

THESIS FOR THE DEGREE OF LICENTIATE OF ENGINEERING

Towards an augmented audit service

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Abstract

To be competitive performing with good quality, improving customer satisfaction, and increasing operational efficiency have become key. Concepts and methods such as Total Quality Management, Six Sigma and Lean have been implemented to manage these demands. Also, ISO management system standards such as ISO 9001 have gained widespread attention and are now implemented by more than one million organisations worldwide. Following this diffusion of ISO management system standards, internal and external audits have become a universal activity in organisations that are certified towards any of these standards. However, audits are reported to have a negative association within many organisations as they are perceived as an inspection activity focusing on compliance and documentation. As a result, management have started to ask for return on investment for the non-negligible costs associated with certification and periodical external and internal audits. The purpose of this thesis is to explore and describe how an organisation can advance the process for internal and external auditing to add value beyond verifying compliance towards a standard. This thesis builds on a qualitative research design and departs from quality management, process management, exploitation and exploration, ambidexterity, and service logic. Data has mainly been collected through interviews and questionnaires.

The three appended papers contribute to the purpose of this thesis by bringing forward examples of how an organisation can operationalise practices for business-relevant audits, but they also point towards possible challenges in the audit process. By abandoning the cyclic audit programme and instead align the audit programme to an organisation's strategies and risks, a more business relevant audit programme can be established. Furthermore, introducing an audit sponsor for each individual audit establishes a closer connection with management. This practice also enhances customer (auditee) participation, which is a central component in a service logic. However, this closer participation from management may jeopardise auditor independence, which is one of the principles of auditing. Findings also indicate that ISO knowledge is more of a qualifying factor, which means that ISO compliance can be argued to be a primary responsibility for the audit provider, and a resource that the audit provider contributes in the audit process. Further, auditors apply requirements in the management system standard, such as requirements for process control across various types of processes, even though they were characterised as explorative. This indicates that there might be a challenge for auditors in moving between exploitative and explorative processes, which could be a result of auditors lacking organisational knowledge and context-related skills. However, the findings show that this can be mitigated by spending more time in the preparation phase of the audit and by adding experts to the audit team. Finally, implementing new report designs and shortening the time from the closing meeting until delivery of the audit report increases the accessibility of the audit services.

Key words: internal audits, external audits, management system, ISO, quality management, process management, exploitation, exploration, service logic, co-creation

List of appended papers

This licentiate thesis is based upon the work enclosed in the following papers.

Paper I: Making internal audits business-relevant

Lenning, J., & Gremyr, I. (2017).

Published in *Total Quality Management & Business Excellence*, 28(9–10), 1106–1121.

Jan Lenning and Ida Gremyr wrote this paper together. The paper is based on longitudinal data that had been partly collected by Lenning. Later the authors jointly conducted a series of interviews and performed the subsequent data analysis. The first version of the paper was presented at the 19th International QMOD-ICQSS Conference in Rome, Italy, 2016 and received the Best Paper Award. The paper was then published in *Total Quality Management & Business Excellence* in April 2017.

Paper II: Auditing of explorative processes

Lenning, J. (2018)

Published in *Total Quality Management & Business Excellence*, 29(9–10), 1185–1199.

This paper was written solely by Jan Lenning. The first version of the paper was presented at the 20th International QMOD-ICQSS Conference in Elsinore, Denmark, 2017 and invited to be published in one of the journals cooperating with the conference. The paper was then published in *Total Quality Management & Business Excellence* in July 2018.

Paper III: Drivers of audit client satisfaction in the external audit fieldwork

Lenning, J., Gremyr, I., Raharjo, H. (2018)

Presented at the 21st International QMOD-ICQSS Conference in Cardiff, Wales, 2018.

Jan Lenning, Ida Gremyr and Hendry Raharjo wrote this paper together and it was accepted for presentation at the 21st International QMOD-ICQSS Conference in Cardiff, Wales, 2018. The data collection was done by Lenning and then jointly analysed by all three authors.

Acknowledgements

In September 2013 I made the decision to investigate the possibility of becoming an industrial PhD. At the age of 49, one may wonder why, but I have always been driven to learn new things and take on challenges. This time I was looking to return to the theories and the latest research in quality management after nearly three decades in industry. The journey towards receiving approval from my manager at Sony Mobile Communication included many different tasks. These included building a rationale and a business case for being an industrial PhD, formulating a possible research focus that could be of interest to myself, the company and a university, but also different discussions and meeting with interested parties. One of those interested parties was Ida Gremyr, PhD and professor at Chalmers University of Technology. In June 2014 we met at the EOQ congress in Gothenburg, where Ida and her colleague Henrik Eriksson (PhD and associate professor) were delivering a presentation. A few month later, in September 2014, I started as an industrial PhD at Chalmers University of Technology and the Department of Technology Management and Economics.

To Ida, my supervisor and co-writer, I am so grateful for the opportunity to get to know you and work together with you. Without your experience, pragmatism and endurance I would not be where I am today. I have learnt so much through these years from you, not only about quality management as such, but also about the craftsmanship of writing and publishing and the world of academia. You have also become one of my key sounding boards in many different questions, which has been a great support.

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Jan Lenning, April, 2019

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1 Introduction

Performing with good quality is a key success factor. Many organisations have implemented quality management concepts such Total Quality Management (TQM) (Hackman & Wageman, 1995), and methods like Six Sigma (Ette, Cannon, Pierce, Raisinghani, & Daripaly, 2005) and Lean (Womack & Jones, 1997) as a means of improving the quality of existing products and services, increasing customer satisfaction and increasing operational efficiency in order to reduce costs (Andersson, Eriksson, & Torstensson, 2006; Eklund, Elg, Pettersen, Poksinska, & Witell, 2010). In addition to the above concepts and methods, the ISO 9001 management system standard is now implemented by more than one million organisations worldwide (*ISO Survey*, 2017). ISO 9001 is argued to have the potential to contribute to quality improvements (Sousa & Voss, 2002), improved operational performance (Kaynak, 2003) and studies of quality management and its application in various organisations indicate that management system standards plays a key role for many quality professionals (Elg, Gremyr, Hellström, & Witell, 2011).

A prerequisite for implementing a management system based on any of the available ISO management system standards (such as ISO 9001) and becoming (and remaining) certified, is to undergo different types of audits. First, an initial certification audit and later periodical surveillance audits by an external certification body (external audits) must be fulfilled (International Accreditation Forum, 2018). Second, in addition to the external audits, a certified organisation needs to establish and execute a programme of internal audits (ISO Annex SL, 2018). Following the diffusion of quality management and ISO management system standard certifications, managers have started to ask for return on investment from management systems, quality programmes and other quality-related initiatives (Coelho & Vilares, 2010), and questions have been raised concerning the value of internal and external management system audits (Heras-Saizarbitoria, Dogui, & Boiral, 2013). Furthermore, and adding to these questions, perceptions of audits are reported to have a negative association within many organisations because they are perceived as an inspection activity focusing on compliance and documentation (Beckmerhagen, Berg, Karapetrovic, & Willborn, 2004; Dennis Beecroft, 1996; Elliott, Dawson, & Edwards, 2007; Hawkes & Adams, 1994; Pun, Chin, & Lau, 1999) but also as focusing too much on fulfilling the audit programme instead of the resulting value (Beckmerhagen et al., 2004; Elliott et al., 2007; Meegan & Simpson, 1997). Research into why these sometimes negative associations of audits occur points, for example, to the reason for implementing the management system; whether the management system is implemented based on external requirements, and tends to focus more on compliance control than on organisational efficiency (Alič & Rusjan, 2010); or if it is implemented based on an internal needs, which seems to result in more benefits from the management system (Alič & Rusjan, 2010; Boiral & Amara, 2009; Poksinska, Jörn Dahlgard, & Antoni, 2002; Sampaio, Saraiva, & Guimarães Rodrigues, 2009).

Because of this somewhat negative perception of both external and internal audits, there is a need for continuous improvements of the audit process (Alič & Rusjan, 2010, 2011; Beckmerhagen et al., 2004; Pivka, 2004; Power & Terziovski, 2007; Roth, 2003). Prerequisites for value-adding audits have been suggested, for example, to create a closer auditor contact with management (Roth, 2003), but also to involve other parts of the organisation (Rippin, White, & Marsh, 1994). Furthermore, it has been recommended to ensure that auditors have organisation-specific knowledge and adaptability (Power & Terziovski, 2005; Ramly, Ramly, & Yusof, 2007) but also to involve subject matter experts in the audit (Pivka, 2004).

While several suggestions have been made about *what* can be done to improve the audit process, there is a lack of literature showing *how* suggested practises can be operationalised and what the effects on the perceived value of audits have been. Furthermore, and adding to above identified research gap, a need has been identified for studies regarding auditing styles but also about “The impact of training, qualifications and professionalism of auditors in the certification process” (Heras-Saizarbitoria & Boiral, 2013).

1.1 Purpose of the thesis and research questions

Referring to above identified research gap and proposed research avenues, the overall purpose of the thesis is to explore and describe how an organisation can advance the process for internal and external auditing to add value beyond verifying compliance towards a standard. To achieve this purpose, two research questions (RQs) have been formulated to guide the studies. RQ1 concerns internal audits of management system standards and draws on earlier research of *what* practices can be implemented in the audit process to add value.

RQ1: How can audits be carried out in a way that is perceived to add value beyond verifying compliance towards a standard?

The second RQ concerns external audits of management system standards and specifically addresses what factors in the fieldwork phase of the audit process drive client satisfaction. In the fieldwork phase of the external audit process, the interaction between the auditor and the auditee is most intensive.

RQ2: What are the main contributors to client satisfaction in the fieldwork phase of the audit process?

1.2 Structure of the thesis

This thesis is made up by seven chapters and 3 appended papers; see Figure 1.

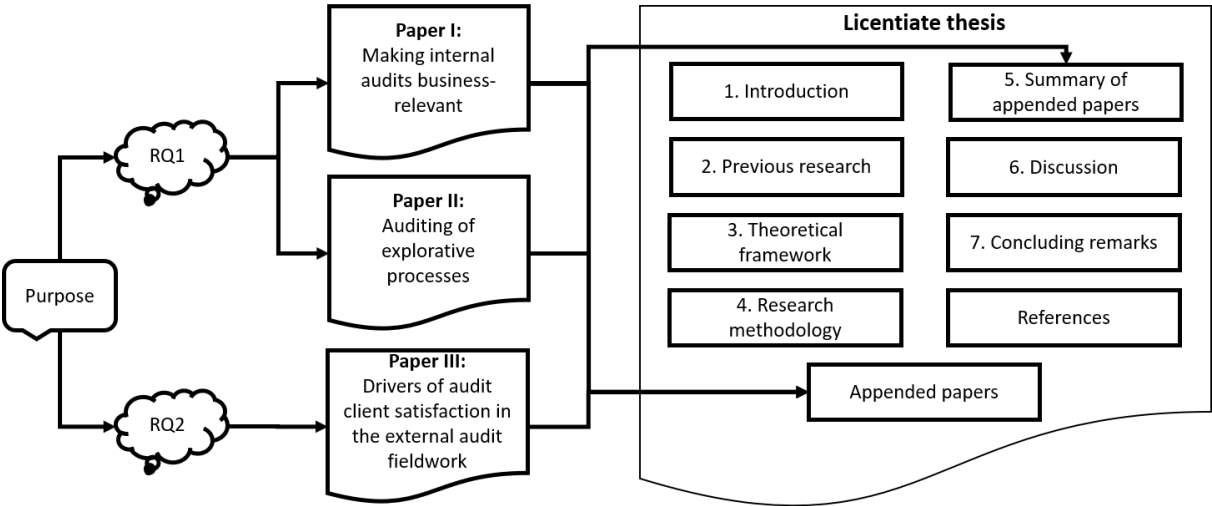


Figure 1 - Structure of the thesis

2 Previous research

To address the above purpose and RQs, this thesis is informed by previous research (Chapter 2) in two other areas: management systems (MS), and the audit process, found in Chapter 2. It is also informed by a theoretical framework (Chapter 3) consisting of five main themes: (1) quality management (QM), (2) process management (PM), (3) exploitation, exploration and ambidexterity, (4) Impact of PM on exploitation and exploration, and (5) the augmented service, found in Chapter 3. From here and onwards the word standard is used as acronym for the term management system standard e.g. ISO 9001, ISO 14001.

