I do not know. But it might have a positive effect that we get jobs that we might not have gotten otherwise.”

IB3:

“Ja, det kan jag ju tro då. Att det gör kanske. Att vi får ner detta som vi redan gör nu får vi ned på pränt. Så då kan man klart och tydligt läsa, kanske, vad var och en ska göra och inte göra.”

“Yes, I might believe that. That it might. That we get this what we are doing now written down. So, that we in plain terms can read, perhaps, what each and one is supposed to do and not do.”

IB5:

“Nej, det tror jag inte. Jag tror att folk jobbar på som vanligt, alltså i sig så tror inte jag att den här ISO-certifiering kommer vara världsomvälvande för vårt företag. Vi kommer göra samma saker, fortsätta göra samma saker som vi gör nu, alla kommer säkert få jobba likadant som dom gör nu. Jag tror liksom inte att det förändrar någonting i vårt arbetssätt. Jag tror inte maskinoperatörerna kommer skrika ‘Jippi, vi har fått ISO-certifiering!’, det tror jag inte, det tror jag inte att dom gör här inne på kontoret heller, mer än [the CEO].”

“No, I do not think so. I believe that people will work as usual, I do not believe that this ISO certification will be world-shaking to our company. We will do the same things, keep doing the same things as we are doing now, everybody will probably have to work the same way as they are doing now. I sort of do not think that it will change anything in our way of working. I do not think that the machine operators will shout “Yay, we have gotten an ISO certification!” I do not believe that, I do not believe that they will do it here at the office either, except for [the CEO].”

M1:

“Nej, det stämmer inte alls, tror jag inte. Det är vad jag tror. /.../ Jo det är ju för att vi har fått påtryckningar från koncernen att vi ska ha ISO-certifiering, antar jag. Det är vad jag tror.”

“No, I do not believe that is true at all. That is what I believe. /.../ Well, it is because we have been pressured by the parent company to get an ISO certification, I guess. That is what I believe.”

M2:

“Ja, det tycker jag stämmer. Jag är nästan 100 på att det är så. Det är väl för att jag har hört att de kommer från England och vill att vi ska bli ISO-certifierade.”

“Yes, I think that is correct. I am almost 100 that it is correct. It is probably because I have heard that they come from England and want us to become ISO certified.”

M3:

“Ja, alltså ledningen. Egentligen vet jag inte [if people on at the office wants ISO certification] eftersom jag tror pratet om ISO-certifieringen hade börjat redan innan jag började, och att målet egentligen var att vi skulle ha gjort det förra året och att det blev framskjutet. Det jag tror är det är ju det att det har kommit påtryckningar från England att vi ska skaffa ISO-certifiering för många andra [in the company group] har det. Jag är inte säker på att det är någon här så som har uttryckt, det är iallafall inte vad jag har hört men det kan ju vara så att det är för att externa kunder här vill, liksom tycker att vi ska ha en ISO-certifiering, tycker att det är bra för dem att vi har en ISO-certifiering.”

“Yes, the top management that is. In fact, I do not know since I believe the discussion about ISO certification had started already before I began working here, and that the goal actually was to have it done last year and that got postponed. What I believe is that there has been pressure from England that we should get an ISO certification because many others [in the company group] have it. I am not sure that there is anyone here that have expressed, that is at least not what I have heard but it could be that it is because external customers here want, sort of thinks that we should have an ISO certification, think that it would be good for them that we have an ISO certification.”

I1:

“Jag känner att jag har aldrig arbetat med det förut och jag känner att jag har tillräckligt att göra ändå. Jag känner att det ligger lite utanför, kan inte sätta ord på varför. Jag känner inte riktigt att jag skulle vilja jobba med det egentligen utan jag har blivit utsedd.”

“I feel like I have never worked with it before and I feel like I have enough to do as it is. I feel like it is a bit ‘outside’, cannot put words on why. I do not really feel that I would actually like to work with it, but that I have been chosen.”

