Quality management system auditing: a critical exploration of practice

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ABSTRACT

The introduction of standardized quality systems and their development into quality management systems offers the opportunity to evaluate the organizational quality of business entities, regardless of their industry. For professional purchasers it has become common practice to demand evidence of the successful application of a quality management system-a necessary step in the process of pre-qualifying potential suppliers. It has become common practice to have the introduction and operation of a quality management system as a minimum requirement for contract as part of a value chain of potential clients or contracting authorities as a future or continuous supplier or service provider. Moreover, this has to be approved.

To do so, purchasers can perform supplier audits or ask for evidence provided by certificates. Typically, certificates stating conformity to the requirements of a quality management system are issued by professional audit service companies, so called certification bodies. This study helps to remedy the dearth of studies concerning the effectiveness of audits conducted by certification bodies. This qualitative study uses a limited number of case studies to analyse and assess the approaches and techniques used by auditors for certification or re-certification audits. Additionally, this study attempts to understand whether auditors involved have taken into account the paradigm change of the early 2000s. To this end, auditors involved in the case studies were interviewed. The interviews were dedicated to understanding the cognitive processes of data analysis and the resulting judgements which led to the issuance of certificates stating conformance to the relevant standards. The study was completed on quality management system audits founded on the ISO 9001:2008. This standard establishes the foundation for various further industry-dedicated standards, for example the IRIS or the ISO/TS 16949.

Cases studies were performed out in small sized companies and recorded through audio tape recordings, as well by notes concerning auditors' observed actions. These were transcribed and coded. Analysis of the data indicates that auditors have a detailed idea of what is to be found, regardless the type of business an auditee conducts and the aims of a company. The structure, policy, and individual processes of the audited company did not seem to be of interest. Additionally, audits were performed on the results of audited

processes more so than on the progress of the process action and their input/output relation.

The interviews shed light on auditors' understandings of the underlying concepts of the ISO 9001:2008. The results show that the auditors examined still have problems with applying these concepts for their audit practices. Furthermore, the study shows the relationship between power and independence of auditors and their impact on effectiveness.

Consequently, the study shows that a certificate issued by a professional audit service does not guarantee conformance to the ISO 9001:2008.

I declare that this thesis was carried out in accordance with the regulations of the University of Gloucestershire. It is original beside where indicated by reference in the text.

This thesis has not been presented to any other academic institution, neither in part nor fully. The views expressed in the thesis are exclusively those of the author and in no way views of the University of Gloucestershire.

Signed Date

CONTENT

KEY TERMS

Auditee

The counterpart of the auditor is an auditee. When this term is used here it can be a single person or the auditee team. Auditee is seen here as a party responding to the auditor, regardless whether it is a blue collar worker or even a member of the top management. Sometimes I have used the term audit team instead.

Kanban

Approach used for inventory management and production control, which is founded on the pull-principle.

Just-in- time approach

Inventory strategy to be employed to increase efficiency and to decrease transaction costs

ISO 9000 family

Before the year 2000, it consisted of the ISO 9000, 9001, 9002 as well as of the 9003 and the ISO 9004. After the year 2000 this family still consists of the ISO 9000, 9001 and 9004. The term family was introduced by the ISO Org and highlights that these norms/standards inseparable connected

IRIS

International Railway Industry Standard: A standard which defines general requirements introduced by the ISO 9001:2008 in detail to fit to the railway industry

ISO/TS 16949

Automotive standard: TS stands for technical specification. This standard is also founded on the ISO 9001:2008 but defines general requirements introduced by the ISO 9001:2008 in detail to fit to the requirements of the automotive industry

Man days

A term used in the certification industry: a man day stands for 8 working hours

Substantive Test

Activities performed by the (financial) auditor to detect material misstatement of fraud

Material misstatement

Financial statement that influences the value of a company

ABBREVIATIONS

QA Quality Audit

QMS Quality Management System

QS Quality System

DIN Deutsches Institut für Normierung

BS British Standard

EN European Norm

ISO International Organisation for Standardization

SOP Standard operating procedure

WWII World War II

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There are too many people to thank individually for their support but I am deeply in debt to them all. Some deserve special mention and I would like to begin by thanking my supervisors, Francisca Veale and Michael Fass for their faithful guidance and motivational contribution. I am also indebted to the staff at Gloucestershire University, in particular to Philippa Ward. I would also like to thank all study participants who let me observe their professional activities. Many thanks to the auditors who provided their time, shared their individual background as well as their professional thoughts during the interviews.

1. The point of the thesis

1.1. **Impetus for this study**

In 2003 I started my own business as a business consultant & trainer as well as a certification auditor for quality management system certification. For the latter, I had to pass training courses to achieve the formal qualifications required. This consisted of two different courses, which were finalized by successfully passing multiple choice tests. The training and the tests were created and conducted by audit professionals. The auditors who conducted the trainings relied on the knowledge and experience gained in the 1990s and before. I still had to participate in a certain amount of audits as a trainee auditor after I had passed the tests. At the end of this phase, the auditor with whom I went through the last audit process signed a monitoring sheet. This sheet stated the level of my competence shown during the audit and established the final cornerstone for being appointed as an auditor by a certification body. Also, this auditor gained his competence for doing this in the period mentioned above.

This experience meant that I was fully equipped with the competencies needed to conduct audits, trainings, as well as providing consultation in the field of quality management systems. I mainly started to consult by providing documents for, as well as producing records with, representatives of companies in preparation for their audits. This method was stipulated by my knowledge about what the auditor would ask for. In doing so, the companies consulted always passed the audits successfully.

In the late 2000s, I gained some additional qualifications. They were concerned with organizational behaviour, controlling, and rating businesses and organisations. The first one provided me with a deep understanding that no business is like another, even when they are in the same industry. Therefore, I began to understand that standardizing audit findings may not be possible nor valid. The second course introduced me to the principle of steering a business entity by applying controlling cycles, which are dedicated to continuous and repeated planning, monitoring, assessing, comparing, correcting, and improving plans, processes, and practices. This helped me to understand first hand Deming's PDCA cycle (Kaminske & Brauer, 1993), which is stipulated by modern quality management system standards. Both of the insights mentioned made me question what I

had done so far. I started re-reading the ISO 9000 family with the newly acquired knowledge and recognized that the standard introduced principles to be applied and to be approved by providing various kinds of evidence (to be provided by analysing paperwork, interviewing the auditee, and observing action). As I have now understood, the ISO 9000 family requires the applicant to follow the principles at a minor and a major level. The minor level appears as processes which interact, depend on, and influence the other processes. The latter is orchestrated or organized as to establish a system. This, then, has to be managed and establishes the major level of the application of Deming's circle. According to my newly acquired understanding of the ISO 9000 family and the incorporated Deming circle, the outcome of any process of a quality management system is just a part of what is to be expected as evidence in an audit. This is not what I had done so far in terms of completeness and correctness of an audit of a quality management system. Instead, I had collected and accepted records and documents as evidence exclusively.

During my career as an auditor, I audited in Africa, Russia, and the Middle East, as well as in Asia and Europe. In these places, I saw auditors using the same audit practice described above. However, I am unsure whether my uncertainty about the correctness and completeness of audits was reasonable at the time.

Especially, when discussing these issues with colleagues, I regularly learn that there are different opinions about what is correct and complete with regard to auditing. Thus, this inspired me to conduct the current study to determine whether auditors effectively conducted audits.

Applying a quality management system according to the ISO 9000 family is voluntary insofar as it is not to be applied for to be eligible to operate any business. On the other hand, it has become common practice to set the introduction of a quality management system as a minimum requirement to be contracted as a part of a value chain of potential clients or contracting authorities as a future or continuous supplier/service provider. Additionally, it also became common that the claim that such a quality management system is in place has to be approved. For this, the potential suppliers have to provide a certificate stating the conformity of the quality management system. This requires the

applicant to order third-party audits, which are provided by certification bodies. For this, the certificate establishes a confidence-building measure and is accepted as a means to qualify the supplier/service provider as quality capable.

Quality management systems and their certification received are also of significance in other areas, for example in the business of rating businesses: Rating is concerned with assessing risks connected with a certain business entity in terms of their quantitative (or financial) and their qualitative (or organizational) performance and future capability to perform. The latter is supported by the application of a quality management system. Besides other objectives, the rating process outcome can be used to negotiate with banks when applying for bank loans.

Amongst other issues, one question to be answered is whether the business entity has introduced a quality management system; and another question asks whether the system is certified by a third-party who is competent to run those services. Answering these questions positively improves the result of the rating process as such, and therefore informs about a risk-reducing factor. This can influence the conditions of bank loans that the applicant applies for. Therefore, the certification process and its outcome needs to be valid, and with that trustworthy.

With this example, I want to show the importance of the effectiveness of a certification audit. This, and my uncertainty about the effectiveness of the current audit practice as I have experienced, establishes the rationale for my study.

1.2. **Objectives of the thesis**

From my own experience in the field of quality management system auditing, the main objective of the current study is to determine whether quality management system auditors effectively conduct audits and whether parties asking for a conformance-stating certificate can generally trust the outcome of certification audits. I do not consider evidence provided by the auditee and accepted by auditors in the course of my study of audit action. I analyse and discuss the way in which auditors approach evidence, as well as how auditors make evaluations on micro (process) and macro (system) levels.

2. Study background

2.1. **Audit history**

"The science of auditing can be traced back over many centuries" (DePaula, 1922, p. 1). The first signs of internal auditing can be found in the records of the early Mesopotamian civilization, as Stone (1969) and Sawyer (1993) noted. "The Greeks, and the Romans after them, had an abiding regard for control over finances". And "the suspicious Greeks preferred slaves to keep the records because they reasoned that a slave under torture could be considered more reliable than a freeman under oath" (Sawyer, 1993, p. 43). Porter, Hatherly and Simon (2008) note that in this early period, citizens assigned to garner and disburse public capital were due to report the processing of these funds before an assigned official, the auditor. Already, this gives the idea of what auditing actually was at this time: Someone was interested in the *status quo* of a certain issue (the senate) - here the finances; whereas, on the other hand there was someone who knew the *status quo* (the senator or auditee). And the latter, the assigned official (the auditor), was due to report the *status quo* to those who had commissioned him.

According to Brown (1962), from ancient times prior to 1500, the objective of auditing was to detect fraud. "The 'hearing' of accounts during the time of the Roman Empire was primarily concerned with preventing fraudulent acts by the quaestors" (Brown, 1962, p. 697). Quaestor was the lowest level of the career scheme of the senate. Spicer and Pegler (1921) note that the Renaissance in Italy led to the evolution of a system of accounting, and at this time the duties of auditors increased.