2.1 Management systems

The present thesis focuses on MSs based upon standards provided by the International Organisation for Standardisation (ISO). There is increasing pressure to become certified according to any of the ISO standards (Benner & Tushman, 2003) and, according to the latest survey of standard certifications (*ISO Survey*, 2017), more than 1.6 million organisations worldwide are now certified with any of the available standards, of which 1.1 million are according to the ISO 9001 standard. A MS is defined as a system that “describes the set of procedures an organisation needs to follow in order to meet its objectives” (ISO, 2019). In order to design a MS, a standard is used; a management system standard is defined by ISO as a standard that “Provide[s] a model to follow when setting up and operating a management system” (ISO, 2019). There are several types of standards, such as ISO 9001 for Quality MSs, ISO 14001 for Environmental MSs and ISO 50001 Energy MSs. However, the most common standard is the ISO 9000 family regarding QM. Among the reasons for implementing a MS based upon a standard are more efficient use of resources, improved risk management and improved customer satisfaction (ISO.org, 2019). In addition to implementing a MS, an organisation can apply for a certification of its MS. However, a certification of a MS to any of the standards is not a requirement and an organisation can still benefit from only building and implementing a MS. Certification can be of value in some cases, for example as a tool to add credibility by showing that a product or service meets customer expectations; in some industries, having a certificate can even be a legal or contractual requirement (ISO.org, 2019).

Several key factors affect the implementation of a MS (Gray, Ivanova, & Sinha, 2014). Gray et al. (2014) found that key drivers to have an effective implementation included whether the organisation has a focus on internal improvements instead of focusing on the certification, and whether there was top management support that not only affected the implementation but also employees’ attitudes towards implementation. In addition to these two key drivers, process orientation was found to be a driver, together with information technology and engaged employees. Furthermore, internal motivation (such as management directions) vs. external motivation (such as customer requirements) and its effect on the outcome of an ISO 9000 adoption have been studied (Alič & Rusjan, 2010; Eklund et al., 2010; D. I. Prajogo, 2011). The above-cited authors conclude that having internal motivation as a driver for an implementation of a MS results in a higher performance of the MS. Moreover, internal motivation also affects the implementation process to a higher degree than external motivation.

Several case studies have explored the effects of having implemented a MS. Certified firms have been shown to improve their organisational competitiveness (Han, Chen, & Ebrahimpour, 2007), increase their production volumes (Terlaak & King, 2006), and reach higher return of investments (Pinar & Ozgur, 2007). There is also evidence that implementation of an standard like ISO 9001 correlates to increased customer satisfaction (Chatzoglou, Chatzoudes, & Kipraios, 2015; Nabavi, Azizi, & Faezipour, 2014) and improved financial performance (Chatzoglou et al., 2015).

2.2 Audit process

Having implemented and certified a MS, planning an audit programme and conducting audits is a mandatory activity and both internal (first-party) and external (third-party) audits are required. An audit programme, consisting of several audits, should take into consideration the importance of the processes to be audited, any changes that are currently affecting the organisation, and the results of previous audits (*ISO 19011*, 2018). The individual audit has several objectives, such as indicating conformity or nonconformity to legal or other requirements, evaluating the capability and effectiveness of the MS, and identifying opportunities for improvements and best practices (*ISO 19011*, 2018). A six-step process for audits is described in *ISO 19011:2018* (see Figure 2).

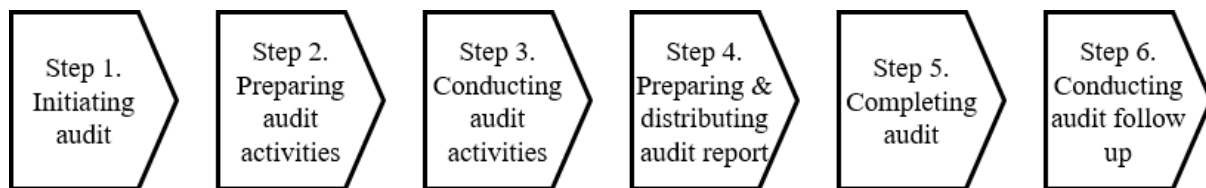


Figure 2 – The audit process (*ISO 19011*, 2018)

Perceptions of internal audits have been studied and the results can be grouped into two themes of associations (see Paper I). One argues that audits are a negative process that focus on compliance, documentation and inspection (Beckmerhagen et al., 2004; Elliott et al., 2007; Hawkes & Adams, 1994; Pivka, 2004; Pun et al., 1999). The other theme suggests that audits have too much focus on the audit programme and executing the individual audit instead of creating value (Beckmerhagen et al., 2004; Elliott et al., 2007; Meegan & Simpson, 1997). Furthermore, it has been argued that audits focusing on compliance mainly have a value before the certification is passed and thereafter is more of a routine activity (Pivka, 2004).

In order to leave the compliance-focused audits and the somewhat negative experiences and perceptions, and move towards having audits with more focus on the business and value creation, earlier studies can be summarised in eight categories of prerequisites for value-adding internal audits (see Paper I):

1. Relationship to management and their commitment
2. Context of the MS
3. Auditor competence
4. Audit programme characteristics
5. Audit preparations
6. How the audit is conducted
7. Audit report design and distribution
8. Audit process measurements

Creating involvement from management in the audit process (Alič & Rusjan, 2011; Dale & Askey, 1994; Pivka, 2004; Poksinska et al., 2002) and from functions in the organisation (Rippin et al., 1994) has been identified as one set of prerequisites for value-adding audits. By establishing good relationships with management, auditors can also build a deeper understanding of challenges, risks and plans within the organisation (Roth, 2003) before the audit is executed. The context of the MS is affected by the type of motivation for implementing the MS. In the case of a MS implementation based on external motivation, audits tend to be more compliance-focused (Alič & Rusjan, 2011). If the implementation is grounded in internal

motivation for certification, it is more likely that the audit will be viewed as a valuable management tool (Alič & Rusjan, 2010; Boiral & Amara, 2009; Poksinska et al., 2002; Sampaio et al., 2009).

Auditor competence and skills have been proposed as prerequisites for value-adding audits. Besides basic auditing skills, context-related skills, organisation-specific knowledge and adaptability are skills that are argued to support value-adding audits (Pivka, 2004; Power & Terziovski, 2005; Ramly et al., 2007). Looking closer at the audit programme and the audit process, earlier research has also suggested that connecting the audit programme to practical needs and other established organisational activities (Dale & Askey, 1994; Rippin et al., 1994; Roth, 2003) produces positive effects such as auditors becoming better at assisting the executive management team in achieving organisational objectives (Alič & Rusjan, 2011; Roth, 2003). Furthermore, to enhance the audit programme it is also suggested to structure the programme based on QM principles (see Section 3.1), such as process management requirements, or improvement projects (Abarca, 1999; Dennis Beecroft, 1996; Liebesman, 2002; Piskar, 2005). It is also suggested that, when preparing the audit, several different information resources should be used (Piskar, 2005). Furthermore, auditors need to adapt to the context of the audit and the MS by having less compliance focus when a more mature MS is present (Mile Terziovski, Power, & Sohal, 2002). Studies have also looked at what auditors focus on and suggested that the audit team should focus more on fact-finding, continuous improvements, providing recommendations, and consultation (Dale & Askey, 1994; Dennis Beecroft, 1996; Mahzan & Hassan, 2015; Roth, 2003). Finally, it has been suggested that adjusting the reporting format according to the type of organisation and the audience for the report (Mahzan & Hassan, 2015; Piskar, 2005) can add value and, from a performance perspective, it is suggested that the effectiveness of the audit, rather than the efficiency of the audit, should be measured together with benefits and savings from the audit (Beckmerhagen et al., 2004; Elliott et al., 2007; Karapetrovic & Willborn, 2000; Piskar, 2005; Rajendran & Devadasan, 2005).

3 Theoretical framework

3.1 Quality management

Born four decades ago from the ideas of W. Edwards Deming, Walter A. Shewhart, Joseph M. Juran and Kaoru Ishikawa, quality management (QM) has evolved to become a management philosophy and approach (Hackman & Wageman, 1995). In this thesis QM has been presented as based upon three pillars: principles, practices and techniques where the core principles are defined to be customer focus, continuous improvements, and team work (Dean & Bowen, 1994). Each of those principles are supported by a set of practices or activities, such as collecting customer information, process analysis and training, which in turn are supported by different techniques on how to execute certain practices, such as quality function deployment, flow charts, and Ishikawa diagrams (Dean & Bowen, 1994). Evolving from QM, Total Quality Management (TQM) was later presented as a MS founded upon three independent pillars – values, techniques and tools – where techniques and tools support the values (Hellsten & Klefsjö, 2000). Values in TQM are represented by elements such as customer focus, continuous improvements, process orientation, results orientation and learning from others. Furthermore, tools being the second pillar of TQM, include Ishikawa diagrams, process maps and ISO 9000. Techniques, the third pillar of TQM, were defined as activities and include process management, benchmarking and quality function deployment, performed to reach the values (Hellsten & Klefsjö, 2000).

The above-mentioned values, as defined by Hellsten & Klefsjö (2000) are similar to the seven quality management principles (QMP) stated to be the foundation for the ISO 9000 family about QM (ISO.org, 2019). ISO defined a QMP as a basic belief, theory or rule that influences how something is executed and can be used as a guidance when an organisation performs improvements. The relative importance of each QMP can vary from organisation to organisation and be expected to change over time (ISO.org, 2019). The seven QMPs are:

- QMP 1 – Customer focus
- QMP 2 – Leadership
- QMP 3 – Engagement of people
- QMP 4 – Process approach
- QMP 5 – Improvement
- QMP 6 – Evidence-based decision making
- QMP 7 – Relationship management

Furthermore, looking at various views of QM (Dean & Bowen, 1994; Hackman & Wageman, 1995; Hellsten & Klefsjö, 2000), but also the ISO 9001 standard, many similarities can be found. Firstly, there are similarities in the grouping of elements in principles or values, techniques or methodologies and practices or tools. Secondly, looking at how principles or values have been described, several common elements can be found, including customer focus, continuous improvements, management commitment, employee engagement, and fact-based decisions. However, there are also some differences, where techniques and tools (Hellsten & Klefsjö, 2000) are differently defined from practices and techniques (Dean & Bowen, 1994). An example of this difference is the “quality house”, which Hellsten & Klefsjö (2000) view as a tool to be used within the technique of “quality function deployment” while Dean & Bowen (1994) view quality function deployment as a technique to be used within the practice of collecting information about customer needs. To avoid confusing the further reading of this thesis, and given that value later in this thesis has a different meaning than above, the terms principles, practices and techniques (Dean & Bowen, 1994) will be used herein.

The effects of QM on an organisation's performance have been studied. Kaynak (2003) made a cross-sectional study of US firms and found that three principles had a direct effect on operating performance: supplier QM, product/service design and PM. Leadership, training, employee relations and quality data and reporting, which were the other tested principles, had a positive effect on operating performance via the other three principles. Furthermore, this positive effect on operating performance resulted in a positive outcome on financial and market performance (Kaynak, 2003). Moreover, leadership and management commitment to QM was shown to be critical because it both enforced and supported employee training but also empowered employee's consciousness about the organisation's goals. The lack of such management commitment resulted in resistance to change and failures in implementing QM principles and, consequently, fewer positive effects on operating performance were reached (Kaynak, 2003).