I2:

“Ja, det känns ju så, det verkar som att det är det för [the CEO] och England. De tycker att det är viktigt att vi blir ISO-certifierade. Det [att det skulle vara av värde för företaget] instämmer jag helt i.”

“Yes, it feels like it, it seems like it is to [the CEO] and England. They think that it is important that we become ISO certified. I agree completely with it [that it would be of value of the company].”

I3:

“Det här var ju svårt, det känns som att det, ja det är ju bara är en del av ISO-certifieringen, ledningssystemet. Det är ju också av stort värde eftersom det ändrar sig. Det är ju viktigt för företaget att ha ett bra ledningssystem för att bli certifierade, framförallt. /.../ Eftersom jag tror att själva certifieringen i sig är viktig för företaget så tror jag att det här också är viktigt för det ingår ju som en del i själva certifieringen, vi måste ju ha ett ledningssystem annars blir vi inte certifierade.”

“Well this was difficult, it feels like, well it is only a part of the ISO certification, the management system. It is also of great value since it changes. It is important to the company to have a good management system to, above all, become certified. /.../ Since I believe that the certification in itself is important to the company, I believe that this is also important since it is included as a part in the certification, we need to have a management system or we will not become certified.”

I4:

“Inte i den position jag sitter i, så tror jag det är varken till eller från om vi har det eller inte.”

“Not in the position that I am in, I do not believe that is neither positive nor negative if we have it or not.”

E3 - Interview 2**IB1:**

“Nej, det tror jag inte. Vi försöker vara så produktiva som vi bara kan redan nu. Det är jättesvårt det här, men jag kan inte se riktigt att det ökar produktiviteten.”

“No, I do not think so. We are trying to be as productive as we can already. This is really difficult, but I cannot really see that it will increase the productivity.”

IB3:

“Ja, det finns ju nedpräntat nu. Men det är ju det vi gör. Det är ju det vi gör, och har gjort innan. Det blev nedpräntat. Men det är möjligt om det kommer in någon ny, att det är klart och tydligt vad de ska göra. /.../ Det som finns i skift nu som ni har producerat det har ju vi, de uppgifterna har ju vi givit er, så då vet vi ju hur vi ska jobba och tillvägagångssättet. Med befintlig personal har det ingen påverkan, kan jag tycka. Men kommer det in någon ny, då är det ju väldigt enkelt. Om någon slutar och ska ersätta någon annan och ska överta alla arbetsuppgifter, och det är inte säkert att det blir så, men då finns det ju i klarskrift.”

“Yes, it is written down now. But it is what we do. It is what we do, and have done before. It got written down. But it is possible that if someone new comes, that it is clear what they are supposed to do. /.../ What is written down now, that you have produced, that is information that we have provided you with, so we know how we are supposed to work and the approach. It will not have any effect with the current staff. But if someone new comes, then it is very simple. If someone quits and will be replaced by someone else that will take over all tasks, and it is not certain that it will happen, but then it exists in plain language.”

M1:

“Ja, en del kanske gör det. Men det är väl först och främst att det kommer från högre ort inom koncernen att vi ska vara ISO-certifierade. Så det stämmer inte alls. /.../ Det är inte på grund av att kunderna efterfrågar det i första hand utan det är ju, om jag har förstått det hela rätt, så är det för att England vill att alla ska vara ISO-certifierade.”

“Yes, some might do it. But it is first and foremost the top management in the parent company that pressures us to be ISO certified. So, it is not true at all. /.../ It is not since the customers desire it primarily /.../ but it is, if I have understood it correctly, it is because England wants everybody to be ISO certified.”