Audit objectives changed over time: In 1850, the detection of clerical errors was added and in this period, the audit of business accounts became common, as Spicer and Pegler (1921) add. With the beginning of the 20th century, another function started to be of importance: The determination of fairness in the sense of an even-handedness in the reported financial position, accompanied with substantial testing of financial reports. With the upcoming industrial development, after 1840 the auditing profession became steadily established (Cosserat & Gill, 1996). Audit appeared as a science: This was the first time that auditing was defined as "the work connected with the confirmation of correct

and objective balance based on checking documents and stock count" (Holiash, 2011, p. 340). With this, as Holiash (2011) adds, an empirical level to auditing was introduced.

In 1912, Montgomery introduced the differentiation between a general audit and the audit of financial records. Montgomery developed principles to analyse the balance, introduced testing as a means of audit, as well as generic audit principles and concepts. With this, he gave the very first input to audit theories (De Fliese, Jaenicke, O'Reilly, & Hirsch, 1990).

During the 1920s and for about forty years thereafter, the audit evolution, which had so far been carried out in the UK, shifted to the US due to the vast economic growth of the States. With the advent of public companies, the separation of management and ownership as well as the increased flow of investments, the need became evident for true and fair information provided by financial statements as well as the financial position and performance of relevant companies (Porter, Hatherly, & Simon, 2008).

Beginning in 1920, the development and use "of material concept and sampling technique was due to the voluminous transactions involved in the conduct of business by large companies in widespread locations" (Teck-Heang & Ali, 2008, p. 4). Porter, Hatherly, and Simon (2008) list the main features of the auditing approach at this time as being reliant on internal controls (to detect and prevent fraud), the gathering of audit evidence through the use of internal and external sources-with an emphasis on true and fair statements-and the gathering of evidence through observation.

The internal auditor was considered a subordinate underling or servant of the public accountant, "the hewer of wood and a bearer of water, walking three steps behind the accountant" (Sawyer, 1993, p. 43). However, by 1940, a more distinct differentiation between internal and external auditing arose. Whereas external (or public) auditing at this time was merely concerned with the attestation of financial statements, the internal auditing profession evolved into a consultation function within the enterprise. The modern internal auditor is therefore working more on improving the enterprise financial system, rather than on detecting errors as Sawyer (1993) adds. This established a kind of value-adding auditing, which is not the point of this paper.

Until 1961, audit science was rather experiential. In 1961 then, a new level of audit sciences occurred. The “tentative postulates of auditing” (Mautz & Sharaf, 1961, p. 49) appeared, which are in short:

- verifiability of statements;
- lack of the necessity of conflict between auditor and auditee;
- information submitted for verification is free from bias;
- an internal satisfactory system eliminates bias;
- general accepted principles of accounting results in fair presentation of *status quo*;
- what was true in the past will be held as true in the future;
- auditors exclusively act in the capacity of an auditor;
- and finally, the auditor acts professionally according to the status of an auditor.

According to Marquis (1969), the first time that the term management audit occurred was in 1931. It arose when the originator of the management audit, Mandell (Marquis, 1969), noticed that there was a difference between the similarly good-looking stock investment and the actual performance of a number of large companies. Marquis (1969) noted that this gap was founded on the lack of quality of the companies’ management. As a consequence, a system for analysing company management was developed in 1938. It still took time, due to WWII, until a framework for management auditing was introduced.

It was the first time that an appraisal was used not just to examine figures, but was about examining the structure and authority flow and their operations step by step (Martindell, 1950). This management appraisal was developed to a rating system in which the 10 factors, if not all, at least some of them, were somehow subjective. There was no widely accepted standard for evaluation set so far.

Burton (1968) suggested that the future auditor is to be asked to attest to the effectiveness of the performance of a board. He suggests several fields of action to be

evaluated. These are: organizational control, planning and information systems, asset management, marketing, as well as production. And finally, Burton (1968) adds that auditing procedures associated with this have to be developed. But, even Burton (1968) does not propose a detailed framework containing clear criteria for evaluation.

But, as Leung et al. (2004) summed up, the role of auditors remained as it had been in the previous period: To affirm the truthfulness (of financial statements) as well as to ensure the fair presentation of those statements.

Summarizing the above, it can be said that auditing developed from simple reporting to detect fraud and error, to determine fairness in reports, and to confirm the correctness and objectivity of what was audited. The new term management audit was introduced to evaluate the quality of management processes, but no general accepted criteria (or framework) for evaluation was introduced. Also lacking was a revised concept for auditing procedures for auditing management systems.

The next section informs about the appearance of the ISO 9000 framework for management audits.

2.2. **Auditing and the realm of quality**

In 1987, the ISO 9000 family appeared as the first internationally-recognized framework for quality systems. With this, quality auditing was introduced, based on materiality, truthfulness, and compliance to the standard mentioned. The ISO 9000:1994 family was the result of developments beginning in the early 20th century with the appearance of the Scientific Approach (Bhagwati). The quality auditing profession learned, and somehow seemingly acquired, methods from actual financial auditing practices. The audit of management performance as well as of the risk associated with the auditee's activities was not the concern of quality auditing at this time. Rather, among the centre of concern was compliance to the 20 elements (or required documented procedures) of the ISO 9000:1994 series, to state-of-the art product quality, as well as to the legal requirements. The effectiveness and efficiency of the quality system in place was not what the quality auditors focused on. Compliance to the requirements was what the auditor was looking for. This changed with quality management system ISO 9001:2000 and its successor in

2008 introducing principles for action on micro and macro levels of organizational actions and generating requirements for evaluation. From this effort, the quality system composed of procedures was changed to a system of actions to be managed.

The term quality in relationship to the quality auditing profession is defined as the "degree to which a set of inherent characteristics fulfils requirements" (DIN Deutsches Institut für Normung e.V., 2005, p.18), a quality management system is a "management system to direct and control an organization with regard to quality" (DIN Deutsches Institut für Normung e.V., 2005, p.20), and quality management activities are "coordinated activities to direct and control an organization with regard to quality" (DIN Deutsches Institut für Normung e.V., 2005, p.21). And "management consists of the interlocking functions of creating corporate policy and organizing, planning, controlling, and directing an organization's resources in order to achieve the objectives of that policy" (Web Finance, 2014).

These definitions show one major difference between the requirements for financial and quality management system auditing. As in the financial auditing business, the objects to be audited are defined by national and/or international accounting standards and compliance has to be looked at. The quality management system auditing profession needs not just an audit system, but also capable approaches and techniques, which have to be applied effectively to look at the conformance to the quality management framework in every diverse organized business entity.

Thus, an understanding of the history and development of quality management and the ISO 9000 family is required to understand the term conformance with respect to quality management auditing: Around 1900, Ford (Saager, 1924) and Taylor (Copley, 1923) introduced quality control through separating out the non-conforming products. This reflects the industrial evolution at this time. The role of the lone craftsman had diminished, and the importance of mass production occurred, together with repetition in work activities. Ford and Taylor focused on the improvement of industrial efficiency.

In 1924, Shewhart (Deming, 1967) started to use statistical approaches for the steerage of production. In doing so, he set-up the foundation for the idea of the PDCA (plan-do-

check-act) cycle, pioneered by Taguchi and Deming (see Figure 1) in the 1950s in Japan (Kaminske & Brauer, 1993) and continuing far into the 1970s. The industrial evolution started to be influenced by the upcoming competition within industries and the increasing awareness of customers of product quality. Producers started to recognize that product quality and cost effectiveness are differentiators between competitors and thus a means to improve success (Kotler & Bliemel, 2001; Meffert, 2000).

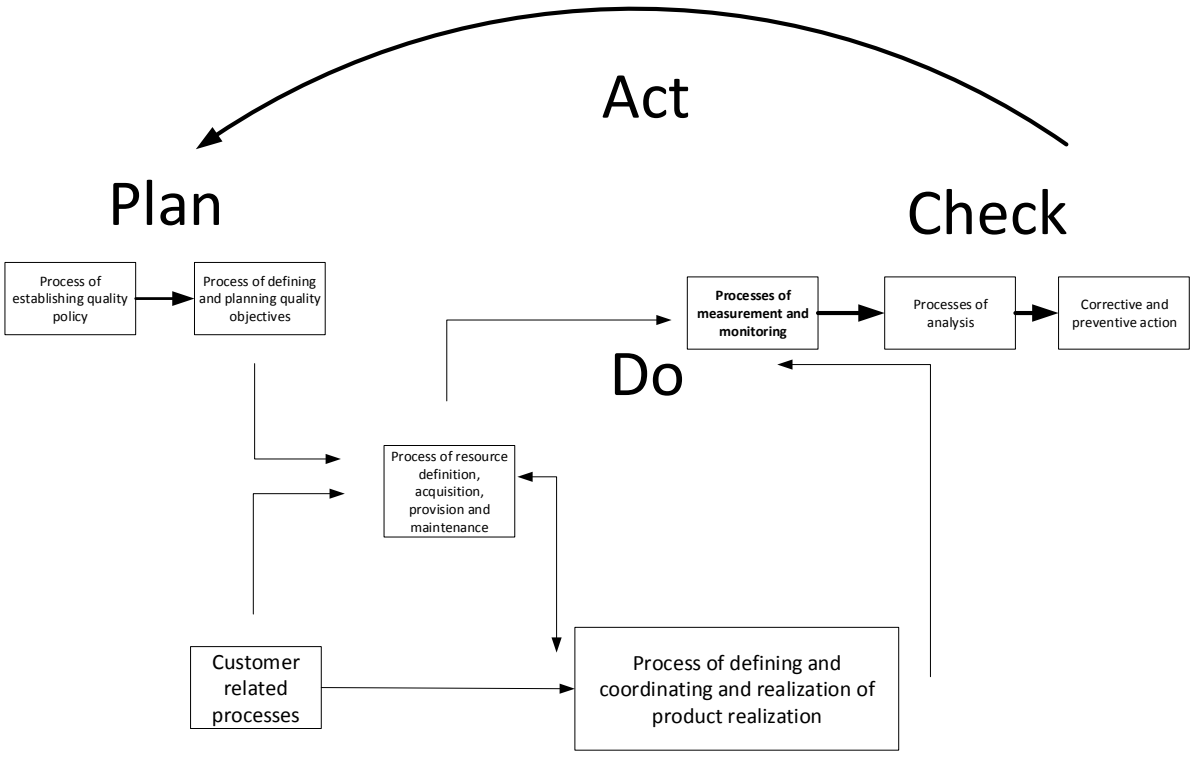


Figure 1: The PDCA Cycle pioneered by Taguchi and Deming

Globalization and outsourcing led to the need for a tool to standardise the minimum requirements for quality and its management. As mentioned above, in 1987 the first version of the ISO 9000 family had been introduced (Kaminske & Brauer, 1993). It had the same construction as the UK standard BS 5750 and consisted later of three revised variations for quality systems (EN ISO 9001:1994; EN ISO 9002:1994 and EN ISO 9003:1994), whose application was based on the scope of the activities of the company. The 1987 issue and its successors in the year 1994 was about compliance to procedural

requirements to ensure that there are procedures in place ensuring that no non-conforming product arrives at the customers' sites. And, it was neither about how effective products were produced nor what input was needed to produce the product. Additionally, the 1987 issue and its reworked release of 1994 were not concerned about any interdependencies of the procedures to be released according to the standard. Thus, the understanding of the term system was that it is a pre-defined set of documents to be followed ensuring that no non-conforming product will be supplied to the customer. Auditing in companies where this standard(s) was applied consisted of checking whether the required documents comply with the rules and action and if the auditees' business entity follows these rules.