3.2 Process management

Already in Deming's (1988) improvement framework, organisations were seen as a system of interlinked processes and the improvement thereof was seen as a prerequisite for improving efficiency and performance, which drew attention to process management (PM) (Dean & Bowen, 1994). This attention to PM – defined as the three practices of process design, process control and process improvement (Hackman & Wageman, 1995; Juran & Godfrey, 1999) – has led to PM becoming a central part of QM concepts like TQM (Hackman & Wageman, 1995), and methods like Six Sigma (Ette et al., 2005) and Lean (Womack & Jones, 1997). These concepts and methods have been implemented throughout many organisations as a means of increasing operational efficiency, but also of improving the quality of existing products and services in order to increase customer satisfaction (Andersson et al., 2006; Eklund et al., 2010).

PM has grown and become business process management (BPM) (Rosemann & vom Brocke, 2015) and there are some critical success factors (CSF) to successfully implementing BPM. Trkman (2010) argued that an organisation should identify the key processes that contribute to its competitive advantage. These processes should be carefully aligned with its environment and designed to be flexible and able to adapt continuously. Furthermore, facilitated by management commitment and a clear connection with the organisation's strategy, but also an up-to-datedness of process documentation, these processes should be in focus for continuous improvement activities (Trkman, 2010). This set of CSFs are similar to what Rosemann & vom Brocke (2015) brought forward as core elements or factors for successful BPM; that is, strategic alignment, governance, information technology, people and culture. Furthermore, looking at the CSFs and the capability areas for each of these factors presented by Rosemann & vom Brocke (2015), there are many similarities with the QM principles (Dean & Bowen, 1994), QM values (Hellsten & Klefsjö, 2000) or the QMPs (QMP, 2015).

PM has also become a central practice in business excellence models like the European Foundation for Quality Management excellence model, the Malcolm Baldrige National Quality Award and the Swedish Institute for Quality Management model, but also in standards like ISO 9001:2015 (ISO 9001, 2015). Furthermore, the ISO 9001:2015 standard contains several explicit requirements related to PM and the introduction to the ISO 9001 standard states that the standard promotes a process approach. Moreover, PM requirements has expanded in the latest version of the ISO 9001 standard to also include additional requirements in areas such as determining input and output from processes, establishing criteria for control of processes, and applying and evaluating performance indicators (ISO 9001, 2015).

The impact of PM on exploitative and explorative abilities has been studied and it has been argued that PM practices drive a culture of local search; that is, exploitation (Benner & Tushman, 2002). Given that PM is a central part in standards such as ISO 9001:20015 and PM, is frequently visited in internal and external audits, audits can impact exploitative and explorative abilities. Therefore, and given that the purpose of this thesis is to describe how an organisation can advance the process for internal and external auditing to add value beyond verifying compliance towards a standard, an account for exploitation, exploration and ambidexterity is presented in the next section, followed by an explanation of the impact of process management on exploitation and exploration.

3.3 Exploitation, exploration and ambidexterity

This section examines March (1991) seminal article on the relation between exploitation and exploration. Exploitation is associated with terms like choice, refinement, efficiency, selection and execution, and exploration is associated with terms such as search, risk-taking, variation and flexibility (March, 1991; O’Reilly & Tushman, 2004); see Table 1.

Table 1 – Synthesis of exploitative and explorative attributes built on March, (1991) and O’Reilly & Tushman, (2004)

	Exploitative attributes	Explorative attributes
Strategic focus	cost, profit	innovation, growth
Critical tasks	operations, efficiency, incremental innovation	adaptability, experimentation, new products/services, breakthrough innovations
Capabilities	operational, refinement, extension	search, entrepreneurial
Organisation	formal, mechanistic	adaptive, loose
Controls, rewards	margins, productivity, positive and predictable return	milestones, growth, often negative and unpredictable return
Culture	efficiency, low risk, quality, customers	risk taking, speed, flexibility, experimentation
Leadership role	authoritative, top down	visionary involved

Results from exploitative activities are often foreseeable, adjacent and positive (March, 1991; O’Reilly & Tushman, 2004), while results from explorative activities are more unreliable, distant and sometimes not so positive (March, 1991; O’Reilly & Tushman, 2004). Therefore, organisations should not focus solely on either exploitation or on exploration; it is important to understand how to balance the two (March, 1991; Palm & Lilja, 2017; Smith & Tushman, 2005; Sutcliffe, Sitkin, & Browning, 2000) – so-called ambidexterity (Duncan, 1976). Even if this dual focus is complicated, it has been argued that ambidexterity is increasingly necessary in dynamic environments where companies’ existing advantages are continuously at risk and new opportunities must frequently be found (Junni, Sarala, Taras, & Tarba, 2013). Organisations that have become successful at balancing both exploitation and exploration have managed to both use and refine their present knowledge at the same time as they create new knowledge (Turner, Swart, & Maylor, 2013). This successful balancing has resulted in launches of more successful products and services compared to more traditional organisations that are either exploitative or explorative (He & Wong, 2004; O’Reilly & Tushman, 2004; Smith & Tushman, 2005; Michael L. Tushman, 1997).

To manage the sometimes-conflicting requirements of an exploitative versus an explorative process or organisation and become ambidextrous, different prerequisites and organisational setups have been proposed. Firstly, Duncan (1976) proposed that organisations need to shift their organisational set up over time to align their organisation to the strategic requirements for innovation or efficiency, so-called sequential ambidexterity. Secondly, so-called structural ambidexterity is built on splitting an organisation into units considered to be exploitative or explorative, which are then held together by a common vision and a strong senior team (M L Tushman & O'Reilly, 1996, 2002). The third is contextual ambidexterity, which is built on the ability to enable and encourage individuals to decide how they divide their time between possibly contradictory demands for alignment to present activities (exploitation) or adapt to new demands (exploration) (Gibson & Birkinshaw, 2004). Moreover, it has also been argued that it is important for an organisation to be able to fit strategy, structure, culture and processes together (Birkinshaw, Zimmermann, & Raisch, 2016) and communicate a clear and compelling vision in which both exploitative and explorative teams can identify themselves (O'Reilly & Tushman, 2004).

3.4 Impact of process management on exploitation and exploration

Studies of the impact that PM has on exploitative and explorative abilities have found that PM practices drive a culture of local search; that is, exploitation (Benner & Tushman, 2002). This, in turn, results in a decrease and a crowding-out effect of the more explorative forms of innovation, which, in a turbulent environment, could negatively impact a firm's chances of survival (Benner & Tushman, 2002). However, the effects of PM practices also differ depending on the level of competition in a certain industry. Organisations that operate in fierce competition and with a high rate of product change require both exploitative and explorative activities, while organisations that operate in low competition and with less need for product change benefit most from exploitative activities. Organisations that operate under mixed conditions – that is, a changing level of competition and need for product change – benefit most from exploratory activities (Linderman & L. Sanders Jones, 2014). Therefore, Linderman & L. Sanders Jones (2014) argued the need to distinguish between the different PM practices (design, control and improvement) based upon the competitive environment in which the organisations operate.

Process design is found to be positive and independent of the competitive intensity, while process control could have a negative effect on innovation performance in intense competitive environments. Lastly, process improvement in intense competitive environments could also weaken an organisation, and such processes might soon be outdated anyway. Instead, these organisations should spend time developing new processes that will help them remain competitive (Linderman & L. Sanders Jones, 2014). Therefore, and in summary, it is important that PM practices are differentiated based upon the level of competition in the industry (Linderman & L. Sanders Jones, 2014). Hence, it has been proposed that managers should carefully adopt PM practices regardless of the increasing pressure for PM practices in initiatives like ISO 9001 and other QM concepts (Benner, 2009; Benner & Tushman, 2003; Müller, Ulrich, & Nielsen, 2014; Milé Terziovski & Guerrero, 2014). Furthermore, it has also been suggested that PM practices should be customised in order to enhance efficiency and/or innovation, rather than applying a one-size-fits-all approach (Linderman & L. Sanders Jones, 2014; Ng, Rungtusanatham, Zhao, & Lee, 2015; Zhang, Linderman, & Schroeder, 2014).

3.5 *The augmented service*

Auditing is a central practice in QM, but at the same time it is a service that appears to be in need of improvements. Therefore, it is feasible to view audits from a service and service quality perspective. This section presents three bodies of theory related to the so-called augmented service offering (Grönroos, 1987). It starts with an introduction to service logic, followed by a sub-section on service quality, and finally the augmented service offering, including an account of co-creation of value.

3.5.1 *Introduction to service logic*

Based on historical models of industrial economy, all firms have a position in the value chain. Looking upstream, there is a provider of input and looking downstream there is the next actor, the customer, in a chain that continues to refine the product or the final consumer using the product (Normann & Ramírez, 1993). In this view of economic exchange, the process of value creation occurs inside the provider through its activities but outside the market and without customers involved (Coimbatore Krishna Prahalad & Ramaswamy, 2004). The provider and the customer, or the consumer, have separate roles in production and consumption and the market as such is a place where only exchange takes place (Coimbatore K. Prahalad & Ramaswamy, 2004), and the value of the exchange, referring to the price of the product, is the monetary amount realised when the exchange takes place (Bowman & Ambrosini, 2000). This concept of “creation of value-in-exchange” builds on the logic that the provider produces products and services that are exchanged for money and the customer is the creator of value when the product or service is in use; that is, when consumption of the product or service takes place (Grönroos, 2008). However, with increased competition and a volatile environment, the focus has shifted away from tangibles towards intangibles such as knowledge, information and more focus on relationships, and a shift from provider to customer orientation has taken place (Vargo & Lusch, 2004). As a result, companies today do not only think about how to add value in their part of the chain. Instead, they focus on the value-creating system itself, meaning all actors – providers, partners, allies and customers – and co-produce value (Normann & Ramírez, 1993). In such a system, the creation of value can be advanced to what is called “value-in-use according to a Goods Logic” (GL) (Grönroos, 2008). GL is defined as the provider making goods as resources available to the customers for them to execute their value-creating process (Grönroos, 2006). In value-in-use according to a GL, the provider acts as a facilitator of value by providing the customer with a foundation for value creation consisting of goods, services, information and other assets. However, the customer is still solely the value creator using the given foundation but also adding other necessary resources and competence held by them (Grönroos, 2008).

In the above discussion about value-in-exchange and value-in-use according to a Goods Logic, the customer is the value creator. However, the value-in-use according to a GL can be further advanced by adopting the service logic, where the provider becomes involved with its customer’s value-generating process and becomes a co-creator of value (Grönroos, 2008). In the service logic, service is defined as being “support for an individual’s or organisation’s everyday processes in a way that facilitates this individual’s or organisation’s value creation” (Grönroos & Gummerus, 2014, p.208). Furthermore, compared to value-in-exchange and value-in-use according to a good logic, the roles of the provider and the customers are somewhat different and extended when creating value-in-use according to the service logic (see Table 2).

Table 2 – Roles in value-in-use according to service logic (Grönroos & Gummerus, 2014, p.208)

Role	Description
Provider	“As service providers, through all their actions and interactions with users (e.g. customers), firms strive to support users’ everyday processes in a way that facilitates (or contributes to) users’ value creation.”
Customer	“Users (e.g. customers) integrate resources acquired from a provider with other necessary resources in their possession and apply knowledge and skills held by them in a process that renders value.”

3.5.2 Service quality

Quality in service is about a customer’s perceived quality of a given service and is argued to be the outcome of an evaluation where the customer matches his or her expectations of the service he or she will receive with the actual perceived service (Grönroos, 1984). There are different models for understanding service quality, such as SERVQUAL (Parasuraman, Zeithaml, & Berry, 1988) and SERVPERF (Cronin Jr & Taylor, 1992). A third model is the Total Perceived Service Quality model (Grönroos, 1988), which is referred to in this theoretical framework and consists of experienced service quality and expected service quality. The experienced quality was initially proposed to only consist of two factors– instrumental performance and expressive performance (Swan & Combs, 1976) – where the instrumental performance relates to the technical result of the service production process and the expressive performance relates to the psychological level of the performance. Swan & Combs (1976) argued that the prerequisite for customer satisfaction was a satisfactory instrumental performance.