M3:

“Ja, kanske. Det tror jag inte egentligen att det finns någon efterfrågan här. Det är ju ingen som har tid till det. Alla vill ha så lite att göra med det för att det innebär tid. Så det tror jag väl inte, men det är väl då i förlängningen då att, t.ex. Thomas som sitter och skriver anbud, om han får frågan hela tiden när han lämnar anbud så kan ju det vara lite jobbigt. Det är ju väldigt skönt då om man har en ISO-certifiering. Men internt så, tror jag inte att det spelar så stor roll.”

“Yes, maybe. I do not really believe that there is a desire here. There is not really anyone that has time for it. Everybody wants little to do with it since it means time. So, I do not think so, but it would be in the long run that, e.g. E4 that does tendering, if he gets asked all the time when doing tendering then it can be quite annoying. It is very nice then if one have an ISO certification. But internally, I do not think it matters.”

I3:

“Ja, men kan inte säga varför.”

“Yes, but cannot tell why.”

I4:

“Nej, det tror jag inte. /.../ Man kommer ju fortsätta arbeta som om inget hade hänt ändå. Om dom inte har planer på att vi ska börja jobba på annat sätt, men det vet vi inte. För mig har

det inget värde, det är väl kanske på andra områden som det här, de som skickar anbud, de kanske får färre frågor och motfrågor, att det betyder mer för dem.”

“No, I do not think so. /.../ One will continue to work as if nothing had happened either way. Unless they have plans to change the way we are working, but we do not know that. It does not have any value to me, there might be in other areas that this, the people in tendering, they might get fewer questions and counter-questions, it might mean more to them.”

E4 - Interview 1

EB2:

“Det är ju lite vår nisch att vi försöker, vi kan inte ha samma meterpris som vissa av våra konkurrenter så därför försöker vi vara lite mer seriösare i och med att vi har kollektivavtal, har personalhandböcker och HR och sånt där och vi har kvalitetsuppföljning, vi är certifierade, vi har CE-märkta maskiner och liknande som de inte har. Så vi försöker konkurrera på det sättet istället för att bara sänka priset, sänka priset.”

“It is a little bit of our niche that we are trying, we cannot have the same meter price as our competitors so we are instead trying to be a bit more serious through having collective agreement, having employee handbooks and HR and such and we have quality follow up, we are certified, we have CE marked machines and similar that they do not. So, we are trying to compete in that way instead of just lowering the price, lowering the price.”

EB3:

“Samma som att de ser att det är ett seriöst företag så kommer de även att tro mer på oss med våra underlag och hela biten med kvalitet och miljö. /.../ Själva produkten kommer kanske inte vara bättre men uppföljningen på den och dokumentation av den kommer vara bättre.”

“In the same way as they see that it is a serious company, they will also believe in us more with our documentation and the entire part with quality and environment. /.../ The product itself will maybe not be better but the follow up on it and the documentation of it will be better.”

EB4:

“Yes, now we are getting it on paper, so sure. /.../ I am often reflecting on the environment but not exactly the ISO certification versus the environment.”

IB1:

“Det kommer öka min produktivitet, jag som gör många anbud. Istället för att jag får skriva i varje anbud att vi jobbar på ett liknande sätt som ISO-certifiering. Väldigt ofta då vill de ha in bevis på det och att de vill ha in en innehållsförteckning vad vår kvalitetsplan innehåller och vad vår miljöplan innehåller, nu istället kan säga att vi är certifierade redan från början. /.../ Vissa andra personer har samma problem att de lämnar anbud och så där, att kunna säga att vi är certifierade skulle dels underlätta här i Sverige men även då..., vi har ju ibland projekt utomlands och där gäller den där stämpeln rätt mycket.”

“It will increase my productivity, with me doing a lot of tendering. Instead of writing in every tender that we are working in a similar way as an ISO certification, very often they want proof of it and they want a table of content of what our quality plan includes and what our environmental plan includes, now instead we can say that we are certified from the start. Some

other people have the same problem that they are tendering and such, to be able to say that we are certified would simplify here in Sweden but even when..., well we sometimes have projects abroad and that stamp is quite important there.”