According to Schandl (1978), auditing is a human evaluation process. Therefore, the standard ISO 9001:1987 as the reference for evaluation stipulated the auditor for chasing paper and whether any outcome of any process is in line with the descriptions (procedures). The 1987 issue of the standard was therefore not concerned about managing processes. This changed in the year 2000.

The year 2000 brought a major change regarding quality systems to the ISO 9000 family. The ISO 9001:2000 had been introduced and became valid in the transition period between 2001 and 2003. Since then it has been called a quality management system standard. This issue replaced not only the former ISO 9000:1994 standard family. It newly included the term management into its name, and it also included the customer requirements and their satisfaction through process management using performance indicators for measuring the effectiveness of processes as well as leading to the involvement of top management.

This replacement established a paradigm change from assuring quality to managing quality. Additionally, a system of continuous improvement, as pioneered by Shewhart (Deming, 1967) and Deming (Cohen) was introduced. The bureaucratic requirements of documentation became less demanding and depended on the size of the company, the quality and suitability of the resources, and the kind of processes and their interdependency. The updated issue as of 2008 established a minor change and has clarified some terms in use.

The impact on quality management practice is that the ISO 9000 family changed from a procedure-oriented quality assurance idea to an input/transformation/output approach, the processes under consideration to be installed and maintained using a process approach (DIN Deutsches Institut für Normung e.V., 2008), and even their interrelationship has to be managed. As every business entity is constructed differently, and therefore, managed differently, after the year 2000, the ISO 9000 family introduced principles to be applied rather than strict criteria to be met. The ISO 9001 defines various processes which have to conform to specific principles. It is not defined as to how they have to look but instead what they are obliged to effect. Some are expected to be there generally and others in case a certain incident triggers its initiation. Thus, the quality management system's construction is context-related and not standardized.

It appears that a process approach for managing entities has not led to newly-defined audit methods in the quality management audit business, nor have the guidelines for audits of quality assurance systems ISO 10011:1992 and its successor DIN EN ISO 19011:2002 and DIN EN ISO 19011:2011 addressed the methodological change from quality assurance to quality management. Even the standard DIN EN ISO 17021:2011 does not determine the consequences of the process approach for the management system in the process of auditing a quality management system. While quality assurance auditing is intended to ensure that results of activities (e.g. products) fulfil predefined requirements, quality management auditing is intended to audit the management of audits (the activities) against predefined principles, and examine whether the activities have the capability to function in a stable and repeated manner.

The DIN EN ISO 9001:2000 and its revised successor DIN EN ISO 9001:2008 define its scope of application as a specification "for a quality management system where an organization:

a) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and

b) aims to enhance customer satisfaction through the effective application of the system, including processes for continuous improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements" (DIN Deutsches Institut für Normung e.V., 2008, p. 16).

The same document notes that there is no intention to unify the structure of quality management systems, or to document them in a unified manner.

With this, the standard also defines the principles to be audited, and thus what the certificate issued after successfully passing a certification audit promises.

The ISO 9000 family consists of three inseparably combined norms: the ISO 9000, the ISO 9001, and the ISO 9004. The ISO 9000 defines the fundamentals to be applied, as well as the vocabulary used in the family. This part of this family defines *quality* as "the degree to which as set of inherent characteristics fulfils requirements" (DIN EN ISO 9000:2005, p.18). This definition applies to the tangible, as in products, as well as the intangible, such as processes or systems.

Capability is defined as the "ability of an organization, system or process to realize a product that will fulfil the requirements for that product" (DIN EN ISO 9000:2005, p. 19). The standard continues to define *system* as a "set of interrelated or interacting elements" and a *management system* as a "system to establish policy and objectives and to achieve those objectives" (DIN EN ISO:2005, p.20). These definitions help to compose an understanding of the term *quality management system*, namely a "management system to direct and control an organization with regard to quality" (DIN EN ISO 9000:2005, p.20). In a different section, the standard defines *process* as a "set of interrelated or interacting activities which transforms inputs into outputs" (DIN EN ISO 9000:2005, p.23).

In this norm, a product is defined as an outcome of a process and can be intangible, as well as tangible. This applies to services, hardware and software, and the like.

The ISO 9000 further defines terms to be used and understood to fulfil requirements for processing a management system according to ISO 9001. These norms or standards define the principles to be applied in the level of processes and the system. The latter can be seen in figure 1. Finally, the ISO 9004 is not a standard but a document which provides guidance for implementing a quality management system. The ISO 9004 is primarily suggestive. Therefore, the vocabulary and principles of the ISO 9000 and ISO 9001 constitute the vocabulary used in the realm of quality management systems and my thesis.

The following review was undertaken to find and analyse literature about the effectiveness of audits in general terms and the validity of quality system certification audit according to ISO 9001:2008.

2.3. **Sales and relationships**

Certification bodies offer their service in a competitive market using sales divisions and necessary staff. Applicants for certification services inquire about this service directly or the sales division uses their network consisting of consulting companies, auditors, and other market participants. Consultants and auditors often have close relationships due to previous successfully passed certification projects. Once the client has signed the contract, the certification body appoints auditors for the contracted certification engagement. Sales staff, auditors, and the independent consultants nurture close relationships to make a certification project successful.

3. Literature review

When I started the review of the literature, I hoped to find ample literature concerned with the effectiveness of certification audits in the scope of quality management systems, especially with the ISO 9001 audit.

Researching the EBSCO database Business Source Complete, I first used narrow terms directly related to quality management system auditing. The results were as follows:

Terms	Findings	Findings relevant to this study
Quality management audit + third-party	2	1
Management system audit + third-party	4	1
Quality management + third-party audit	11	3
Quality audit + third-party	13	2
Certification audit + quality + ISO	19	0
Quality audit effectiveness	7	2

Table 1: Literature review: findings in data bases

Attempts to find more at Google Scholar gave a similar result. In the early years of the new century, Beckmerhagen, Berg, Karapetrovic, and Willborn (2004) had already noted that literature related to quality management audit effectiveness is rare. And I quickly recognized that this is still the case. There was no study found dealing with the effectiveness of quality management system certification audits that evaluated the effectiveness of quality management systems regarding the DIN EN ISO 9001:2008.

On the other hand, I found various publications concerned with financial auditing and its roots as well as with management auditing, and quality management auditing from various perspectives. The latter showed that quality management (system) auditing,

whether internal or external (so-called third-party or certification/ surveillance audit) is fairly new and its theoretical perspective is rooted in financial auditing.

Therefore, I went through the literature on auditing first to make sense of the terms for auditing, the approaches, and the techniques in use. I even looked into various audit perspectives, such as internal versus external auditing. Terms and their synonyms used in the context of financial audits became relevant to the review of literature related to quality management auditing.

In doing so I changed my review strategy according to quality management system audit effectiveness. I started to search for relevant literature by looking in indexes of quality management system and general audit literature. In the very first loop of review activities, I simply looked for auditing as such, regardless of whether it was concerned with financial, managerial, quality system, or quality management system auditing. Doing this is founded on my perception that auditing is a tool: An evaluation process regardless of what is to be audited.

In the following review of the literature, I will firstly define what an audit is. Secondly, this will be followed by a brief excursion into the theoretical foundation of audits. Then I will define what effectiveness means, and what the objective of a quality management certification audit is. Lastly, I shall be discussing the literature with regard to audit effectiveness and the factors impacting on the latter, including existing opinions about the methods and approaches that are to be used when auditing.

3.1. **Definition of the term audit**

The term audit is well known by those who are in the accounting business or are in a field related to business. The examiners are called certified accountant, chartered accountant, as well as public accountant, or even auditor. In the English-speaking world, people think mostly of examining accounting activities when hearing the term auditor. This connotation is only one part of the process, though it does not really cover the terms auditing and auditor fully.

“An audit may then be said to be such an examination of the books, accounts and vouchers of a business, as shall enable the auditor to satisfy himself whether or not the

balance sheet is properly drawn up, so as to exhibit a true and correct view of the state of the affairs of the business, according to the best of his information and the explanations given to him and as shown in the books; and if not, in what respects it is untrue or incorrect" (Spicer & Pegler, 1921, p. 4). And an audit ensures that an auditor "may be able to satisfy himself and honestly certify that, in his opinion, such Balance Sheet is properly drawn up so that to exhibit a true and correct view of the state of the affairs of the particular concern, according to the information and explanations given to him" (De Paula, 1922, p. 2). Further definitions can be found:

Mautz & Sharaf (1961, p. 1)	"Auditing is a series of practices and procedures, methods and techniques, a way of doing with little need for the explanations, descriptions, reconciliations, and arguments so frequently lumped together as 'theory'."
Schandl (1978)	Auditing is a human evaluation process.
Dunn (1991)	Auditing is an applicatory discipline.
"Gabler Wirtschaftslexikon," 1997	Anglo-American business term for revision or examination, to be done by an independent person.
Mish (2005, p. 81)	An audit is "a methodical examination and review" and "an act of hearing" and "a formal examination of an organization's or individual's accounts or financial situation" or finally "a formal examination and review".
Hayes et al. (2005, p. 11)	"An audit is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between these assertions and established criteria, and communicating the results to interested users."
Hayes et al. (2005) International Financial Publishing Ltd (2006), Soltani (2007), Porter, Hatherly, & Simon (2008)	An audit is a form of assurance engagement that enables the auditor to form an opinion. This opinion is the verbalized judgement which expresses the satisfaction of the auditor about the information that has been reviewed.
Arter, Ciafrani, & West (2012, p. 5)	According to ISO EN 9000:2005 and ISO EN 17021:2011 an audit is a "systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which criteria are fulfilled."