Later, Grönroos (1984) argued that the expressive performance must also be taken into consideration in order to reach acceptable levels of customer satisfaction. Grönroos (1984) proposed a basic service quality model for understanding the experienced service quality, consisting of three dimensions: the technical quality of the service, the functional quality of the service, and the image of the service provider (right-hand part of Figure 3). The technical quality, or the *what*, mainly consists of the outcome of the service process. The functional quality, or the *how*, consists of components such as attitudes and behaviours in the service provider, accessibility to the service, and also the trustworthiness of the service and the provider. Furthermore, components such as the environment or servicescape, being elements of the physical environment of the service process, and the provider’s capability to handle failures and mistakes, are also included in the functional quality (Bitner, Booms, & Tetreault, 1990). To understand the total perceived service quality, the basic model is expanded to also include the expected service quality (Grönroos, 1988), where the expected service quality is a function of several different factors such as market communication, word of mouth, corporate/local images and the actual customer needs. Given the above descriptions, the total perceived service quality is reflected in the gap between the experienced service quality and the expected service quality (Grönroos, 1988); see Figure 3.

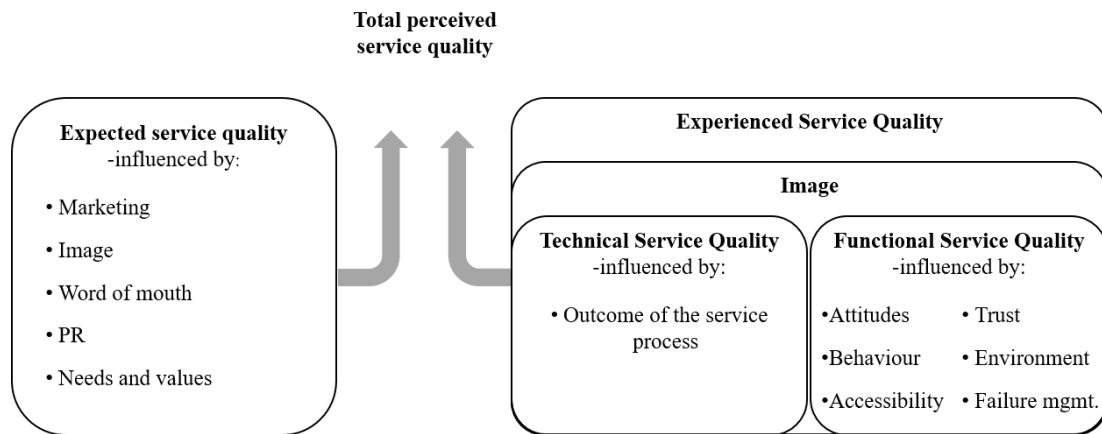


Figure 3 – Total perceived service quality model adapted from (Grönroos, 1988)

3.5.3 The augmented service offering

A service generally has three main characteristics: (1) it is a process including a series of activities, (2) it is, to some extent, produced and consumed concurrently, and (3) the customer participates as a co-producer to some extent (Grönroos, 2008). Thus, a service is argued to be a complicated phenomenon and can take many different forms, such as a personal service, a product or an offering, and by adopting the SL a firm can turn any resource into a service (Grönroos & Ravald, 2011). To connect these particularities and the concept of total perceived service quality (Grönroos, 1988); (see Figure 3), (Grönroos, 1987) proposed a so-called augmented service offering model (see Figure 4).

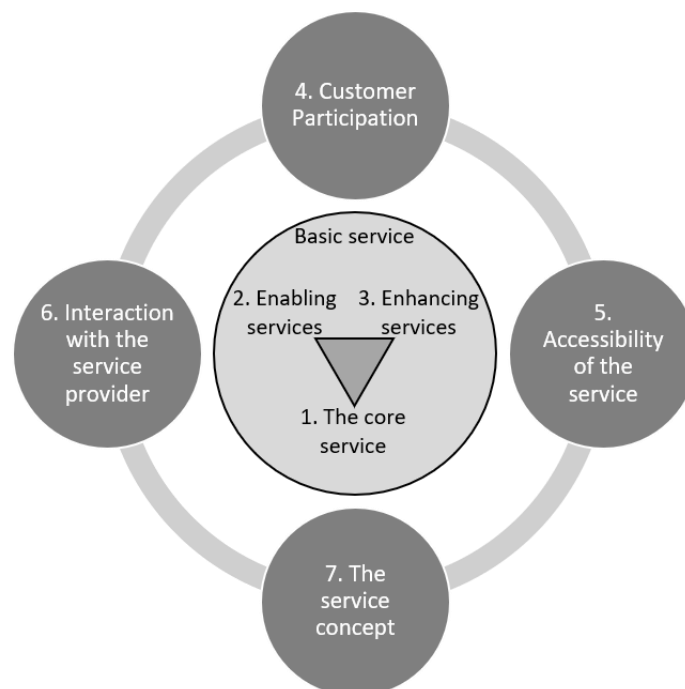


Figure 4 – The augmented service offering adapted from Grönroos (1987)

The augmented service offering model is geared towards the experienced service quality, considering both the technical service quality and the functional service quality, as discussed in Section 3.5.2. The basic service, being the inner circle in Figure 4, consists of three service

components: the core service, enabling services and enhancing services. The basic service mainly represents the technical dimension of the experienced service quality, and not the total perceived service quality (see Figure 3). To build a more complete service offering, reflecting not only the technical dimension of the experienced service quality, but also the functional service quality, three additional components representing the process view of the service delivery must be added: customer participation, accessibility of the service and interaction with the service provider (see Figure 4) (Grönroos, 1987). Lastly, the service concept component constitutes an umbrella that guides the development of service components and, altogether, the seven service components constitute the augmented service offering (see Table 3).

Table 3 – Description of components in the augmented service offering (see Figure 4) adapted from Grönroos (1987)

Service component	Description
1. The core service	The reason for being present
2. Enabling services	Enabling the use of the core service; if left out, the service package collapse.
3. Enhancing services	Used to increase the value of the core service; if left out, the core service can still be used but is less attractive.
4. Customer participation	The customer impacts the service and becomes a co-producer of the service, hence is a co-creator of value.
5. Accessibility of the service	Depending on the skills of the provider personnel, timetables and time used to perform different tasks, but also on the tools, equipment and documents used.
6. Interaction with the service provider	Reliant on the communication between the provider and the customer, which in turn depends on the behaviour of the provider’s employees, their attitudes, what they say and do, and how they say and do things.
7. The service concept	Guiding the development of the components of the augmented service offering.

Seeing value as a consequence of, and determined in, the actual use rather than being solely captured by a price of an output (Vargo, Maglio, & Akaka, 2008) means moving away from a focus on transactions and exchanges towards a focus on relations. This means, for example, that service components four (“customer participation”), five (“accessibility of the service”), and six (“interaction with the service provider”) in Table 3 must exist mutually. This move from a provider-centric view to one based upon co-creation has certain challenges (Ramaswamy & Ozcan, 2018) and requires a transformation in thinking from attributes to value-in-use and from a provider-centric view to a consumer-centric view (Michel, Brown, & Gallan, 2008). The co-creation view focuses on the provider-customer interaction and all instances of interaction are important (Grönroos, 2006; Coimbatore K. Prahalad & Ramaswamy, 2003). Via high-quality interactions between the provider and the customers, a “co-creation of value” may take place (Coimbatore K. Prahalad & Ramaswamy, 2004) where co-creation is defined by Grönroos & Gummerus (2014, p. 210) as:

a joint process that takes place on a co-creation platform involving, for example, a service provider and a customer, where the service provider’s service (production) process and the customer’s consumption and value creation process merge into one process of direct interactions. In this merged process, the service provider may engage with the customer’s value creation and, through joint co-creational actions, influence the customer’s creation of value-in-use. On the co-creation platform, the customer can also take on a role as a service provider and co-create value with the provider.

The value generation process (Grönroos, 2011) describes value creation and co-creation according to the SL (see Figure 5). Firstly, the value generation process is divided into three domains: the provider domain, the joint domain, and the customer domain. In the provider

domain, the provider develops and provides resources that offer the potential to support the customer’s value-in-use activity. The joint domain is where the direct interaction between the provider and the customer takes place and creates the platform for co-creation of value. Finally, the customer domain is where the customer independently creates value as value-in-use. Even if this domain is closed for the provider, co-creation can take place; in this case between the customer and its ecosystem. Looking further into the joint domain, where the co-creation of value takes place, the provider’s and the customer’s processes become merged as they are carried out concurrently and in interaction. These merged processes allow the provider to participate in their customer’s value-creating process and become a co-creator of value (Grönroos, 2011).

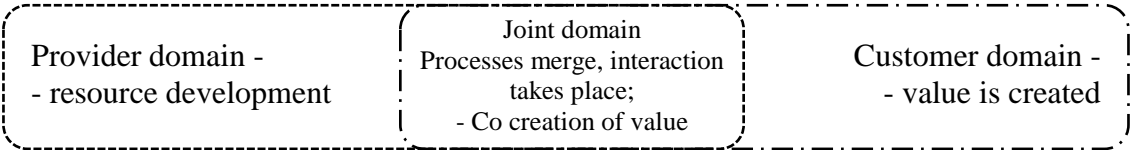


Figure 5 – Value generation process adapted from Grönroos (2011)

To make the co-creation happen, several components need to be in place (Coimbatore K. Prahalad & Ramaswamy, 2004). Firstly, a dialogue, built on an ability and willingness to act on both sides, should take place. In this dialogue, the provider and the customers share their interest and become joint problem solvers. Secondly, both parties must be fully transparent, and thirdly, they must balance out any asymmetry in terms of access to information. Thirdly, and building upon the other components of co-creation of value, the customer must be able to conduct a risk-benefit assessment in order to judge coming actions and decisions (Coimbatore K. Prahalad & Ramaswamy, 2004). However, direct interaction and a simultaneous use of a merged process is not sufficient for co-creation of value to take place. Just as important are the provider’s employees, being the ones that interact and communicate with the customer, and their competence in understanding their customers’ needs and expectations (Grönroos, 2011).

4 Research methodology

4.1 Research strategy

The phenomenon in focus for this research is the audit process, which is studied with the objective of understanding the perception of the audit process with the help of those involved; hence, the data collection and analysis are more focused on words rather than quantification. The relationship between theory and research is inductive; that is, observations and interviews about changes in the audit process are used for theory generation, not for hypothesis testing (Bell & Bryman, 2011). Moreover, based on the identified research gap, which is a lack of knowledge of *how* an audit process can be advanced to increase the perceived value, it can be argued that the understanding is too limited to start from a hypothesis. Instead, a sensitising approach is needed to understand this phenomenon and the impact of different changes (Edmondson & Mcmanus, 2007; Flick, 2014). Therefore, the qualitative research strategy is well suited to study the development of an audit process. However, in this thesis qualitative and quantitative research strategies have been combined. Combining qualitative and quantitative research strategies can be done by linking both strategies into one design, by combining data from both strategies, by combining methods and by linking results (Flick, 2014). Given the research questions and the empirical data in this thesis, both qualitative and quantitative research methods have been applied. When combining qualitative and quantitative research strategies, some implications are brought forward; for example, that integration ends up in a “one-after-the-other” or a “side-by-side” usage or that one research strategy becomes dominant (Flick, 2014). In Paper I, both the “one-after-the-other” and the “side by side” model took place in a natural and non-conflicting way; observations and study of organisational documents and questionnaires took place side by side and the key informant interviews took place later, after the other data collection activities. The qualitative research strategy was dominant in Paper II, and the quantitative research strategy prevailed in Paper III (see Table 4).