IB2:

“Ja, jag tror ju mer på det här med tjänsterna eller med dokumentation och uppföljning och liknande att det kommer att förbättras.”

“Yes, I believe with more in this with services or with documentation and follow up and similar that it will improve.”

IB3:

“Förhoppningsvis, det är ingenting som jag vet. /.../ Det återstår att se.”

“Hopefully, that is nothing that I know. /.../ It remains to be seen.”

IB6:

“Har man allting i ett tjockt block då kan man hitta allting där och det är lättare att leta upp, och dä är det lättare att lära ut och lättare att ge till någon också.”

“If you have everything in a thick folder then you can find everything there and it is easier to find, and then it is easier to teach and easier to give it to someone as well.”

D1:

“Nej, det tror jag inte alls att jag kommer ha mer administrativt att göra. Så det påståendet stämmer inte.”

“No, I do not think at all that I will have more to do on the administrative part. So, that statement is not correct.”

D4:

“Jag har märkt lite initiala besvär hos vissa men på sikt så tror jag inte att det kommer vara något överhuvudtaget. Så jag ligger någonstans mellan en tvåa och trea där i och med att jag vet om lite besvär nu i början att få alla de här på samma linje. Så just nu skulle jag säga en trea.”

“I have noticed some initial problems with some but in the long run I do not believe that there will be anything whatsoever. So, I am somewhere between a two and a three there, since I do know of some problems now at the start to get everybody on board on the same line.”

M1:

“Jag vill att vi ska bli ISO-certifierade, men inte för att kunderna pressar oss till det utan det är mer inom det interna moderbolaget som pressar oss och även jag pressar oss för vi behöver vara med, alltså certifiera oss i Norge, enligt Sentral Godkjenning och sånt, då får man en stämpel där också som gör att det blir enklare på alla projekt. För att få det skulle en ISO-certifiering underlätta betydligt. Då får vi även den stämpeln som underlättar i tredje led.”

“I want us to become ISO certified, but not because the customers are pressuring us to do it, but more that it is the parent company that pressures us and I am also pressuring us because we need to be part, that is certify us in Norway, according to Sentral Godkjenning and such, then you get a stamp there as well that makes it easier on all projects. An ISO certification

would simplify getting it [the certification in Norway] considerably. Then we would also get that stamp that simplifies at the third stage.”

M2:

“Så är det, vår ledning pressar alla delar av Keller att bli certifierade. Så att hela moderbolaget har certifiering ut i minsta gren.”

“That is the case, our management pressures all parts of [the parent company] to become certified. So, that the entire parent company has the certification to the smallest branch.”

M3:

“Det gör det också, åtminstone från min sida och Pers sida.”

“That is also the case, at least from my part and [the CEO’s] part.”

I1:

“Det är bra att jobba med ett system som är globalt, eller alla känner till. Det är dumt att ha något annat system som man behöver förklara varje gång. ISO är välkänt.”

“It is good to work with a system that is global, or that everybody knows of. It is dumb to have any other system that you have to explain every time. ISO is well known.”

I3:

“Vi har ju försökt jobba enligt ett ISO-ledningssystem, men vi har ju ibland gjort avsprång från det så då är det bättre att man säger att nu ska vi vara certifierade och då jobbar vi efter det här på heltid liksom. Så, nej, bli certifierade och inte bara följa ett system som följer... Det är så klart att när vi är certifierade så kommer vi följa ledningssystemet men om vi inte är certifierade och bara följer ett ledningssystem, som vi tar som en mall, utan jag vill ha hela paketet. /.../ Vi vill följa systemet, inte bara stämpeln som är viktig utan det är själva systemet och enkelheten i det som vi ser som fördelaktigt.”