Table 2: Audit definitions

However, according to these various definitions, auditing is the examination of objects to form an opinion as to whether the objects examined are true or false (or correct or incorrect) by comparing them to criteria (evaluation). And this has to be done in a systematic (pre-planned) and independent manner, and has ultimately to be documented and reported by applying methods, procedures, and techniques. These definitions do not deliver information as to what way various audit activities have to be processed, as well as concerning the establishment of an effective audit, especially if the criteria for evaluation are just framed as a cornerstone and not set quantitatively, as is in the case for quality management system auditing. In quality management system standard family versions issued after the year 2000, the criteria are mainly principles. Additionally, various criteria are to be fulfilled when there is a releasing condition: the auditor needs to start by looking for existing conditions and then decides whether the respective condition requires subsequent actions according to the ISO 9001, and whether this action is performed.

The various definitions suggest that auditing is an action, intended to collect information to evaluate against pre-set criteria. Furthermore, it is an applicatory and methodological activity. Some of the writers tend to name it an (formal) examination; others say it is a process of collecting evidence to achieve a certain objective. While Spicer and Pegler (1921) define the audit objective as to come to a conclusion whether the content of a certain document is true or false, others call it a Hearing and a tool for obtaining evidence objectively to determine to what extent set criteria have been fulfilled. Others (Karapetrovic & Willborn, 2000a) note that an audit is also a means to evaluate evidence objectively against audit criteria. Even these definitions seem to be inconsistent. They lack a definition of the terms objective and criteria, and what consequently determines the audit action and the way the audit has to be planned and conducted. Thus, it will be of essence to elaborate on the concepts and principles of auditing in the literature.

3.2. **Audit theory**

As audit theory developed rather empirically until the early decades of the 19th century, audit theory appeared as a science after the 1930s. Mautz and Sharaf (1961) set up five primary concepts for auditing:

- Evidence
- Due audit care
- Fair presentation
- Independence
- Ethical conduct

Mautz and Sharafs' (1961) primary concepts are the foundation of definitions, which are addressed differently by various authors and standard authorities, e.g.:

Gray & Manson (2005)	ISO 17021:2011	ISO 19011:2011	Gomez (2012)
		Evidence-based approach	Objectivity
Credibility and Performance	Responsibility	Due professional care	Integrity
Communication	Openness	Fair presentation	
	Impartiality	Independence	Independence
	Confidentiality	Integrity + confidentiality	Confidentiality
	Competence		Skills+ competence
	Responsiveness to complaints		
Process			

Table 3: Audit concepts

Mautz and Sharaf (1961) discuss their primary concepts in detail. After citing them, Gray and Manson (2005) use the terms listed in the chart above as grouping. Within these groupings they list 14 concepts in detail. Gray and Manson (2005) add that Mautz and Sharaf (1961) formulated their concepts decades ago and "that society is likely to have changed a great deal in that period of time and that attitudes of both management and auditors are likely to have changed as well (Gray & Manson, 2005, p. 34). Gomez (2012) refers to Spicer and Pegler, DePaula, and others when defining the term audit. With that, Gomez (2012) refers back to the time before Mautz and Sharaf. He calls the concepts listed above as ethical principles to be followed by the auditors. On the contrary, the standards (norms) shown in table 3 are related to management system auditing. The related concepts listed in the chart are simply named, but the standards do not explain

what the terms used for defining the individual concepts or principles in detail mean. Since the terms used are mostly synonymic, it can be argued that the management system auditing profession and their proceeding rests on the theoretical foundation of financial auditing.

Therefore, it is of interest to go back to the most current and comprehensive definition of audit principles found: Schandl (1978) outsets four groups of audit principles and defines them as follows:

➔ **Principle of exclusiveness**

This principle requires defining a purpose, and thus an objective for each and every audit. And with that, it defines the judgement to be made, the norms to be applied, as well as the sort of evidence to be collected and evaluated against.

➔ **Principles of norms**

These principles introduce various requirements: The norm applied has to be defined, objective, as well as to be understood by the judge (auditor) and serving the audit purpose.

➔ **Principles of judgement**

With these principles, Schandl (1978) introduces the requirements for competence (knowledge and awareness) for the auditor, the need for independency (in general terms) of the auditor, the need for establishing a relationship between evidence used for evaluation and the normative requirements applied (which requires the auditor to exclude personal opinions and commonalities). Additionally, this group of principles requires the auditor to judge completely and to communicate the result of the audit trail in a way that the auditee (and further interested parties) can understand the judgement fully.

➔ **Principles of evidence**

This grouping contains requirements around evidence: They need to be available and have to be relevant and of quality (value of surrogates and their origin used for evaluation). Additionally, the auditor requires operational independence as well as shall take the potential risk of judging wrongly an account.

As noted, the standard DIN EN ISO 17021:2011 fully addresses the five primary concepts according to Mautz and Sharaf (1961) as noted above, and shows that quality management system auditing is largely founded on financial auditing. It appears that the standard lacks a full explanation of these principles and leaves it to the reader to make sense of and to interpret the terms, and how to apply them in practice. Additionally, the principles do not provide information on methods and approaches to be used to approach evidence, as well as what an audit, and the evaluation process, entails. On the other hand, the principles indicate that the norms applied for evaluation determine the course of the audit, the methods/approaches to be used, and that the auditor's competence is required.

Comparing the groups of principles offered by Gray and Manson (2005) in detail, only the credibility group is directly addressed in this standard. It is the same with Schandl's (1978) principles; the principles of competence and independence are the only principles fully recognized to be the foundation for action according to the DIN EN ISO 17021:2011, and others are partially addressed within the text.

Nevertheless, audit theory is deeply rooted in the development of financial accounting and the industrial evolution, but still a fairly young academic branch (Mautz & Sharaf, 1961; Schandl, 1978). The auditing of quality management systems differs from its financial sibling insofar as the evaluation criteria are principle-like, simply framed by generic requirements of conformance, and thus different from financial auditing, where compliance or non-compliance is to be attested. In the context of quality management system auditing, the ISO 9000:2005 defines conformity as the fulfilment of requirements. Requirements are defined as a need or expectation which is stated, custom, or common practice for the respective auditee, or even obligatory. Thus, the auditing of an individual quality management system requires the auditor to understand the individual system to determine the individual requirements of the system and whether the system under consideration fulfils the principle-like criteria of the quality management system standard. This then defines the course of the audit and the approaches and techniques used.

The various principles and/or concepts defined and delivered by the authors mentioned above explain what universal rules the auditor has to comply with under the DIN EN ISO 17021:2011.

The process for the group of principles according to Gray and Manson (2005), especially the concepts of evidence, audit judgement, and materiality, are neither clearly defined within the DIN EN ISO 17021:2011 nor in the standard framing of the requirements of conformity. This raises the question of how effective certification audits are, and what the term effectiveness means in relation to auditing, especially quality management system auditing. On the other hand, the principles to be applied do not define how to process an audit itself, especially when the individual evaluation will be done by applying principle-like criteria, instead of compliance criteria.

However, the concepts defined show that the audit itself, and with that the reliability of an audit statement depends on the objective set, the norms applied for evaluation, communication processes during the audit process, as well as on the competence of the auditor and the evidence used for evaluation.

Theory does simply deliver the academic and somewhat generic technical features of audits but omits to explain what establishes a good audit, especially when the auditor does not just audit compliance, which is rather *status quo* oriented. Consequently, I will look at what writers think establishes effectiveness in regard to auditing in the next section.

It is noteworthy that the literature cited Mautz and Sharaf (1961) just one time (Porter et al., 2008). They were found in a textbook dealing with financial auditing. Texts citing Schandl (1978) I found by chance while searching for audit history. The texts seen dealing with quality and quality management system auditing never cite these authors. They simply reflect the principles/concepts mentioned in industry related standards, like the DIN EN 19011 and the DIN EN 17021.

3.3. **Auditing and audit effectiveness**

3.3.1. Effectiveness and audit objectives.

The definition of audit and quality management system audit and their wording gives information about its roots and it also notes that it has to be concordant with the principles/concepts of an audit as mentioned in the theory section of this work, but it does not supply information on what makes an audit, especially a quality management system audit a good or effective audit.

"Effectiveness means ensuring that the intended result is fully attained from the application of the resources" and "the problem of effectiveness is the establishment of acceptable objectives…" (Glendinning, 1988, p. 43). Dittenhofer (2001) discusses the function of internal financial auditing and notes that "effectiveness is the achievement of goals and objectives using the factor measures provided for determining such achievement" (Dittenhofer, 2001, p. 445). Or, as Huigang, Yajiong, and Liansheng (2007) state, effectiveness equates to the term accuracy and adds that effectiveness can be revealed by assessing various task outcomes on the basis of objectives for a given task.

Furthermore, Karapetrovic and Willborn (2000a), discussing quality audits, characterise effectiveness as "providing confidence to the audit customers that their requirements for the quality audit are met" (Karapetrovic & Willborn, 2000a, p. 691), and the ability of the audit system to meet ever-changing audit policy and objectives. This statement covers the requirement for processing the audit in conformity to the principles/concepts for audit as well as to the conformity of the system itself. Thus, to issue a valid and reliable audit statement to the audit customers, the audit itself needs to be effective.

Karapetrovic and Willborn (2000a) note that auditors need to collect and verify audit evidence independently and objectively, and to evaluate against audit criteria. They add that at this stage that an audit will be effective and efficient when the auditors are not directly responsible to the function or organization to be audited, which applies to the principle of independency. In addition, Karapetrovic and Willborn (2000a) also use the terms compliance with applicable standards and quality assurance. In this article, the writers are concerned that the implied effectiveness of auditing services rests only on the qualification and competence of auditors, and on the conformance of processing the

audit according to audit guidelines. According to them, the effectiveness of audits depends on pre-stated qualifications and the competence of the auditors and procedural correctness of audits. This article was produced exactly in the period when the quality system standard had changed to a quality management system standard, and thus the vocabulary and partially the thinking behind it remains seemingly close to the vocabulary of the outdated 1990s thinking by the introduction of the DIN EN ISO 9000:2000 family. According to them, the objective of an audit is reflected in their definitions. The evaluation "is performed by collecting and comparing audit evidence with a reference standard" (Karapetrovic & Willborn, 2001, p. 367), and it is "possible that an audit reveals that some criteria are met, and some are not" (Karapetrovic & Willborn, 2001, p. 367). In this case, an audit evaluates "the extent to which audit criteria are fulfilled" (DIN Deutsches Institut für Normung e.V., 2005, p. 31). They both claim that auditing remains largely function- and process-focused. Karapetrovic and Willborn (2001) define the objective of quality audits generically as the measurement of the "effectiveness and achieved improvement of an organization's quality system against the requirements of a selected ISO 9000 model" (Karapetrovic & Willborn, 2001, p. 366). In the case of a certification audit, it is the conformity of the management system in place to the standard establishing the conformance criteria as well as evaluating the grade of the betterment of the system and finally arriving in the provision of a written assurance (a certificate) that the system in question meets specific requirements.