4.2 Research design and methods

Research design is defined as a framework for collecting and analysing data to answer a stated question (Bell & Bryman, 2011; Flick, 2014; Yin, 2014). However, (Maxwell, 2012) distinguished between typological or linear design approaches where the research is described as a prescriptive guide of tasks involved in planning or conducting a study; that is, an optimal order and a model that is more interactive. In this interactive model it is proposed that the design of a qualitative study is not something that you can find “off-the-shelf”. Instead, it is a “do-it-yourself” model that needs constant review, and adoption if needed, to fit the purpose. Bell & Bryman (2011) also discussed this approach, describing a looping research process involving interpretation of data, comparing with the theoretical framework, tightening of the research questions and then further collection of data. Looking closer, one can see the key components of the proposed designs, and even though there are differences in these four descriptions (Bell & Bryman, 2011; Flick, 2014; Maxwell, 2012; Yin, 2014), they all contain the following common activities:

- Setting goals for/a purpose with the study
- Designing research questions
- Defining a theoretical framework to inform and support the research
- Collecting and analysing data
- Writing up findings and securing quality

Moreover, qualitative research commonly refers to several research designs, such as case study design, comparative design, retrospective design and longitudinal design (Bell & Bryman, 2011; Flick, 2014). Several aspects should be considered when selecting the correct research design: the fit between RQ and the design, the fit between researchers and the design and whether the design is appropriate given the field and participant settings (Flick, 2014). In this thesis, the case study design was selected and the main research questions were *how*-type questions. As the researcher I focused on a contemporary phenomenon, not a historical one (Yin, 2014). In addition, an audit process and how that process can be developed is a “general problem”; in such a situation, a case study is suitable for capturing the process in a detailed way to understand how it can be further advanced (Bell & Bryman, 2011). Moreover, given the field and participant settings, data collection methods such as studying organisational documents, performing observations and interviews and using questionnaires were used and those methods typically fit the case study design (Eisenhardt, 1989).

In summary, the research questions and corresponding research design, given the required data, are summarised in Table 4. In Paper I, answering RQ1, quantitative data from a questionnaire was used together with organisational documents, observations and semi-structured interviews. Paper II, which also answer RQ1, only used qualitative data from organisational documents, observations and semi-structured interviews. In Paper III, which addressed RQ2, only quantitative data from questionnaires was used.

Table 4 – Research question and corresponding research design

Research question	Paper	Empirical data used to answer RQs	Research design
RQ1: How can audits be carried out in a way that is perceived to add value beyond verifying compliance towards a standard?	I	<ul style="list-style-type: none"> • Audit process documentation • Audit plans • Audit reports Perception of the audit process and audits from both auditors and auditees	A single case study with an Action Research approach and a longitudinal element. Multiple data collection methods: observations, organisational documents, questionnaire and interviews enabling triangulation. Multiple investigators on both data collection and analysis
	II	<ul style="list-style-type: none"> • Organisational documents • Auditors’ lists of questions • Audit reports • Auditor adaptation to the context of the audit 	A single case study with an abductive approach using systematic combining. Multiple data collection methods: organisational documents and interviews enabling triangulation. Pattern matching tool developed for data analysis
RQ2: What are the main contributors to client satisfaction in the fieldwork phase of the audit process?	III	<ul style="list-style-type: none"> • Auditee’s perception of the fieldwork activity 	A single case study with an abductive approach. Data collection through questionnaires and explorative data analysis using Bayesian networks. Multiple investigators on data analysis model development and data analysis

Even though the sample of research designs from my academic discipline – defined here as quality management with a focus on auditing – is small, the dominant research strategy is qualitative and the case study design is common and often combined with the longitudinal design, and common data collection methods are questionnaires, semi-structured interviews and review of organisational documents. Furthermore, the above choice of design and methods corresponds well with the suggested intermediate archetype of methodological fit in field

research described by Edmondson & Mcmanus (2007, p.1160); that is, hybrid data (both quantitative and qualitative), data collection through interviews, observations and questionnaires, and data analysis through content analysis and explorative statistics. The research designs of each of the three studies are described in more detail below; that is, the research approach, data collection and data analysis.

4.3 Paper I

4.3.1 Research approach

The focus of Paper I was to understand how internal audits can be carried out in a way that is perceived to add value beyond verifying compliance towards a standard. In Paper I, the research approach was based on Action Research (AR), viewing the meaning of research as not only describing, understanding, and explaining an empirical phenomenon, but also as changing a practice (Bell & Bryman, 2011; Coghlan & Brannick, 2008). The company studied in Paper I, Sony Mobile Communications, is a global company in the consumer electronics sector. The company is certified for ISO 9001, ISO 14001 and other industry-specific standards. However, this paper focused on the ISO 9001 standard. I, being the first author, was employed in Sony Mobile Communications, with a global responsibility for MS-related external auditing.

AR is a research approach in which the researcher and the participant jointly diagnose a problem and then collaborate to develop a solution (Coghlan & Coghlan, 2002; Reason & Torbert, 2001). Together with the different phases in the AR cycle (see Figure 6) my primary roles R1–R3 are stated.

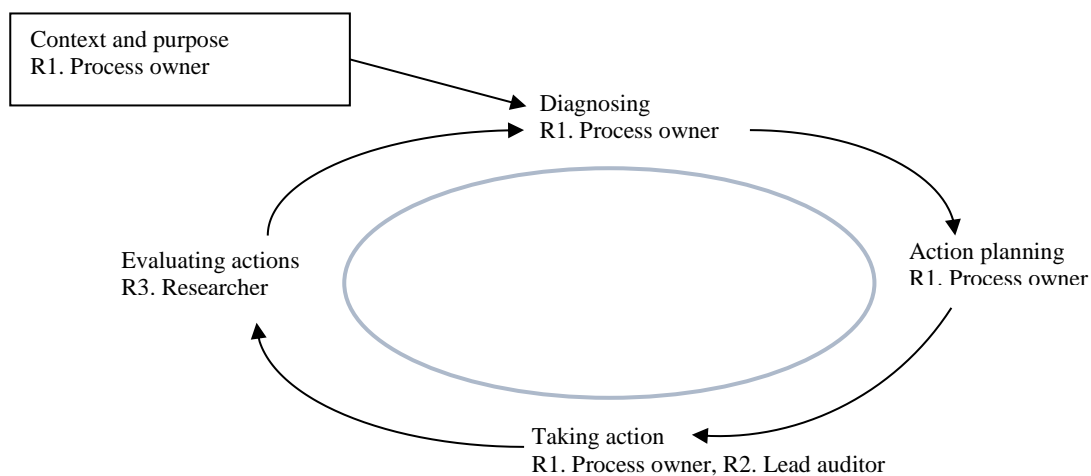


Figure 6 – Action research in your own organisation (Coghlan & Brannick, 2008, p.22) and my different roles R1-R3

In an action research project, the different phases include several activities where I as the researcher am more or less involved. This implies that it is important for me as a researcher to have an understanding of *when* and *how* this involvement can affect the research process. Bell & Bryman (2011) posited that there are three areas an action researcher must manage and reflect on:

- Researcher pre-understanding
- Role duality
- Organisational politics

All three of these aspects had to be considered in Paper I. A pre-understanding refers to the knowledge, insights and experience of the action researcher gained from the experience of the own organisation, meaning both from the system and the job. This gives the action researcher both advantages and disadvantages (Coghlan & Brannick, 2008). First, I had an in-depth pre-understanding of the subject of auditing and the audit process, based on several years of experience in planning, executing and follow-up of both internal and external audits. Second, I had been instrumental in forming the current way of performing the first-party audits regarding the ISO 9001 and 14001 standards within the organisation. This pre-understanding helped me identify relevant parts of the organisation, processes and roles suitable for participating in any of the planned studies. On the other hand, there was a risk when interviewing that I could both influence the interviewee or assume things and miss opportunities for reframing.

The role as insider has several advantages, such as familiarity with the company’s culture, language and history. It also includes having a network meaning accessibility to different organisations. However, adding the researcher role to the normal organisational memberships can be difficult and confusing. This can result in a conflict between the two roles, such as in the organisational role, where there are requirements on the person in focus to be fully involved and active, while the researcher role requires a more detached, objective and neutral position. Furthermore, friendships and other ties can vary from openness to restrictiveness, thus influencing not only relations but also the ability to gather data (Coghlan & Brannick, 2008). In Paper I, I participated in several different roles throughout the AR cycle (see Figure 6). I was a member of the organisation that is responsible for the area in focus, I had performed audits in the organisation and met with the interviewees earlier, and I had been the process owner for the internal audit process. However, at the time of the evaluation phase in the AR cycle I was no longer the process owner for the internal audit process.

Finally, in general, research in any organisation has a political impact. Politics can affect research projects in several ways, such as gaining access, using data, and reporting results. Another example is the diagnosis phase in an action research project, where the result can affect people in both positive and negative ways. It can cause harm due to the exposure of negative findings, but also create positive feelings. Furthermore, action research is a subversive activity when the objective is to identify and diagnose, for example an organisation or process, followed by an action and an implementation of a change that could impact various people who have different roles in the organisation or process (Coghlan & Brannick, 2008). In some cases, I had audited the organisation and therefore already had a relation to the organisation. I had also been involved in other audit activities, both in the audit programme-planning role, and also in developing the audit concept in use. This meant that I was involved in organisational discussions and politics, for example when stating non-compliances and how to handle audit results, which could possibly affect how respondents act and what answers are given. To manage the above-mentioned challenges, actions were taken to mitigate possible negative outcome (see Table 5).

Table 5 – Mitigation of action research issues related to Paper I

Role in research	Role at work	My role in a possible change project	Mitigating of research implications
Step 1 – insider Step 2 – interviewer	Responsible for the internal audit process and audit concept Lead auditor	Improvement facilitator.	Triangulation and use of a co-interviewer, group reflections, interviewee to read transcriptions. Participating functions to participate in design of changes and evaluation of results.

4.3.2 *Data collection*

To strengthen the reliability of the findings, several data sources were triangulated (Bell & Bryman, 2011; Eisenhardt, 1989; Flick, 2014; Yin, 2014). These were: participatory observations, organisational documents, questionnaires and interviews. Collection of data was done in three phases: involvement as action researcher, studies of questionnaires and internal documents, and by key informant interviews. Initially, during the involvement as action researcher, I led and observed the change of internal audit practices and at the same time acted as lead auditor. The observations focused on auditor meetings and conduct of audits. Using this set-up, feedback was received directly from the auditees but also from questionnaires performed during the change. This was complemented with studies of organisational documents such as audit plans and audit reports. Finally, to understand whether the change had an impact on the perceived business relevance of the internal audit, five interviews with key informants (senior vice president, senior managers and specialists) were conducted onsite by both researchers in April 2016. The interviews lasted between 27 to 51 minutes and were all recorded and transcribed. The work in the three phases of data collection covered a considerable length of time, which made it possible to study not only the change and implementation of new auditing practices, but also the perceptions of these new practices after implementation.

4.3.3 *Data analysis*

The data analysis in Paper I was performed using the so-called Pattern Matching method (Mills, Durepos, & Wiebe, 2009), comparing patterns within the data collected in the two first phases of the data collection with data from key informant interviews and prerequisites for value-adding audits in earlier research. Both authors of Paper I were involved in the data analysis, I was internal, with several years of organisational knowledge, insights, and experience from Sony Mobile and from being an auditor. The second author was external to the company, acting as an external investigator.

4.4 *Paper II*

4.4.1 *Research approach*

The focus of Paper II was to understand whether internal auditors adapt to explorative processes when auditing ISO 9001 process management requirements. Examples of explorative processes are processes for product design, portfolio planning and business development. These processes are characterised by explorative attributes like innovation, growth, experimentation and search (March, 1991; O'Reilly & Tushman, 2004). Because this is a dynamic and complex phenomenon to study, a qualitative approach was chosen (Flick, 2014). Moreover, this phenomenon required an understanding of connections between the setting and the phenomenon, a type of research suited to the case study methodology (Dubois & Gadde, 2002; Frohlich, Voss, & Tsikriktsis, 2002; Meredith, 1998). The research approach used in Paper II was the so-called systematic combining (Dubois & Gadde, 2002). This abductive approach involved movement between theory and empirical data, and conclusions were drawn when sufficient data had been collected from the case. A global company in the consumer electronics industry (Electronics) was studied. Electronics operates in a fiercely competitive environment where product life cycles have become shorter and shorter and the need for quick adaptation to new and changing requirements has increased over the years. Since 2014, new explorative functions have been added to the organisation and the setup is considered to represent structural ambidexterity.