“We have tried to work according to an ISO management system, but we have sometimes made detours from it and then it is better that we say that we should be certified now and work according to this full time. So, no, get certified and not just follow a system in accordance with... It is of course the case that when we are certified we will follow the management system but if we are not certified and only follow a management system, which we use as a template, but I want the entire package. /.../ We want to follow the system, it is not only the stamp that is important but it is the system itself and the simplicity in it that we see as beneficial.”

E4 - Interview 2

EB4:

“Nej, vi gör vårt bästa för att skydda miljön som det är. Vi har maskiner som går på diesel så vi släpper ut mycket där, men det kommer inte minska på grund av en ISO certifiering.”

“No, we protect the environment as well as we can at the moment. We have machines that run on diesel, so we produce a lot of emissions but they will not be lowered because of the ISO certification.”

IB1:

“Nej, jag tror att den kommer vara liknande. /.../ Alltså vi har en hög produktivitet per anställd idag och vissa saker kommer bli lite lättare och vissa saker kommer ta lite längre tid än de gör idag så överlag så tror jag att det kommer vara ungefär samma. /.../ Det är planerandet i sig som kommer att ta längre tid, från anbud till projektstart. Men å andra sidan kommer vi vara bättre förberedda när projektet börjar och vi kommer inte behöva svara på lika många frågor och liknande som kunderna kräver av oss.”

“No, I believe that it will remain similar. /.../ That is, we have a high productivity per employee right now and some things might improve and become a little bit easier and some other things will take more time than they do today so all in all I believe that it would remain on about the same. /.../ It is the planning itself that will take more time, from contracting to start of project. But on the other hand, we will be better prepared when the project starts and we will not need to answer so many questions and similar that clients get to demand from us.”

IB3:

“Ja, nu när jag har tagit del i det lite mer så tror jag särskilt att platschefsrollen kommer bli mer tydligt definierad. Tidigare har det varit lite ’Vad är det jag ska göra?’ när en nyanställd kommer. /.../ Det tar oftast ett halvår innan den personen är bekväm i sina arbetsuppgifter och liknande. Detta kommer bli bättre.”

“Yes, now that I have been part of it a little bit more, I especially believe that the site manager role will be more defined. Because it has been a little bit like ‘What am I supposed to do?’ when a newly hired arrives. /.../ It usually takes half a year or similar before that person is comfortable in the work tasks and similar. This will improve.”

D1:

“På kort sikt, ja, på lång sikt tror jag att det kommer att minska. För att just nu behöver vi skriva många formulär och mallar måste tas fram och mycket av det ligger på mitt bord. Så jag måste verkligen göra administrativa saker. Men senare när det är gjort kommer platschefen ha sina mallar och liknande och jag kommer inte behöva göra någonting för dem utan de kan göra det själva istället.”

“In the short term, yes, in the long term I believe that it will decrease. Because at the moment we must write a lot of forms and templates must be developed and a lot of this is on me. So I will really have to do administrative things. But later when that is finished, the site manager will for instance have his forms and similar and I will not need to do anything for them, and they can do it instead.”

M1:

“Ja, det är en del av det. /.../ Visst, det finns vissa företag som praktiskt taget kräver det men de säger vanligen ’eller liknande system’, vilket vi har klarat oss på tidigare. Men det kommer komma till en punkt där de kommer säga ’vi arbetar bara med ISO certifierade företag’ eller någon annan certifikation. Så, visst lite press finns men det är inte det viktigaste för oss just nu. /.../ De [kunderna] vill se det, det finns ett större och större antal standarder, eller inte standarder utan certifikat. BREEAM till exempel, varje projekt ska nå excellent status. De mäter vissa saker, och de mäter mycket kvalitet och också miljögrejer och material och sånt och då skulle en ISO certifiering göra det lättare att nå ett sånt mål.”