Rajendran and Devadasan (2005) note that the quality audit was fairly new and hitherto unknown in organisations. Although this has changed to date, their comment that the hidden agenda (revelation of whether Deming's PDCA circle is applied effectively) of quality auditing is not realized in the majority of organisations. It results, according to Rajendran and Devadasan (2005), in not nourishing the objectives set by the standards for auditing. Thus, "organizations view quality auditing only as a checkpoint, which has to be crossed to obtain quality system certification." And they add, "many quality engineers and quality system consultants do not consider quality-auditing as a technique enabling continuous quality improvement" (Rajendran & Devadasan, 2005, p. 365).

By contrast, Carnero and Delgado (2008) note that when auditing, the objective should be the detection and diagnosis of problems, the provision of solutions to found non-conformities (deviation from set requirements), and the adaption of a maintenance function to the specification of the chosen standard. It could be argued that this can be applied generically, although the provision of solutions for betterment is not the task of the third-party auditor due to the principle of independency which might be affected by recommendations for improvement. This is true at least in the course of future audits on the same site and conducted by the same auditor. However, the effectiveness of the processing of audits influences the outcome, and thus the credibility, or trustworthiness of an audit statement.

The opinions discussed above do not entirely define an effective quality management system audit. Some suggest that it is effect when criteria are fulfilled, offering procedural, auditor dedicated, or result oriented criteria. Others note that an audit is effective when audit objectives are achieved.

What then is the objective of an ISO 9001 third-party audit? It is not the issuance of a certificate stating the conformance of the system audited or the pure (impression) satisfaction of the auditor. Neither can it be the efficiency of an audit. The objective of a quality management system audit is delivered by the scope of application of the relevant evaluation frame:

“This international standard specifies requirements for a quality management system where an organization:

a) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and

b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements (DIN Deutsches Institut für Normung e.V., 2008, p. 12).”

Consequently, the objective of a certification- or third-party audit is to find out whether the quality management system enables the organization to be able to provide product (or service) in a stable quality (as promised or agreed on) by complying with statutory and

mandatory requirements as well as to better the system continuously for reducing customer complaints.

3.3.2. Audit effectiveness.

At the beginning of the new century, Karapetrovic and Willborn (2000a) were concerned that the implied effectiveness of auditing services rests only on the qualification and competence of auditors, and on the conformance of conduct of the audit to audit guidelines. According to them, the effectiveness of audits depends on pre-stated qualifications and the competence of the auditors and procedural correctness of audits. Ramly, Ramly and Yusof (2007) refer to Karapetrovic and Willborn (2000a), who offer a fault tree diagram in which three sources for the ineffectiveness of QAs are identified. These are failures of the objective set for the QA, the processes conducted, and the resources provided to conduct the QA. In terms of DIN EN ISO 9001, auditing objectives as well as the auditing processes are standardized. The resources include the auditor, the time allocated for the audit, and the auditor's competencies. The time allocated for the audit will be always determined by the certification body before the audit starts. The required competence is roughly defined in ISO 17021:2011 appendix A).

Shortly after the introduction of the process-oriented Standard DIN EN ISO 9001:2000, Ni and Karapetrovic (2003) discussed the ineffectiveness of audits, noting the replacement of the ISO 9000 family applied before 2000 by the new standard containing the principle-like criteria to be audited were introduced. Ni and Karapetrovic (2003) argue that the DIN EN ISO 19011:2002 was simply rehashed and does not provide a new or different audit model or approach. They add that "a component-based structure had been shifted to a system-based one" (Ni & Karapetrovic, 2003, p. 363). The previous ISO 9000 family stipulated the applicant to address 20 elements. These elements or components had to be documented and utilized. Therefore, the auditing was component based. The ISO 9001:2000 and its successors are process based. These processes are interrelated and do therefore establish a system. Ni & Karapetrovic (2003) conclude that the old approach of auditing a quality system no longer works.

While the newly introduced audit standard DIN EN ISO 17021:2011 does not deliver new solutions to audit methodology and subsequent approaches, it defines the competency,

skill, and qualification needs for certification auditors anew. As an auditor was previously expected to be more of an engineer in the field of the customer (product orientation), the new auditor now needs to have competence in the field of entrepreneurship according to the DIN EN ISO 17021:2011. This is because the auditors are supposed to audit processes required to manage the processes necessary to produce products or serve a customer, rather than test the outcome of relevant processes.

Dittenhofer (2001, p. 445) discusses the function of internal financial auditing and notes that “effectiveness is the achievement of goals and objectives using the factor measures provided for determining such achievement” and “effective audit procedures should result in determination by the (internal) auditors of the character and quality of the effectiveness of the auditee’s control operations.” This refers to the quality of conduct of the individual audit process. According to this, audit effectiveness depends on the disclosure of the quality and their strict application of procedures/processes in place. Dittenhofer (2001) adds that the auditor needs to conduct the following activities in advance: the identification of the auditee’s objectives, as well as the establishment of criteria to determine the conformity to the objectives. It can be understood that Dittenhofer’s statement, applied to QMS auditing, suggests that to achieve an effective audit, the auditor needs to follow the system’s path by analysing set objectives and act by moving towards set objectives and measuring the objectives achieved. Additionally, the auditor needs to root the actions taken by the auditee to overcome obstacles in a systematic manner. Therefore, quality management system auditing requires a more adaptive and dynamic audit approach.

Beckmerhagen et al. (2004) qualify an audit as effective when it serves its intended purpose. “Mere inspection of compatibility with management system standards is obviously insufficient when such standards themselves be adapted to changes and when the business environment demands not the *status quo*, but continuous improvement” (Beckmerhagen et al., 2004, p. 15). They offer principles to measure effectiveness, but a principle registering the analysis of the effectiveness of the actual audit process is missing.

Joe and Vandervelde (2007) approach audit effectiveness differently. They state that "performing both audit and non-audit services increases audit effectiveness and audit efficiency because it promotes a more comprehensive understanding of the client (Joe & Vandervelde, 2007, p. 1). In their study, they say that the task of an audit is to transfer knowledge to the client, and this might only be managed when the non-audit and audit services are provided by the same individual. And this seems to be more than just giving recommendations for improvement; it might be the delivery of causes and measures for the recommendation given. But Joe and Vandervelde (2007) add that the auditor exhibits a less critical position for audit customers when their company also provides non-audit services (e.g., consultation). Here, Knechel and Sharma (2012) agree that the quality of audits is the effectiveness of audits and note that there are two streams of literature: One stream claims that the additional provision of non-audit services to audit services does not impose a threat to audit quality; the other says it does. By referring to Mautz and Sharaf's (1961) and Schandel's (1978) postils concerning the independence, or impartiality, non-audit services cannot be applied in third-party audits that result in judgements stating conformance and/or compliance. Such an audit is dedicated to certify the *status quo* of what was audited. In the literature, audits providing additional services, like consultation are often called value-adding audits.

To sum it up, it can be said that literature states that an audit is effective, when:

- It will be conducted in conformance to guidelines.
- A clear audit objective is set and followed, and finally achieved.
- The auditee's objective (for the objective of concern, e.g., the quality management system) are identified.
- The control operations of the auditor are of quality.
- Necessary resources for the audit are available (and applied).
- And the audit process conducted is flexible in terms of being adapted to individual and ever-changing settings of the objective under audit.

In the review of the literature it became apparent that processing value-adding activities when auditing influences the effectiveness of audits. This was discussed briefly by referring to audit theory, and according to this, the provision of non-audit services cannot be part of a certification audit.

At this stage I have not found any texts explaining how to approach audit effectiveness. As it seemed to be, the writers offered opinions about audit effectiveness but did not show in what way audit effectiveness can be achieved.

Audit effectiveness in the area of quality and quality management systems was mainly discussed by Karapetrovic and Willborn (2000a, 2000b). They are most often quoted by others. Generally, the discussion about audit effectiveness is rare.

The next section investigates literature, delivering insights on what influences the effectiveness of audits. Since literature on audit effectiveness is rare the review is expanded to the factors influencing evaluation effectiveness because various texts define auditing as evaluation.

3.3.3. Factors influencing effectiveness.

Chen and Rossi (1989) discuss factors influencing the effectiveness of evaluation (auditing). They note that evaluators need to have some social research training, and beyond that they add that evaluators have diverse disciplinary backgrounds. Thus, every evaluator needs to be knowledgeable about the target problem. Also, Zajarskas and Ruževičius (2010) relate audit effectiveness to the individual auditor's background: They note that the effectiveness and completeness of a certain audit depends on the auditor and his qualification and experience. Zajarskas and Ruževičius (2010) add that the audit outcome often lacks quantitative indicators reflecting on the performance of the quality management system audited. Even the absence of the quality analysis of the economic foundation of the management system in place is of consideration.

This appears to be the rationale for appointing auditors to specified industries based on their industrial background and their understanding of business administration (principles). Nevertheless, until now, it is not clear what is meant to be the required

knowledge and experience the auditors need to have to audit activities framed by the term management.

Furthermore, Chen and Rossi (1989) distinguish between black-box evaluation and theory-oriented evaluation. While the first is primarily concerned with the relationship between input and output, the latter emphasizes an understanding of the transformational relations between transformational processes and outcomes, as well as the contextual factor, or the interrelationship to other processes under which these processes occur. In terms of auditing a quality management system according to ISO 9001:2008, the theory-oriented evaluation is able to reveal the processes capability of producing or serving as required. The black-box evaluation produces information about the efficiency of the audited process.