4.4.2 *Data collection*

While Paper II did not encompass any observations, it still used multiple data collection methods (namely, study of organisational documents and interviews) to enable triangulation of several data sources to increase reliability (Eisenhardt, 1989). The first phase of the data collection was a review of auditors' lists of questions used in internal audits. This was followed by a second phase, including five semi-structured interviews with lead auditors and auditors to understand how the audit process was adopted to the characteristics and contexts of the audited organisation or process. The interviews were performed in April 2017 and lasted between 47 to 77 minutes, and were all recorded and partly transcribed. To further enable generalisability, these interviews also included informants from outside the European part of the organisation. In the third phase of the data collection, six audit reports from audited processes were chosen using purposive sampling (Flick, 2014). The focus was on selecting audits of typically explorative processes.

4.4.3 *Data analysis*

The Pattern Matching method (Mills et al., 2009) was used to analyse the collected data from audit reports in Paper II and explore whether auditors adapted their way of auditing requirements for process management practices to processes characterised as explorative. A pattern matching tool was created using PM requirements in the ISO 9001:2008 standard, which were mapped towards the key practices of PM (design, control and improve), described in the theoretical framework. The mapping was then validated by two trained lead auditors, after which some corrections were made. This pattern matching tool was subsequently utilised to categorise audit findings from the selected audits towards the three PM practices. The author's knowledge, insights and experience in internal auditing as a trained and certified lead auditor for both ISO 9001 and 14001 standards was helpful during the data analysis and in activities such as interpreting audit findings and classifying findings using the pattern matching tool.

4.5 *Paper III*

4.5.1 *Research approach*

The focus of Paper III was to understand factors in the external audit fieldwork that contribute to audit client satisfaction. Previous research on audits has pointed to the need for contextual understanding and the relationship between an auditor and the client (e.g., Power & Terziowski, 2007), so audit satisfaction is shaped through interactions between parties in a specific context. This type of study is suited for the case study methodology (Frohlich et al., 2002; Meredith, 1998) and a global company in the consumer electronics industry (Alpha) was chosen as a case organisation. Alpha is certified for ISO 9001, ISO 14001 and other industry-specific standards, and as a part of holding the ISO 9001 certificate there is a yearly audit program including internal (1st party) and external (3rd party) audits.

4.5.2 *Data collection*

Following Grönroos (2011) reasoning about value creation, the questionnaire focused on step 3 of the audit process (see Figure 2), where the most intense provider-customer (auditor-auditee) interaction takes place. Data was collected using a questionnaire that was originally developed for surveying perception of internal audits within Alpha, but later developed and tested in 2015 for collecting auditees' perceptions of the fieldwork activity performed by a third-party certification body. Information about the questionnaire was given in the opening meeting, the first part of step 3, conducting the audit. Before handing out the questionnaire in the closing meeting, the last part of step 3, conducting the audit, the auditees were informed

about the purpose of the questionnaire and that the questionnaire should be filled out anonymously.

The original questionnaire consisted of 29 questions, both closed and open-ended, of which the result from 21 have been used in Paper III. The questions (statements) used from the questionnaire targeted auditees perception of the opening meeting, the interview, the closing meeting and a final overall rating question. Examples of statements are:

- ‘In the opening meeting the auditor/auditors informed about the closing meeting’
- ‘The terminology and language used by the auditor/auditors was easy to understand’
- ‘In the closing meeting the auditor/auditors presented findings that are relevant for our business’

Furthermore, the questions included a mix of response options as; a four level Likert scale together with possibilities to give specific comments, Yes/No questions with possibilities to give specific comments but also questions with multiple choice. The data used in paper III were collected from external audits taking place at different sites in different countries from October 2015 up until, and including, May 2018. A total number of 208 responses were used in Paper III.

4.5.3 Data analysis

To build the model for the data analysis, questions were selected from the full version of the questionnaire; that is, questions focusing on the fieldwork of the external audit. Values of all independent variables were discrete or categorical, which meant that an excessively large set of combinations to explain the variation in the dependent variable (overall score of the audit) were possible. This type of data can be handled by probabilistic graphical models or Bayesian networks (BNs) (Pearl, 1988), which offers a systemic approach to addressing factor interdependency, but also provides an effective way to deal with reasoning under uncertainty. The BNs approach offer various facets of what-if scenarios considering the interdependency of the relationships among enablers (process variables), results (customer satisfaction in terms of overall impression), and contextual variables. Moreover, BNs can also handle absent data, which suited this paper, while a few auditees did not fully answer all the questions in the questionnaire due to irrelevance or other unknown reasons.

4.6 Research quality

A number of questions can be raised regarding quality in research; for example, whether qualitative research should be evaluated using the same criteria and concepts as quantitative research, what the recognised criteria or strategies are for evaluating qualitative research, and whether qualitative research can be valid and reliable without using the old-style criteria (Flick, 2014). Measures have therefore been taken to ensure quality in the appended papers. First, to strengthen reliability of the findings, multiple data sources were triangulated in Papers I and II (Eisenhardt, 1989) involving participatory observations, internal documentation and questionnaires, and interviews. Furthermore, multiple investigators, one internal and one external to the organisation were involved in both data collection and analysis in Paper I to ensure objectivity (Flick, 2014) and reliability (Eisenhardt, 1989). In Paper I the data collection spanned a considerable length of time, making it possible not only to monitor the change and implementation of new auditing practices, but also the perceptions of these new practices after implementation. This longitudinal approach is said to improve the reliability and validity of the findings (Barratt, Choi, & Li, 2011). In Paper II, mapping of process management requirements in the ISO 9001 standard towards key practises in process management was validated by two

lead auditors to increase the reliability of the pattern matching tool. In Paper III all three authors participated in the development of the model for data analysis to ensure objectivity (Flick, 2014). However, all papers are limited to one organisation per study and their auditing of ISO standards. To further increase the validity of these studies, future researchers could perform the same interviews and surveys in other parts of these organisations. To increase the generalisability, future studies in other organisations are suggested to understand whether similar results have been achieved. It is also proposed to study other audit types using the same underlying audit process in order to understand whether the same results have been achieved.

In order to determine the quality of the AR, (Herr & Anderson, 2005) brought forward five validity criteria, which are linked to the goals of action research: outcome validity, process validity, democratic validity, catalytic validity, and dialogic validity. In Paper I, outcome and process validity were mainly secured by the key informant interviews. Democratic validity was established during the change process through the audit forum, which was used as a focal point for launching ideas and discussing results. The catalytic validity was secured by monitoring if changes of audit practises were still in place and used in the audit process. Finally, the dialogic validity could have been improved by performing a higher number of interviews, which could act as a form of peer review. The core activity performed in order to achieve all five criteria was to reflect over these criteria and plan for validity enhancements already in the early phases of the different studies and have a continuous and transparent dialogue with the participants.

4.7 Ethical considerations

Diener & Crandall (1978) proposed that research ethics in business research consists of four main parts for researchers to avoid and safeguard: harm to participants, informed consent, invasion of privacy and risk of dishonesty. Moreover, and specifically to mitigate ethical concerns in AR projects, Williamson and Prosser (2002) stated three questions that the action researcher and participants should jointly discuss and agree upon:

1. How can confidentiality and anonymity be secured?
2. Action research can be seen as a journey and an evolving activity and no one knows at the start where they will end, so how can informed consent be meaningful?
3. Actions research can enter political arenas, so how can harm to participants be avoided?

Ethical concerns have been taken into considerations for all papers. A summary of mitigations of ethical considerations connected to the empirical data and research design (see Table 4) underlying each paper is presented in Table 6.

Table 6 – Summary of mitigations of ethical considerations in Paper I, II and III

<ul style="list-style-type: none"> • Individual consent before participating in informant interviews via interview bookings • Informants informed about the purpose of the research, anonymity and handling of recordings before starting interviews • Informant anonymity when writing up empirical findings • Use of approved storage solutions for electronic information such as organisational documents, questionnaire data, recordings and result presentations • Case-specific confidentiality matters reviewed • Data analysis tools validated by more than one author, and outsiders, to maintain honesty and avoid deception

5 Summary of appended papers

This licentiate thesis includes three papers. This chapter summarises each of these papers.

5.1 Paper I

Title: Making internal audits business-relevant

Summary: Internal management system (MS) audits are sometimes seen as policing activities that focus on compliance and documentation rather than something that contributes to improvements. Previous research has looked into this but focused on *what* to change in order to make auditing more business-relevant and less on *how* these changes can be operationalised. Thus, the purpose of Paper I was to understand *how* internal audits can be carried out in a way that is perceived to add value beyond verifying compliance towards a standard.

I, as first author of Paper I, was employed in Sony Mobile Communication and had held the role as responsible for the internal MS audit program for several years, thus Sony Mobile Communication was an accessible case. As the evolution of an audit process is a dynamic and complex phenomenon and requires an understanding of both the context and the phenomenon, a qualitative research strategy was chosen. Furthermore, while Sony Mobile Communication was involved not only in the research but also in the implementation of the results, an action research approach was suitable. Data was collected in three phases. In the first phase I was directly involved in the implementation of the new audit practises, and feedback was received from auditees in direct communication but also from questionnaires. In the second phase data from two internal questionnaires was studied; one questionnaire targeting both auditors and auditees, and one targeting only auditees. In the third, and last phase of the data collection, five key informant interviews were performed. These interviews were done to understand whether the changes in the audit practises had impacted the perceived business relevance of the internal audits. These five key informants had been involved in audits conducted both before and after the implementation of the changed audit practises, thus they could reflect over the changes.

Findings confirm that several of the suggested proposals for *what* to change in the audit process contributed to more value adding audits when being operationalised. Thus, internal audits can add value beyond verifying compliance, acting as a generative mechanism for business-relevant improvements. However, both short- and long-term changes in audit practices are needed. Short-term, hands-on changes are needed, such as explicit requirements regarding the time from audit to report and improved, and customised reporting formats. Long-term, it is critical to create management engagement by involving managers in various ways throughout the audit process and to ensure that auditors have relevant knowledge and understanding of the organisation's challenges in the area being audited.

Contribution: Previous research has focused on *what* to change to make auditing more business-oriented and value-adding. This paper shows empirical examples of *how* changes in the audit process can be turned into practice and what the results on the perceived benefits are.

5.2 Paper II

Title: Auditing of explorative processes

Summary: Process management (PM) is a central part of management systems standards such as ISO 9001. In ISO 9001 PM is represented by different requirements on process design, process control and process improvement. Research has been conducted on PM in relation to the concepts of exploitation and exploration. Exploitation being characterised by refinement, efficiency and selection, and exploration being characterised by search, risk taking and variation. Research has also been performed on the sometimes-negative effects from process management practices on exploration in organisations operating in competitive environments. While one of the objectives with audits is to evaluate compliance to the requirements in the ISO 9001 standard, e.g. PM requirements, the focus of Paper II was to understand how auditors manage different types of processes i.e. exploitative and explorative processes. Thus, the purpose of Paper II was to study if internal auditors adapt to explorative processes when auditing ISO 9001 PM requirements.

For Paper II a qualitative research strategy was chosen. The company in focus was a global company in the consumer electronics industry called Electronics. Several data sources were used, such as auditors' list of questions, audit reports, but also interviews. Findings from audit reports were analysed and classified in three groups; findings related to requirements for process design, findings related to requirements for process control, or findings related to requirements for process improvement. After having analysed the empirical data, findings indicated that internal auditors apply ISO 9001 standard requirements for process control across the studied organisations and processes even though the audited organisations and processes were characterised as explorative, and the environment was competitive. This lack of adaptation to the context may originate in a lack of understanding of exploitation and exploration, and the differences between the two e.g. in terms of effects of PM. Results in Paper II indicated that it might be challenging for internal auditors to move between exploitative and explorative processes in an ambidextrous organisation, when looking for conformance to PM requirements in the ISO 9001 standard. If requirements for process management is not adapted to an explorative process in a competitive environment, that can stunt an organisation's capability to be innovative and thereby negatively affect its competitiveness.