“Yes, that is one aspect of it. /.../ Sure, there are some companies that practically demand it but they usually say ‘or a similar system’, which we have managed earlier. But it will come to a point where they say ‘we only work with ISO certified companies’ or with some kind of certification. So, sure it is a little bit of pressure but that is not main for us right now. /.../ They [the customers] want to see it, there are an increasing number of standards, or not standards but certificate. BREEAM for example, the project should reach excellent status. They measure certain things, and they measure a lot of quality and also environment aspect and material and such and then an ISO certification would make it easier to reach such a goal.”

E5 - Interview 1

EB1:

“Vi jobbar med ganska mycket större företag och de vill ha med det, så då blir det automatiskt, har vi det inte så kommer vi inte få något jobb. Men det är väl de mindre bolagen som inte bryr sig och det är väl därför jag menar att det inte är en femma [gradering]. För att de kommer ändå ta jobb eller ge oss jobb. “

“We work with quite a lot of larger companies and they want to include it, so then it is automatic; if we do not have it we do not get any jobs. But it is the smaller companies that do not care and that is why I do not value it as a five [the score], since they will take jobs or give us jobs regardless.”

EB2:

“De vet att det finns en struktur i företaget, /.../ att det finns mer tänk bakom det vi gör och att det finns rutiner och regler på ett annat sätt.”

“They know that there is a structure in the company, /.../ that there is more thought behind what we do, and that there are routines and rules in a different way.”

EB3:

“Om vi följer det vi tänker oss att göra, så tror jag det. /.../ Alltså att vi följer våra rutiner och att vi då kanske levererar allt i rätt tid, /.../ att vi får ett bättre flöde inom företaget och då blir det ett snabbare flöde till vi blir färdiga. Det är väl det som jag hoppas att ISO är meningen med, att det blir rätt flöde inom företaget.”

“I believe it [that the customer satisfaction will increase], if we actually follow what we are planning on doing. /.../ That is that we follow our routines and that we maybe deliver everything on time, /.../ that we get a better flow within the company and then it becomes a faster flow to finished products. That is what I hope is the meaning of ISO, that we get a correct flow in the company.”

IB1:

“Det beror på hur man ser det, för om man menar bara de som kör kalkcementpelarmaskinerna så tror jag inte att de kommer arbeta mer effektivt, /.../ men jag tror att produktiviteten inom företaget totalt kommer öka, för att vi har bättre ordning på oss.”

“It depends on how one look at it, if one only look at the people driving the drilling rigs, I do not believe that they will work more efficiently, /.../ but I do believe that the total productivity within the company will increase, since we have better order.”

IB2:

“Nu känns det som att jag bara ger dig samma svar till alla frågor, för ‘ja, det gör det’. För saker kommer bli mer handfasta om hur det ska vara, och då kommer vi få en mer enhetlig bild eller de kommer få en mer enhetlig bild från utomstående perspektiv.”

“Now it feels like I am giving you the same answer to all questions, because ‘yes, it does’. Because things will get more tangible how it is supposed to be, and then we will get a more uniform image or they will get a more uniform image from an outside perspective.”

IB3:

“Det är just det vi känner att det inte finns strukturer överallt, att vi inte riktigt vet ‘vad gör vi där?’. Mycket tack vare att det är så många nyanställda och då försvinner ofta det som folk gör på rutin. Finns det inte nedskrivet är det svårt men nu kommer det bli nedskrivet och då blir det lättare att få det bra och förhoppningsvis att personen också får ett bättre tänk på att förbättra hela tiden, så att man kan förbättra sitt eget tillvägagångssätt. Jag har ju varit med om en ISO-certifiering innan så jag vet att det blev så.”

“That is exactly what we feel, that there are not structures everywhere, which we do not really know ‘What do we do in this situation?’. A lot thanks to it being so many newly hired here which leads to a lot of the routines disappearing. It is difficult if it is not written down but now it will be written down and then it will be easier to get it good and hopefully the worker will also get a better awareness of constant improvements, so that they can improve their own way of working. I have experienced an ISO certification earlier so I know that it turned out that way.”