Chen and Chaiken (1999) approach the effectiveness of audits differently. They hold that the Heuristic-Systematic model (HSM) posits that people utilize two modes of information processing to make judgements. According to Chaiken (1980), systematic processing involves comprehensive analyses of relevant information, whereas heuristic processing (experienced-based techniques for discovery, and thus probably not optimal, or effective) tends to rely on judgement rules or heuristics. Chen and Chaiken (1999) add that systematic processing results in more reliable judgements: According to them, heuristic processing needs less cognitive effort and work, but may result in more failures. Which mode will be applied is largely determined by the decision context. This model states that people prefer to use heuristic processing in cases where the lack of time or less of an effort are the dominant objectives. “That is, judgement effectiveness is positively related to systematic processing and judgement efficiency is positively related to heuristic processing” (Huigang, Yajiong, & Liansheng, 2007, p. 3).

Comunale, Sexton, and Gara (2003) contribute to the discussion differently: They note that the audit effectiveness is influenced by the audit inquiry process. They offer a model of client inquiry process in which the auditor’s perception as well as representation of reality is of importance. Both, the perception and representation of reality are, according to Comunale, Sexton, and Gara (2003), connected with the auditor’s technical competence, presentation skills, the auditor’s trustworthiness, as well as their objectivity.

Dunlap (2008) adds that the way the inquiry process is conducted influences the effectiveness of the evaluation, thus the audit process. He proposes appreciative inquiry. Preskill and Catsambas (2006, p. 1) define it as “a group process that inquiries into, identifies, and further develops the best of “what is” in organizations in order to create a better future”. It “seeks what is ‘right’ in an organization” as stated by Watkins and Cooperrider (2000, p. 6). According to them, appreciative inquiry includes, among others, various opportunities to influence the audit’s effectiveness:

- It encourages auditees to have their say.
- It encourages and enables auditees to be positive.
- It produces settings in which the auditees can decide on how they contribute.
- It supports the auditees in terms of discretion and is supportive.

Zeng and Tian (2007) provide another viewpoint regarding the levers influencing the effectiveness of audits: They note in their article “Barriers to effective audits of ISO 9001 standard” (Zeng & Tian, 2007, p. 250) that some certifying bodies pursue simply their commercial objectives and list some of the following results, which are superficial documentation and site evaluation, partial, lacking auditor competency, superficial assessment of the connection between the certified quality management system and the actual management system, and a lack of the adoption of “any review or remedial measures” (Zeng & Tian, 2007, p. 250) in the case of any non-conformities that are found. Hence, this leads to a high failure rate they add.

Regarding Zeng and Tian (2007) and Gyani (2008), it is important to note that their statements are based on quantitative methods or general observations. Both studies do not show what the actual process of auditing is like. The statements are primarily concentrated on the anticipated objective of conducting audits, as well as on the competence of the auditors.

Gyani (2008), especially, evaluates the effectiveness of third-party quality management audits. In this quantitative study the author fails to define what is meant by the term effectiveness and how he establishes the criteria for evaluation. It appears that Gyani

(2008) uses the term effectiveness as defined above: Gyani (2008) mentions that there is considerable dilution of the certification process caused by inadequate control of and by competition between certification bodies. “The fact that the international mechanism of conformity assessment has a vital role on domestic and international trade shows that the credibility in the certification process is an issue of paramount importance (Gyani, 2008, p. 263). This is also supported by Russell (2009) who criticizes that the audit effectiveness is limited to counting non-conformities or further simplistic measures; meaning the heuristic processing introduced above.

Recently, Chapman (2013) concludes that an evaluation is (to be) done on a basis of various reference points caused by different experiences and adds that a limited mind-set will hinder effective evaluation. Therefore, Chapman (2013) prefers a working phenomenal evaluation process, based on the personal skill of being able to improve. Also, Beck and Fibich (2013) state that technical preparation is of crucial importance for effective evaluation (or auditing). Though, they criticize “method selection is an underestimated aspect … as practitioners often lack any grounding in research methodology and fail to consider the strengths and weaknesses of different approaches” (Beck & Fibich, 2013, p. 596). Here the writers pinpoint that the competence is of paramount importance to the effectiveness of auditing.

Mironeasa and Codina (2013) name further factors influencing the audit process and thus, the audit effectiveness. According to them, these are culture, values, beliefs, and attitudes introduced to the quality management system to be audited. Therefore, a quality management system audit is a complex process which requires a good knowledge of the internal and external levers influencing the system. It therefore could be argued, that this consequently requires auditors to adopt, or at least to understand these factors thoroughly before and while conducting any audit.

Mironeasa and Codina (2013) propose a new set of audit functions to govern audit process effectiveness to connect audit principles to new audit functions. In this explorative quantitative work, the researchers introduced a model based on audit

functions and audit principles for auditor professional behaviour, which has the audit functions of deontology and auditor competences. Deontology is an ethical dimension which promotes the fixedness to rules, and auditor competences as the ability to perform. This work was done on the internal audit processes, and supports the earlier work by Schandl's (1978) principles of judgement and evidence.

And, finally, Popova (2013) contributes to the discussion by naming the lack of professional scepticism (in terms of distrust) as one of the main reasons for audit failures, or non-effectiveness. She differentiates between scepticism caused by personal traits, and scepticism born from experience with a specific audit customer. Popova (2013) adds that "auditors are supposed to maintain an independent and sceptical attitude throughout the audit, to help to perform an effective audit" (Popova, 2013, p. 142).

There appears to be various views of what influences audit effectiveness. With respect to this, one can summarize the different opinions that writers have as:

Any audit's objective shall be to find out whether the system audited works effectively or any audit's purpose is pure problem detection and to find out whether the system audited conforms/complies to the criteria set. Some think, any audit should provide solutions to problems detected during the course of action, and thus the audit has a maintenance function. Some authors expand this by stating that the audit objective should be the delivery of knowledge and thus the promotion of understanding on the auditee's site. A further idea is not just the knowledge transfer; it is also the rooting of problems, the delivery of recommendations for solving any problem detected. Obviously, there are different opinions of what the purpose of an audit is, as discussed.

Further, there is critique about the lack of professional scepticism on the auditor's side: This induces the idea that auditors act credulously. Further, influences for the effectiveness of audits are the standpoints of auditors (and perhaps auditees) in the scope of values, beliefs, and attitudes. This is also discussed by the use of a systematic versus a heuristic audit processing. This further emphasizes the importance of the competence of the auditor to the effectiveness of any audit.

In conclusion it can be said that audit effectiveness depends mainly on personal factors:

- The auditor's education background.
- Modes/methods and approaches used by the auditors.
- Techniques used to collect data.
- Culture, beliefs, attitudes, and ethics.

As an external lever, literature sees competition caused by financial interests between certification bodies and between their vicarious agents. Without a doubt, the latter are auditors.

3.3.4. Audit approaches.

The previous section has shown that audit effectiveness depends mainly on the human factor. Therefore, it is of interest what approaches are available for the conduction of audits.

However, every auditing, even quality management system auditing, is based on auditing theory and once again - has its roots in financial auditing. In theory and practice there are various known approaches to be found in text books for financial auditors: These are the Systems-based approach, Substantive-test approach, Balance sheet approach, and the Risk-based approach. The quality auditing profession adds a Process-oriented audit approach.

The Substantive-test approach (also called vouching) requires the detailed tests of a large number of transactions. According to Dunn (1991), substantive tests are dedicated to test transactions and other procedures which try to procure evidence as to the integrity, exactitude, and truth of information found in records. In quality management systems auditing, the Substantive-test approach means concentrating on an increasing amount of process actions (transforming process input to become process output), which depends on the non-conformities that are found. Literature examining audit approaches in the realm of quality management system auditing does not mention the term *substantive-test approach*. This approach may be useful for applications on the transformational

activities and therefore to understand the respective processes' capabilities to perform as promised.

The term *risk-based approach* to financial auditing is used to "assess the likelihood of material misstatement existing in each area" (International Financial Publishing Ltd, 2006, p. 93). Risk in this context is the "risk that an auditor may give an inappropriate opinion on financial information that is materially misstated" (Dunn, 1991, p. 111). Depending on the risks identified, the auditor audits more extensively (high-risk) or less extensively (low-risk). According to Fraser (2011), this approach is used in those processes and areas that contain the risk for causing material misstatement (Fraser, 2011). She adds that it is crucial that "the auditor needs to obtain an appropriate understanding of the entity and the environment (including internal control) in which it operates." The risk-based approach to auditing is not known in quality management system auditing and there appear to be no studies which research misstatements (incorrect judgements) by quality management system auditors. This suggests that these auditors do not assess the risk before auditing and therefore the risks to give an inappropriate opinion at the end of an audit is not well addressed.

Another approach used by the financial auditors is the *balance-sheet approach* (International Financial Publishing Ltd, 2006; Pine, 2008). "In this procedure, substantive procedures are focused on balance sheet accounts" (Pine, 2008, p. 1). By using substantive testing "on the argument that if the opening and closing balance sheets are accurate, then the profit or loss for the year must also be stated accurately" (International Financial Publishing Ltd, 2006, p. 93). The b*alance-sheet approach* is only backwards-oriented and tries to control whether the balance sheet is true and fair. On the contrary, in the case of quality management auditing, the most similar document to balance sheets is the so-called management review, which appears at the end of a period under consideration. It states the *status quo* of various horizons of concern in comparison to the objectives set previously. Additionally, the latter requires the producer of the document to set objectives for future action. The quality management system auditor is supposed to audit the reflective action and the plan rolled out for future action. Thus, the financial auditor looks for the *status quo* but the framework for quality management

system auditing looks for past, reflective, and future actions. Therefore, the *balance-sheet approach* does not apply for quality management system auditing.

In financial auditing, the auditor audits procedures and their results, whereas in management system auditing the auditor audits an individual system, which consists of coordinated processes.

Thus, the Systems-based approach defined in the financial auditing area differs from the definition given by DIN EN ISO 9000:2005 In financial auditing, the systems-approach means certain activities, but in the quality management system, it means the process of auditing, which will be investigated later.

Using the Systems-based approach, according to Gray and Manson (2006) and International Financial Publishing Ltd, (2006), the auditor focuses on the control mechanisms and, to some degree, on substantive testing, depending on the weaknesses that are found. In terms of quality management systems auditing, this requires auditing the various and different control measures, but misses referring to the quality management system objectives set by the management, and analysing to what degree the objectives are met. Thus, the Systems-based approach in accounting does not address the idea about systems in quality management and its consequent auditing.