Contribution: Previous research has focused on understanding exploitation and exploration, and PM practices as such, but also the effects of PM practice on exploitation and exploration. This paper contributes to earlier research in three ways. First, earlier research on the effects of PM practices on exploration is now linked with internal auditing of PM requirements in the ISO 9001 standard. Second, a focus on the internal auditor as being a key person in operationalising PM requirements has been introduced. Third, rather than focusing the effects of PM on exploitation and exploration, this paper focuses on adaptation of PM practices to better support explorative process in competitive environments.

5.3 Paper III

Title: Drivers of audit client satisfaction in the external audit fieldwork

Summary: To become - and stay – certified according to the ISO 9001 standard, a prerequisite is to undergo an initial certification audit and later periodical surveillance audits by an external certification body. However, there are non-negligible costs associated with certification and periodical external audits, and managers have started to ask for return of investment from MSs, quality programs, and other quality-related initiatives. In this paper the external audit is viewed as a service where the value created in a service delivery arise in the interaction between an auditor and the auditees, interacting during the fieldwork in the external audit. The purpose of Paper III was to understand factors in the external audit fieldwork that contribute to audit client satisfaction. Paper III is based on a study of one company (Alpha) and their interaction with one of their certification bodies for external auditing. Data from a questionnaire with the purpose to serve as an input to a dialogue on the perception and potential improvements of the external audit fieldwork between Alpha and the certification body was used. Data was analysed by probabilistic graphical models, or Bayesian networks, which offered a more systemic approach for addressing factors interdependency, but also provided an effective way to deal with reasoning under uncertainty.

The empirical findings re-confirmed audit fieldwork as one of several quality attributes that contribute to audit client satisfaction. Findings also points towards that the overall satisfaction of the audit, is sensitive for changes in context as for example the role of the auditee, the site where the audit was performed, and the previous experience of external audits. Furthermore, it was found that the terminology and language used, the auditors´ knowledge of the operation and the focus on improvements are critical variables. Moreover, adding the concept of co-creation of value to the audit process opens up for an understanding of the criticality of the auditor–auditee interaction.

Being a certification body or a buyer of the audit services, these factors are of interest to understand and follow-up to drive continuous improvements of the service provision i.e. the audit process. Being the customer and buyer of audit services, it is of interest to understand factors affecting audit client satisfaction to monitor the provider and increase the likelihood of a value-adding audit.

Contribution: Previous research has examined which quality attributes are associated with audit client satisfaction and concluded that one attribute is the audit fieldwork. This paper adds to this body of knowledge by empirically examining which factors within the fieldwork contribute to audit client satisfaction, but also by adding the concept of co-creation of value to the audit process. By understanding these factors and the concept of co-creation of value, it is possible to increase the value added from external audits, either being a provider or a buyer of audit services.

6 Discussion

The purpose of the thesis is to explore and describe how an organisation can advance the process for internal and external auditing to add value beyond verifying compliance towards a standard. This chapter discusses findings and their implications but also their relation to theory and practise. First, the two research questions will be reviewed and discussed, followed by a discussion that draws on the concept of the augmented service offering developed by Grönroos (1987).

6.1 *How can audits be carried out?*

The first research question, formulated as “*How can audits be carried out in a way that is perceived to add value beyond verifying compliance towards a standard?*” was addressed in Paper I and Paper II. The starting point in Paper I was that work related to a standard and MS is implemented in many areas within organisations (*ISO Survey*, 2017) and is argued to have the potential to contribute to quality improvements (Sousa & Voss, 2002). Despite this, questions have been raised concerning the value of internal and external MS audits, being an integral part of work related to a standard and MSs, and whether these audits create negative experiences (Dennis Beecroft, 1996) focusing on compliance and documentation (Beckmerhagen et al., 2004; Elliott et al., 2007; Heras-Saizarbitoria et al., 2013; Pun et al., 1999). Previous research has focused on possibilities for *what* to change in order to make auditing more business-oriented and value-adding. However, research describing *how* suggested practices for making internal audits more business relevant can be operationalised is scarce.

It has been argued that management commitment is a critical success factor for having value-adding audits, both through receiving management directions (Alič & Rusjan, 2011; Poksinska et al., 2002; Roth, 2003), but also from management involvement in the audit process (Alič & Rusjan, 2011; Dale & Askey, 1994; Pivka, 2004; Poksinska et al., 2002). By, for example, connecting the audit programme to organisational needs and activities (Dale & Askey, 1994; Rippin et al., 1994; Roth, 2003) positive effects have been observed, such as auditors becoming better at helping the executive management team achieve organisational objectives (Alič & Rusjan, 2011; Roth, 2003). In the case of management engagement, Paper I show empirical examples of how changes in the audit process can be turned into practice. First, the yearly audit programme has been aligned with areas such as strategic plans, activity plans and budgets, which is an important alternative to cyclical audit programmes. Second, by establishing a so-called sponsor role in the management team, audit teams have been given direct access to management and vice versa. This closer relationship with management during the audit programme planning and during individual audits, through the sponsor role, has created increased management interest and, in turn, affected the perception of audits. These two examples describe *how* suggested practices for making internal audits more business relevant can be operationalised and confirms that management commitment is one of the core values in standards as well as in TQM, as proposed by Hellsten & Klefsjö (2000).

However, this closer relationship management through the sponsor role, and changes in audit programme planning through alignment, for example with strategies and risks, requires auditors to have more than basic auditor skills. Besides basic auditing skills, it has been argued that context-related skills, organisation-specific knowledge and adaptability are necessary for value-adding audits (Pivka, 2004; Power & Terziovski, 2005; Ramly et al., 2007). Furthermore, behavioural skills like the ability to express positive opinions and proposals for improvement

measures (Piskar, 2005), communication skills, empathy, flexibility, and a positive approach all seem to influence the perception of audits (Power & Terziovski, 2007). Paper I showed that adding an expert to the audit team who has skills that were relevant for the audit criteria, such as IT, software, or hardware development, was perceived to be important, not only from the point of understanding the organisation but also for creating trust in the interaction with management.

Findings in Paper II indicate that, even though it has been argued that PM practices as process control have a negative positive effect on organisations operating in an environment of fierce competition and with a high rate of product change (Linderman & L. Sanders Jones, 2014), auditors looked for conformance to standard requirements driving the “process control” PM practice irrespective of what type of process they audited. Looking for conformance to the “process control” PM practice in explorative processes such as product design processes, product planning processes, and software development processes indicates that internal auditors do not adapt PM requirements when auditing explorative processes. Instead, auditors should separate exploitative attributes like efficiency and refinement from exploratory activities. Furthermore, it has been argued that it is important to balance the focus on exploitation and exploration (March, 1991; Smith & Tushman, 2005; Sutcliffe et al., 2000) in order to be successful at launching breakthrough products and services (He & Wong, 2004; Smith & Tushman, 2005; Michael L. Tushman, 1997), but also to differentiate PM practices based on the competition in the industry (Linderman & L. Sanders Jones, 2014). Moreover, findings in Paper II point towards a possible challenge being an internal auditor in an ambidextrous organisation; in other words, it may be difficult to move between exploitative and explorative processes, at the same time as adapting PM requirements in the ISO 9001 standard and evaluating compliance to PM requirements. This highlights an opportunity to improve how internal audits are carried out in a way that is perceived to add value beyond verifying compliance towards a standard; that is, by being more adaptive to the context of the audit and leaving a one-size-fits-all approach.

6.2 What are the main contributors to audit client satisfaction?

Paper III investigated the second research question, formulated as “*What are the main contributors to client satisfaction in the fieldwork phase of the audit process?*”. Previous research has concluded that one of the quality attributes associated with audit client satisfaction is audit fieldwork (Behn, Carcello, Hermanson, & Hermanson, 1997). The findings in Paper III indicate that context-related factors (such as the role of the auditee, the site where the audit was performed, and auditees’ previous experience of audits), but also process-related factors (such as the terminology and language used, auditors’ knowledge of the operation and the focus on improvements), contribute to audit client satisfaction. Furthermore, drawing on value-creation (Grönroos, 2011), having the ability as an auditor to use language and terminology easy to understand, posit knowledge of the operation being audited, and focus on improvements supports the co-creation of value in the interaction sphere (Grönroos, 2011) and makes auditees perceive the audit as less compliance-oriented (D. Prajogo, Castka, Yiu, Yeung, & Lai, 2016). Moreover, the findings in Paper III do not indicate criticality of ISO compliance, which means that ISO compliance can be argued to be a primary responsibility for the provider, in this case the auditor, and therefore a resource that the provider contributes with in the process (Grönroos, 2011). Thus, ISO knowledge seems to be more of a qualifying factor compared to knowledge of the operation and using a language and terminology that is easy to understand. Even though Paper III had a focus on external auditing of MSs, there are many similarities with internal audits of MSs, studied in Paper I and Paper II; for example, auditor qualification and training

are important factors for value-adding audits (Pivka, 2004; Power & Terziovski, 2005; Ramly et al., 2007).

6.3 The augmented service offering

This section discusses the findings and implications for theory and practice, drawing on the concept of the augmented service offering (Grönroos, 1987). For the purpose of this discussion, the concept of the augmented service offering is adapted to the audit process as follows. In the basic service, consisting of three parts (see Figure 7 and the inner circle), the core service is defined as being the audit itself defined by ISO 19011:2018 (p. 1) as: “a systematic, independent and documented process for obtaining objective evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled”. The enabling service is defined as consisting of the audit plan, the opening and closing meeting but also the audit report. Given the purpose of this thesis, these two parts of the audit service are not addressed in this discussion. Instead, the focus in this discussion is on the enhancing services, but also on the outer circle, which have been addressed in the three appended papers (see Figure 7). In the discussion, the audit team is the provider (of the audit service) and the auditee or audit client is the customer (of the audit service).

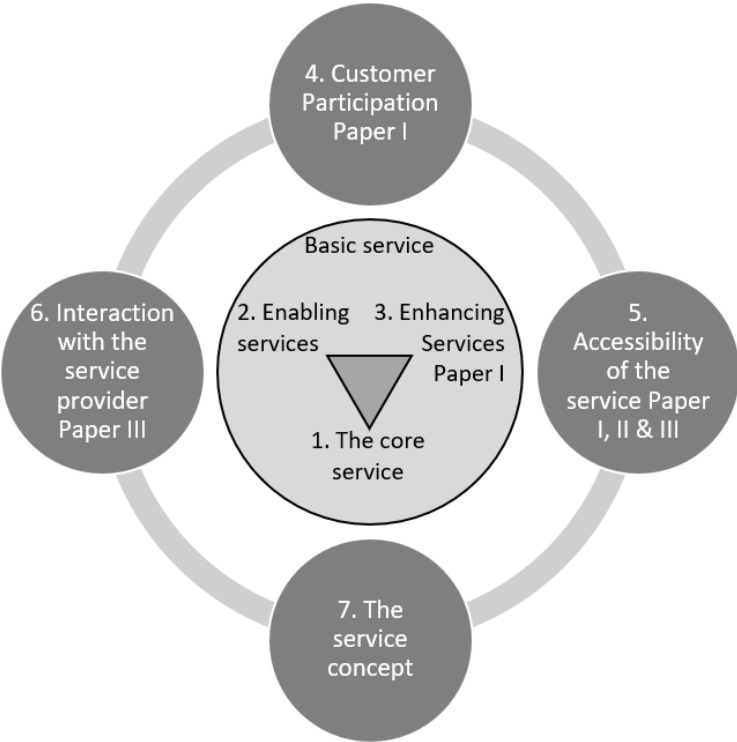


Figure 7 – Appended papers and their relation to the augmented service offering (Grönroos, 1987)

6.3.1 Enhancing services

It could be argued that whether or not the audit criteria are fulfilled (that is, compliance to a standard) is the ultimate objective for an audit. However, having compliance as the ultimate objective for an audit draws attention to the questions raised concerning the value of internal and external MS audits, and whether these audits focus on compliance and documentation (Beckmerhagen et al., 2004; Elliott et al., 2007; Heras-Saizarbitoria et al., 2013; Pun et al., 1999) creating negative experiences (Dennis Beecroft, 1996). Thus, something more is needed

beyond the core and enabling services to increase the value of the core (audit) service, which can make the core service more attractive; that is, an enhancing service (Grönroos, 1987). In Paper I, acting in a consultative manner and booking follow-up meetings was found to be perceived positively. Such practices are not a prerequisite for delivering the core service, and can therefore be argued to enhance the audit service by making the core service more attractive, thus adding value beyond verifying compliance towards a standard.