IB5:

“Det beror helt på varje person. För vissa är det en 1 [survey scoring] och för vissa är det en 5, så det är väldigt svårt att svara på. Vissa kanske till och med tycker att det är en försämring. Det beror på.”

“That is completely dependent on each individual. For some it is a 1[survey scoring] and for some it is a 5, so that is actually very hard to answer. Some might even think that there is a deterioration. It depends.”

IB6:

“Just nu vet jag inte riktigt vad det kommer resultera i, jag menar vad vi kommer få när allt är färdigt. Jag vet inte riktigt. Jag menar om jag kommer få veta vad ni har dragit för slutsatser om gården eller om det kommer stanna inom varje avdelning. Men det beror också på i vilken riktning [the CEO] för oss, vad [the CEO] tycker ska göras. Men det kommer förmodligen bli någonting som man förstår, eftersom det kommer bli mer diskussioner om företaget och strukturen.”

“Right now, I do not really know what this will result in, I mean what we will get once this is finished. I do not really know. I mean if I will be informed about what conclusions you have reached for the yard, or if that will still stay within that department. But that is also depending on in what direction [the CEO] leads us, what [the CEO] thinks should be done. But that will probably be something that one will comprehend, since there will be more discussions about the company and the structure.”

M1:

“Det är väl bara att vissa gör det och vissa inte.”

“It is just that some does it and some does not.”

M2:

“Jag vet inte om de gör det. Kanske gör de det, jag är faksikt inte säker.”

“I do not know if they do or not. Maybe they do. I am actually not sure.”

M3:

“Det stämmer inte alls. /... / Det är ingen här som efterfrågar det.”

“That is not true at all. /... / Nobody here requests it.”

I1:

“Det blev väldigt, väldigt bra på det andra bolaget jag var på. Så jag tror det kan vara jättebra. Sen vill jag inte vara typ ansvarig för någonting, det säger jag inte med detta, men jag kan följa det.

“It turned out very good at the other company I was at. So, I believe that this could be really good. I do not want to be responsible for anything, that is not what I am saying with this, but I can follow it.”

E5 - Interview 2**IB2:**

“Nej, jag tror inte att det har något att göra med detta. Vi måste liksom fortfarande göra vårt jobb, det spelar ingen roll om vi är ISO certifierade eller inte när vi ska vispa ner cement i backen så jag tror inte att den delen kommer förbättras. Möjligtvis att pappersarbetet mot slutet av projekt men jag tror inte att det utförda jobbet på plats kommer förbättras. De som sköter maskinerna bryr sig inte om en ISO certifiering. Det tror jag inte.”

“No, I do not think it has to do with this. We still have to do our job. It does not matter whether or not we are ISO certified when we are going to mix some cement into the ground, so I do not think that part will improve. Possibly the paperwork during the end of a project, but I do not think the performed task at site will improve. Those who are operating the machinery do not care about an ISO certification. I do not think so.”

IB5:

“Nej! Det tror jag definitivt inte. Jag tror bara inte det är så, finns ingen mer förklaring.”

“No! I definitely do not think so. I just do not think it is like that, so there is no more explanation.”

IB6:

“Nej, det tror jag inte heller. Jag är så negativ idag. [skrattar] Nej, men jag tror inte det. Jag vet inte varför heller. Men ISO är inte den sortens morot som de behöver för att vilja lära sig saker. Så jag tror inte det. [one of the authors points out that dissemination of knowledge also includes internal dissemination of information and experiences between different projects]

Nej, inte för att vi följer ISO, det tror jag inte. Jag tror att vi kommer göra det, men inte för att vi följer det.”

“No, I do not think so either. I am so negative today. [laughs slightly] No, but I do not think so. I do not know why either. But ISO is not that kind of carrot they need in order to want to get educated. So, I do not think so. [one of the authors points out that dissemination of knowledge also includes internal dissemination of information and experiences between different projects] No because of us complying with ISO, I do not think so. I think we will do this, but not as a result of complying with it.”