However, the approaches listed above are neither taught nor known in the quality management system area: The standards for management system auditing are the DIN EN ISO 19011 and the DIN EN ISO 17021. Their current release does not offer any of the approaches mentioned before. Only the DIN EN ISO 19011 points towards methods by stating the audit evidence can be of a qualitative and/or quantitative nature, but needs to be verifiable. Both standards add that the methods for collecting evidence include interviews, review of documented evidence, as well as observations. But no approach to be used is defined.

The quality auditor community uses other vocabulary for auditing. Here the method is called process-based approach to auditing, due to the fact that the quality management systems are based on processes (DIN Deutsches Institut für Normung e.V., 2005), in which a process is a “set of interrelated or interacting activities which transforms inputs to

outputs" (DIN Deutsches Institut für Normung e.V., 2005, p. 23, DIN Deutsches Institut für Normung e.V., 2008, p. 3). "The application of a system of processes within an organization, together with the identification and interactions of these processes and their management to produce the desired outcome, can be referred to as the process approach" (DIN Deutsches Institut für Normung e.V., 2008, p. 6). This implies the requirement for effectiveness (see definition above) to the application of the DIN EN ISO 9001:2008, as well as the auditing of this effectiveness, requires also the identification of the processes and their application by the auditor. Admittedly, the term system in the scope of financial auditing is meant to be applied to control functions; in the scope of quality management system, it means the whole organization under consideration. Thus, the term system needs to be clarified in general, as well as within the scope of quality management systems.

According to DIN EN ISO 9000:2005, a system is defined as "a set of interrelated or interacting elements" (DIN Deutsches Institut für Normung e.V., 2005, p. 20), and a "quality management system is a management system to direct and control an organization with regard to quality" (of the system and its outputs). The term elements is best explained with processes, resources, and some pre-set order/direction. A system is a "set of detailed methods, procedures and routines created to carry out a specific activity, perform a duty, or solve a problem" and/or "an organized, purposeful structure that consists of interrelated and interdependent elements (components, entities, factors, members, parts, etc.)". Thus, the term process is equivalent to the term system; a quality management system in its entity that is to be understood as a process, consisting of subordinate processes. Consequently, the process establishes the macro-level, and the system the micro-level to be audited. Therefore, auditing a quality management system requires the application of a process-based audit approach.

There is no consistent definition available. Russell's (2000) audit design offers tracing as a means, requiring the auditor to follow "the chronological progress of something as it is processed"(Russell, 2000, p.49), the discovery method (random auditing), the element method—which refers to the procedure-driven standard—and the department method. According to Russell (2000), the discovery method examines what is currently taking place

and reflects existing (written) procedures. Russell (2000) adds that this should not be applied when the audit schedule has been properly planned. His department method focuses on the entire operation of a single department. Finally, Russell (2000) offers the element method, which refers to each element of any quality assurance standard (Russell, 2000, p. 50). Methods introduced by Russell (2000) are based on ideas about the ISO 9000 family released before year 2000. Auditing by using these methods is mainly based on pre-written procedures and a focus is given to whether the action of the auditee complies with the procedure and whether the result expected is achieved. Only the method called tracing has the potential to be used when auditing processes. The discovery method introduced by Russell (2000) can also be used because it requires the observation of action.

In contrast, Muil (2000) discusses the process approach. He states that the "process approach is more than an auditing technique—it's a philosophy. It means shifting focus away from basic compliance to embrace an improvement mind-set. When activities and related resources are managed as a process, the desired result can be achieved more efficiently" Muil (2000, p. 1).

The Praxiom Research Group Limited (2000) considers the process approach as a management strategy, and in this respect it means that managers manage the processes that make up their organization, the interaction between these processes, and the inputs and outputs that glue these processes together. Ford and Rosam (2003) add that auditors need to follow, when conducting process-audits, a general approach that starts with understanding the purpose, inputs, and outputs, as well as the objective of the processes under consideration. Tricker (2005), also dealing with the terms of process approach and systems, does not provide any comprehensive definition.

However, Peddle and Rosam (2009) indicate that auditors have to understand how the particular business operates and, if they are to be effective, how to gather information about the organization's effectiveness and how their findings need to be reported to add value to the business. "Often the failure of auditors to understand this basic requirement is the prime reason why they can fail to meet expectations" (Peddle & Rosam (2009, p. 3). These writers fail to explain whether they promote audits establishing what Chen and

Rossi (1989) define as black-box evaluation or theory-oriented evaluation. In the case of quality management system auditing the theory is established by the ISO 9001 and its incorporated Demming's PDCA cycle.

Palmes (2009) approaches process- and system auditing differently: He draws a picture by applying Deming's PDCA (plan-do-check-act) cycle instead of delivering a clear and unique definition for auditing a management system that is based upon a process-approach construction.

Packard (2012) notes that the process approach identifies relationships between processes and claims the process approach is a more efficient approach to cover all clauses of the standard rather than auditing each clause, which he calls the element approach. In contrast, Arter et al. (2012, p. 27) note that the "process approach offers the opportunity to audit processes as they flow through the functions of an organization" and "the opportunity to test the effectiveness of process interactions." They also mention that the concept of process audit is not defined.

Further approaches to quality management system audits, including the process approach, can be found in Sidorowicz (2012). He lists various approaches to (internal) quality management system auditing.

• clause approach to audit plans	Audits are conducted against clauses of the standard (by chasing paper).
• clause approach to checklists	The auditor turns 'shall'-statements of the standard (by using a checklist) into questions (by chasing paper).
• clause approach to auditing	The auditor looks at whether any given procedure covers the requirements of the standard, do the employees obey procedures and are the records being kept?
• Department approach to auditing	The auditor trails through departments but will stop at the department boundary.
• task approach to checklists • task approach to auditing • task approach to audit plans	The focus remains on the requirements of procedures and the standard, but not on the individual business.

Sidorowicz (2012) summarizes that the focus remains on the requirements of procedures and the standard. It appears that these approaches establish something akin to what Chen and Chaiken (1999) mention in applying the heuristic mode of information processing (see section 3.3.3): The auditor treats a pre-given order as a rule, requiring less cognitive effort. Additionally, processing check lists might promote sequential auditing. The auditor might concentrate on individual questions instead of understanding the process flow within an organization.

Finally, Sidorowicz (2012) explains the process approaches to the audit plan, to checklists, and to the audit itself. The process approach to the audit plan, according to him, identifies the common business processes which the organization uses to aim to achieve its objectives.

The audit plan shows an audit trail through business processes and across department boundaries (Sidorowicz, 2012, p. 25). Sidorowicz's term *process approach to checklists* means that the auditor does not need any checklist; the auditor's understanding of the standard guides the auditor through the process of auditing. On the other hand, in complex audit engagements there is a risk of missing a topic while auditing. Thus, the use

or rejection of checklists does not necessarily qualify an audit as effective. The approaches identified while researching literature inform of approaches available for use on a micro level. But the literature fails to show how and when to apply these approaches.

Additionally, no literature was found clearly demonstrating the approaches quality management system auditors actually use when auditing and whether they are effective. The literature gives wide insight into what the theorists think are the modes and/or approaches to be used, and what their advantages are. Whereas the discussion about approaches gives an idea of how an effective audit has to be processed in the sense of action flow, there is still the question of what techniques are to be used.

Whereas textbooks available for the financial auditing industry offer various approaches on how to look for evidence, the literature dealing with quality management system auditing simply promotes the process approach and the system-approach. The ISO 9000:2005 defines the terms process and system, but literature fails to explain the approaches. And, the DIN EN ISO 17021:2011 offers observation, interview, and document review as techniques for collecting evidence.

3.4. **Auditor independence, power and organizational culture**

Auditing is a process that is conducted by an auditor who must have the power to process the audit independent of the forces influencing its effectiveness. Wood et al. (2001) identified two sources of power: position-based and person-based power sources. In their view, position-based power can be further divided into three categories. The first category is reward power, “which is the extent to which a manager can use extrinsic and intrinsic rewards to control other people” (Wood et al., 2001:473). They named the second category coercive power, “which is the extent to which a manager can deny desired rewards or administer punishment to control other people” (Wood et al., 2001:474). The third category introduced by Wood et al. 2001) is legitimate power, which is based on the staff member’s belief that their superior has a natural right to control and lead due to his or her position.

Personal-based power resides in the individual, regardless of the position that this person holds. Wood et al. (2001) use expert-power as one term for personal-based. According to them, expert power is “the ability to control another’s behaviour through the possession of knowledge, experience or judgement that the other person does not have but needs” (Wood et al., 2001:475). Furthermore, Kotler et al. (2003) define the different power sources mentioned above similarly, but add in the case of expert power, “once the expertise is passed on to the intermediaries, the power weakens” (Kotler et al., 2001:541). According to them, the expert must develop new expertise to keep their power.

Adapting the definitions of Wood et al (2001), position-power relates to the auditor’s ability to deny desired certificates. The personal power of the auditor is founded on the expertise of the audit process and the relevant framework that will be applied. The latter form of power can also be defined as information asymmetry that “exists when one party in a transaction has more information that is important for the transaction than the other party” (Laudon & Laudon, 2006:116).

Given that quality management system (QMS) audits are considered a type of qualitative research that primarily uses interviews to gather information and control the course of an audit, one can approach power asymmetry in different ways. Kvale (2007) states that an interview is not “an open dialog between egalitarian partners” (Kvale, 2007:14), and he continues to define an interview as one-directional questioning and instrumental conversation. Therefore, it can potentially be perceived as manipulative dialog, where the interviewer has the monopoly of interpretation. Thus, auditing poses an inherent imbalance in terms of power distribution within the process with those who are involved in the process.

Annex D of the ISO 27001:2011 lists the desired behaviour for personnel involved in certification activities for any type of management. In addition, the standard requires the personnel (auditor) to act and function independently. This requirement is in accordance with Mautz & Sharaf (1961) who stated that it is the “independence of approach and attitude which any professional man should have if he is engaged in truly professional work. This is a combination of self-reliance, freedom from client control, expert skill and

ability, and considered judgement…" (Mautz & Sharaf, 1961:278). This statement is still valid for current auditing. Basu (2006) added that "the judgement of the auditor is not subordinated to the directions of any person who might have engaged him or his own self-interest" (Basu, 2006:102).

Gray and Manson (2005) and Hayes et al (2005) identified five threats to the independence of auditors: (1) the self-interest threat, (2) the self-review threat, (3) the advocacy threat, (4) the familiarity or trust threat, and (5) the intimidation threat. In addition, Porter et al (2008) and Soltani (2007) added the management threat.