6.3.2 Customer participation

Customer participation in the augmented service offering model draws on the value generation process (Grönroos, 2011), describing the joint domain, value creation and co-creation according to the SL (see Figure 5). From a value generation perspective, Paper I made several findings regarding *how* an organisation can advance the audit process by evolving the customer participation. Firstly, aligning audit programmes and plans to strategic plans, budgets and activity plans, instead of having a standalone cyclical audit programme as suggested by Roth (2003), was shown to have positive effects on the audit process. Secondly, by introducing the sponsor role, a dialogue with management has been established and management have become directly involved in discussions about not only the audit programme, but also individual audits. This has enabled management to directly affect the audit focus and thus create prerequisites for greater return on investment (Pivka, 2004). Moreover, this close connection to management has contributed positively to discussions about follow-up of audits, which in turn have contributed positively to the audit process (Alič & Rusjan, 2011) but also support the “customer domain” through improvement proposals (see Figure 5) where the customer, independently of the audit team, creates value as value-in-use (Grönroos, 2011).

By spending more time in the preparation phase of the audit (see Figure 2, step 2), and by increasing the participation of the auditee (the customer of the audit service), internal auditors have become more knowledgeable of the organisation and/or process they are going to audit. However, this closer relationship between the auditor and the auditee could raise questions about the independence of the auditor. The guideline for auditing MSs, ISO 19011:2018, specifically states that an important principle of auditing is independence:

Auditors should be independent of the activity being audited wherever practicable and should in all cases act in a manner that is free from bias and conflict of interest. For internal audits, auditors should be independent from the function being audited if practicable. Auditors should maintain objectivity throughout the audit process to ensure that the audit findings and conclusions are based only on the audit evidence. (*ISO 19011*, 2018, p.6)

This points towards a challenge for the audit team, balancing the need to gather rich information about the auditee and the organisation they will audit (Piskar, 2005), have a close relation with management (Roth, 2003), and receive management support in audit activities (Alič & Rusjan, 2011; Pivka, 2004) at the same time as safeguarding their independence and avoiding bias and conflict of interest.

Finally, taking the discussion to the QM level and looking at audits as a technique, ISO 9001:2015 as a practice, and management commitment as a principle (Dean & Bowen, 1994), this close connection to management and increase of management commitment in audits supports what has been found in earlier studies; that is, that leadership and management commitment is critical for successful implementation of QM (Kaynak, 2003) and that management’s support positively affect employee’s attitudes towards implementation of a MS (Gray et al., 2014).

6.3.3 *Accessibility of the service*

The accessibility of the service, the second element of the augmented service offering, has also increased via several changes of the audit process studied in all three papers. First, besides basic auditing skills, other skills like organisational and operational ones have shown to be important factors to add more value in the audit process. As studied in Paper I, adding experts to the audit team in order to be able to be more relevant in specific areas and better judge adherence to certain audit criteria, has proven to add value to the audit and corresponds with earlier research concluding that the use of experts (Pivka, 2004) and auditors with organisation-specific knowledge (Pivka, 2004; Power & Terziovski, 2005) are prerequisites for value-adding audits. It was also seen in Paper III that knowledge of the operation and the terminology and language used by the auditors had a positive impact on the audit client's satisfaction.

Second, focusing specifically on context-related skills, several researchers have argued that organisation-specific knowledge and adaptability are skills that support value-adding audits (Pivka, 2004; Power & Terziovski, 2005; Ramly et al., 2007). Internal auditors' adaption to explorative processes were specifically studied in Paper II through auditors' usage of ISO 9001 process management requirements. Findings show that the internal auditors partly adapted to the process and organisation in focus by preparing audit questions about company vision, mission and strategies, which is argued to support structural ambidexterity (M L Tushman & O'Reilly, 2002; Michael L. Tushman & O'Reilly, 1996) and form a common foundation in an organisation consisting of both exploitative and explorative organisations (Birkinshaw et al., 2016). However, several questions were also prepared about risks, predictability, process efficiency and measurements of effectiveness, which represents exploitative attributes (March, 1991; O'Reilly & Tushman, 2004). Focusing on such exploitative attributes can have a negative effect on an organisation's ability to adapt to its environment (Benner & Tushman, 2002; Milé Terziovski & Guerrero, 2014) and explorative capabilities as innovation, which is deemed to be important in competitive environments (Linderman & L. Sanders Jones, 2014). Similar behaviour was also observed when reviewing audit reports as part of the collected data in Paper II. Some reports showed evidence of auditors searching conformance with standard requirements driving the PM practices, such as overall process descriptions, identification of process interfaces, receivers of process deliverables, and process awareness. Such practices are believed to have a positive effect on organisations operating in an environment of fierce competition (Linderman & L. Sanders Jones, 2014). However, it was also found that auditors looked for compliance to attributes that are geared more towards process control, which is argued to support exploitation and hinder more explorative activities such as innovation (Benner & Tushman, 2003). All in all, the result in Paper II points towards a possible challenge for auditors in moving between exploitative and explorative processes and organisations in an ambidextrous organisation.

Finally, new practices, such as target group-oriented report designs and shorter time from closing meeting until delivered audit report, were reported in Paper I. The new audit report practice supports earlier research arguing that reports formatted, taking the target group needs and expectations into consideration, adds value (Mahzan & Hassan, 2015; Piskar, 2005). The shorter time from the closing meeting until the auditees receive the preliminary report, as a means of retaining the momentum of the audit, supports earlier research arguing that managers should remain directly involved in the audit process and the audit results (Alič & Rusjan, 2011).

6.3.4 *Interaction with the service provider*

In the augmented service offering (Grönroos, 1987) the interaction with the provider of services is described as the interactive communication between the provider and the customer, which depends on the behaviour of the provider employees, such as what they say and do, and how

they say and do it. If the interaction is considered complicated and unfriendly, the perceived quality may be low (Grönroos, 1987). Findings in Paper III indicate that the auditee's feelings after the opening meeting are important for the overall audit client satisfaction; this confirms the above reasoning. Furthermore, feelings after the opening meeting were shown to be sensitive for practical elements like clarifying the purpose of the audit activity, audit arrangements and the next steps, which supports the argument that having a clear purpose, defined and communicated roles, and establishing good relationships supports value-adding audits (Power & Terziovski, 2007).

6.4 *Limitations*

The studies in this thesis are limited to internal and external auditing of MSs in three case organisations. Hence, generalisation based upon the results is limited. The informants interviewed in Papers I and II geographically represent organisations or parts of organisations in Europe. To increase the validity of Paper I and II, future researchers could perform the same interviews in other geographical areas. Regarding Paper II, one case company in a competitive environment was studied, so the generalisability of the findings is limited. Future research could include multiple case studies in organisations in different competitive environments in order to increase reliability. Paper III is based on one company and their interaction with one of its chosen certification bodies for external auditing, so the generalisability of the findings is limited by the case study method. Moreover, the MS studied in this case is restricted to the ISO 9001 standard. Future studies across more companies, other certification bodies, and additional standards are suggested.

7 Concluding remarks

7.1 Conclusions

For more than 1.6 million organisations worldwide that are certified to any of the available ISO standards (*ISO Survey*, 2017), both internal and external audits have become a technique (Dean & Bowen, 1994; Hellsten & Klefsjö, 2000) for evaluating compliance with any of these standards. Even though considerable resources are spent on work related to audits, audits have a negative association within many organisations; for example, the audit process is considered a negative process with a focus on inspection and documentation (Dennis Beecroft, 1996; Pun et al., 1999) and too much emphasis on fulfilling the audit programme and less on adding value to the organisation (Beckmerhagen et al., 2004; Meegan & Simpson, 1997).

The present thesis provides insight into how the audit process can be advanced to add value beyond verifying compliance to a standard and builds upon widely diffused and accepted QM principles, practices and techniques (Dean & Bowen, 1994), but also upon research on exploitation and exploration (March, 1991) and service quality (Grönroos, 1984). The first paper demonstrated empirical examples of how changes in the audit process can be turned into practice and what the results on perceived benefits are. The second paper focuses on auditors' understanding of different contextual settings and if that affects their execution of the audit process such as preparations, fieldwork and reporting of findings. The third paper focused on external auditing and empirically examined what factors within the fieldwork part of the audit process contribute to audit client satisfaction.

For research and theory on auditing of standards such as ISO 9001 and ISO 14001, findings confirm that internal audits can add value beyond verifying compliance by operationalisation of earlier suggested changes in the audit process (Alič & Rusjan, 2011; Dale & Askey, 1994; Piskar, 2005; Pivka, 2004; Poksinska et al., 2002; Rippin et al., 1994; Roth, 2003). Furthermore, creating management engagement – an important QM principle (Dean & Bowen, 1994) – is confirmed to be an important contributor in enhancing the audit process to achieve value-adding audits. Findings also confirm that organisational knowledge and context-related skills are important prerequisites for value-adding audits (Pivka, 2004; Power & Terziovski, 2005; Ramly et al., 2007). Moreover, findings also confirm that the audit fieldwork contributes to audit client satisfaction; that is, it is an important quality attribute in the audit process (Behn et al., 1997). Lastly, this thesis adds to existing literature on audits of standards by adding the concepts of co-creation of value (Grönroos, 2011), service quality (Grönroos, 1988) and augmented service offering (Grönroos, 1987) to the audit process. Adding these concepts to the audit process opens the way for an understanding of the criticality of auditor–auditee interaction, auditee participation, and also the accessibility of the audit service.

From practical and managerial perspectives, this thesis provides several implications. Firstly, it presents several validated short- and long-term changes of audit practices that can be implemented to advance the audit process to add value beyond evaluating compliance to a certain standard. Such practices include adding the sponsor role, which enables a continuous involvement of management throughout the audit process, starting with discussing the content and focus of an upcoming audit, and ending with a close follow-up of reporting and closing of findings. Secondly, findings indicate that internal auditors apply requirements for process management in ISO 9001 with a one-size-fits-all approach and do not adapt to whether the audited organisation or process is characterised as explorative. This can have a negative impact on organisations in an increasingly competitive environment while strong requirements for

process control may hinder more explorative processes (Benner & Tushman, 2002). Thirdly, findings show that contextual factors such as country origin, role and previous experience of the auditee, but also the feeling after the opening meeting have an impact on audit client satisfaction. For internal or external providers of audit services, and customers of the same, understanding these factors should be of interest in order to drive continuous improvements of the audit process, and also given the fact that audit client satisfaction most probably affects the will of an organisation to spend resources on the audit result.

7.2 Suggestions for future research

This thesis has studied and discussed a sample of suggested changes in the audit process. However, considering the number of certified organisations, and the fact that both internal and external audits are key practises in maintaining a certification, further studies of how suggested changes of audit process can be operationalised would be of interest, both from theoretical and practical perspectives. Continuing this avenue of research, as questions have been raised concerning the value of MS audits (Beckmerhagen et al., 2004; Dennis Beecroft, 1996; Elliott et al., 2007; Heras-Saizarbitoria et al., 2013; Pun et al., 1999), it would be of interest to investigate whether implemented value-adding audit practices change an organisation's willingness to allocate resources to MS activities, and their perception of the MS contribution. Finally, this thesis has introduced the concept of augmented service offering (Grönroos, 1987) as a possible viewing platform for auditing. Further research, taking service logic as a starting point, would contribute to a further servitisation of the audit process.

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