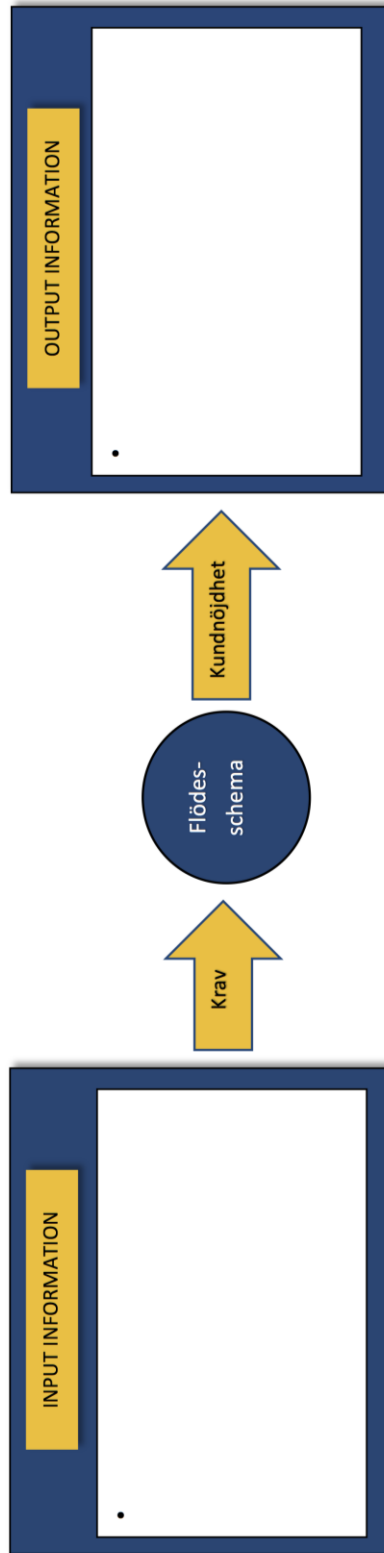
M2:

“Ärligt talat så har jag ingen aning om det. Men jag tror att de gör det, så jag sätter en 4 [survey scoring].”

“To be honest, that I have no idea about. But I think they do, so I will score a 4 [survey scoring].”

Appendix 3 - Process overview spreadsheet

Process:	Typ:	Nr:	Syfte med process	Externa krav
Gränssnitt med andra processer				
Styrda av: Sa				
Styr: S				
Rapporterar till: R				
Rapport från: Rf				
Processägare:				



VAD? Resurser/Material/Verktyg/Maskiner	VEM? Resurser/Kompetenser/Kunskap	HUR? Metod/Procedurer/Dokumentation	HUR MYCKET? Indikatorer/Måtal/Effektivitet	RISKER & MÖJLIGHETER

Appendix 4 - Result of the prestudy

The recorded results from the study is presented below, sorted into three general categories.

Reason for implementation

Pressure from management, all companies in the company group should become certified.

A demand from certain customers, would help tendering.

The certification is necessary in order to get certain jobs.

Needed for certain jobs.

Potential benefits

People do the same things in different ways now, no standardisation. Could be improved through the standard.

No order in paper work now, some folder structure would be appreciated.

Improves communication with other companies in the company group.

Shows that the company is serious, primarily an improvement towards the customer.

Feels like the company is trying to follow laws and regulations, and it would be nice to have paper on it.

Has not been in contact with it before, believes it is extra important in the construction industry.

Needed for marketing. Will bring income and bigger works.

Potential difficulties

Do not have time now as the company is growing.

A fear that the management system would end up as detailed as the system in use in England, which is believed to be based on too much documentation and paper work.

A lot of paper work.

Perceives it only as bureaucracy, which people are already trying to escape.