• Self- interest threat	The auditor might have self-interest in the client (e.g. losing the engagement, financial interest, etc.). This might cause the auditor to take action, which could be adverse to the interests of the certification body or the audited company.
• Self-review threat	The auditor might not be able to maintain objectivity when reviewing his or her own activity due to previous audit and non-audit actions and their outcomes (e.g. past provision of counselling). This makes the auditor unable to have an impartial view.
• Management threat	This threat occurs when an audit firm and its personnel acts, which involve making judgements and taking part in decisions, or provide non-audit services. In this case, the auditor's independence and objectivity might be impaired due to the interests of his audit firm.
• Advocacy threat	This threat might arise when the audit firm or the auditor acts as an advocate for the audited firm by supporting its position in a promotional context. This might also create threats to the auditor's independence and objectivity
• Familiarity (or trust) threat	This might occur when the auditor is predisposed to accepting or insufficiently questioning the auditee's position. For example, this threat might be caused by long-term engagements with the same client and it might affect the impartiality of the auditor.
• Intimidation threat	This threat might occur when the auditor's action can be influenced by any dominant or even aggressive individual.

Table 4: threats- summary by the author

Soltani (2007) stated that there are additional threats that may arise from other parties within the audit environment. He concluded that it is the auditor's responsibility "to identify people who are in the position to influence the outcome of the audit" (Soltani, 2007:202). Furthermore, Windsor (1995) postulated that auditor independence is

determined interactively. She reported that three styles of auditor decisions exist: ‘autonomous’, ‘accommodating’, and ’pragmatic’. According to her, “autonomous auditors were responsive to personal beliefs, such that those with strong just world beliefs were more likely to resist client management power. Pragmatic auditors were responsive to client management power, irrespective of beliefs. Accommodating auditors responded both on personal beliefs and client management power; they compromised the least resistant group, especially when they believed in an unjust world" (Windsor 1995:701).

Emby and Davidson (1998) noted that a client’s ability to hire and fire auditors affects an auditor’s action. Accordingly, Causholli, Chambers, and Payne (2015) identified that future procurement of non-audit services influences the audit quality. In addition, Gue´nin-Paracini, Malsch and Tremblay (2015) stated that auditor independence can be approached by analysing two dimensions: “The first dimension, organizational independence, relates to the auditors’ willingness to act in accordance with professional standards and to report errors found during the audit. The second dimension, operational independence, relates to the auditors’ capability to work diligently and effectively in order to detect material anomalies” (Gue´nin-Paracini et al, 2015:201). They conclude that the effectiveness of an audit largely depends on the willingness of the auditee to cooperate.

Based on the research that was conducted for this thesis, no literature is available on threats to the auditors’ independence in the realm of QMS auditing. Unlike financial auditing, the action of QMS auditors is not legally supported; quality certification bodies are publicly and privately owned companies. There is no information in the literature on how this circumstance influences the activity of a certification body in terms of backing the auditors against identified threats. In addition, there is no literature available that discusses the field-competence the QMS auditors must possess. So far, it is not clear to what extent the experience in implementing and leading a management system impacts on the expert power of auditors.

The literature identifies factors that reduce the power of auditors by threatening their independence (see above), which include individual factors, as well as factors related to

the client organization and the certification body. Other parties can also influence an auditor's independence and power directly and indirectly. The ISO 17021:2011 states that the "certification body has to be committed to impartiality in management system certification and has to frame it in a publicly accessible policy showing its understanding of the importance of impartiality in processing its certification activities". In addition, the certification body must identify and manage conflicts of interest. The standard then lists potential sources of threats, which are concordant with the six threats listed above. However, by framing its corporate commitment with a policy, the certification body defines the frame for its corporate, or organisations culture. Hood and Koberg (1991) defined an organization's culture as the "interweaving of individuals into a community and the collective programming of the mind that distinguishes the members of one human group from another: the values, norms, beliefs, and customs an individual holds in common with members of some social unit or group. Culture can be a singularly powerful organizational tool. It shapes behaviour by giving organizational members a sense of identity…" (Hood & Koberg, 1991:12).

A corporate or organizational culture is "the system of shared beliefs and values that develops within an organization or within its sub-units, and that guides the behaviour of its members"(Wood et al, 2001:436). According to Jenkins et al. (2008:65), "culture establishes the parameter of acceptable and unacceptable behaviour" and "successful acculturation of employees influences an organization's performance". They add that acculturation is used by audit firms to manage the quality of their services. Jenkins et al. (2008) view acculturation of employees as a primary mechanism for managing the quality of their audit services. According to them, acculturation is a technique used to transform staff into professionals.

Therefore, organisational culture and the independence of auditors are dependent factors of audit quality. It could be presumed that the effectiveness of audits is dependent on the culture in which the individual auditor is embedded in and committed to. In addition, it can be said that the code of conduct is supported or impacted by the organizational culture of the audit firm that appoints and acculturates the auditor. Furthermore, it could be surmised that the 'best practice' observable in the field might

allow to make conclusions about the general culture accepted in the quality management system market.

There is no literature available, at least to my knowledge which discusses the best practice related to corporate or organizational culture and acculturation. In addition, I have not found literature which discusses the relationship between the organizational culture of an auditee and the way the audited firm presents audit evidence during an audit.

4. Methodology

As already mentioned in the introductory section of this thesis and based on the review of the existing literature, the impetus for my research was my confusion about the difference between the ways quality management system (QMS) auditing is supposed to be carried out. The research interest is based on the reported and sometimes observed practice of auditing!

My experience has led me to feel uncertain about and question the effectiveness of current quality management audit practice but I did not know how to create a theory of what effective quality management auditing should look like.

In my past practice I sometimes took on an audit contract of auditing QMS in companies which were/are certified and formerly audited by different auditors. Here I was often surprised by past judgements of auditors because we appeared to have come to different judgements about the conformance of the QMS in place. In extreme, I found situations in which it was said that the QMS in place has already existed for several certification periods, but was missing the required level of conformance totally.

Additionally, when participating in discussions at the mandatory annual experience exchange meeting of auditors I learned that there is no mutually agreed position on meaning about how to audit or even what to look for. This consequently produced uncertainty about the effectiveness of audit processes and their results. Yet, these results establish the reality constructed by the relevant auditor about the QMS audited by applying conformity criteria set by the DIN EN ISO 9001 for evaluation. Where the audit process results in a positive outcome, this is signalled by a certificate which can be published.

In addition, I also experienced that auditor trainers as well as auditors think that the standard has to be interpreted instead of understanding in what way the management system audited conforms to the standard's requirements. Initially, I thought that the audit result should be at least similar in terms of assessing the conformity achieved, regardless of which auditor audits because audit procedures, auditor appointment, as well as the frame for evaluating the management system audited are always the same. The only difference is the auditor and the established management system in different

business entities. This then led me to my research questions and the interest to investigate the auditing processes and their effectiveness further.

4.1. **Purpose of research**

As the result of my uncertainty that was mentioned in section 2 and the lack of clarity of how quality management system auditing should be processed, the purpose of my research was to investigate the effectiveness of the current QMS audit practice as well as consequently to evaluate whether the auditors have managed to cope with the paradigm change required by the on-going industrial evolution since audit theory developed into a scientific category. The resulting intended outcome of my research was to find out whether the current QMS audit practice is effective, or in other words, whether one can generally trust the judgement of the auditors.

Additionally, I found gaps within the literature. So far there was no research available in which the effectiveness of certification audits, and subsequently the application of the ISO 9001 requirements and necessary audit approaches were evaluated.

4.2. **Underlying research philosophy**

Schandl (1978, p. 4) noted: "Auditing is a human evaluation process." In QMS auditing, the criteria used to compare audit findings against and subsequently to evaluate the conformity to these principle-like criteria depend very much on the way in which the auditor interacts with the counterpart, the auditee(s). Thus, it is a process in which the auditor and auditees interact and construct their own reality. This consequently means that judgements are made on the auditor's perception of reality.

This clearly is in accordance with the definition "that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context" (Crotty, 1998, p. 42), whereby the latter is established by the business entity and the staff audited.

Patton (2002), Flick (2009), Saunders et al. (2012) and many more writers see reality as a result of a constructive process. In the case of QMS auditing, the audit itself establishes this constructive process, and the subsequent audit judgement establishes the reality

constructed by the auditor. It can be argued that experience is socially mediated and therefore a shared experience and which presents a reality. On the other hand, audit judgements depend in part on subjective observations, assessments, and interpretations by the auditor, and therefore are unlikely to be an objective or a shared experience that presents an irrevocable truth. Denzin (1989) questioned as to whether the truth can be found in the process of an interpretative research approach because the use of language/words distorts events as they occur and influences the perception and interpretation of the observer/researcher.

This was the time to consider my own worldview which defines the research philosophy informing my research. This concept is also referred to as a research paradigm (Bryman & Bell, 2011) or a theoretical position (Flick, 2009), and refers to the ontological end of the epistemological assumptions of the researcher. Crotty (1998) defines ontology as the study of being able to answer the question of what is, and epistemology as the "way of understanding what it means to know" (Crotty, 1998, p. 10). Grix (2004) explains ontology as what's out there and how does it exist and epistemology as what and how can we know about it?

Easterby-Smith, Thorpe, and Lowe (2002, p. 32) note that the realist's position is "that the world is concrete and external, and that science can only progress through observations that have a direct correspondence to the phenomena being investigated." This means to me that realists believe that we all perceive the world in a pure state in exactly the same way. I do not agree with this viewpoint because every human being senses the world in their own way, depending on experience, culture, education, and various other variables on which the different awareness abilities are founded. "What is said to be 'the way things are' is really 'just the sense we make of them' … [and] we have to recognize that different people may well inhabit quite different worlds" (Crotty 1998, p. 64).

Relativism, as opposed to realism, holds that the world out there (the realities) exists regardless of whether we recognize it, as Crotty (1998) adds. This means to me that there is an outside world to which we, as human beings, have no direct access. We simply discern reality as a result of our cognitive configuration. Waters and Mehay (2010) support this by arguing that what we as human beings understand as the truth is according to relativist ontology simply a representation of our world in our consciousness.

In other words, the relativist ontology acknowledges that truth, the interpretation of the representations of the world out there is subjective, and what is out there has to be negotiated socially. Therefore, the subsequent epistemology can just be subjective. Truth depends on who establishes it.

According to Saunders et al. (2012), subjectivism asserts "that entities are created from the perception and consequent actions of those social actors responsible for their creation" (Saunders et al., 2012, p. 682). Whereas, objectivism/positivism asserts "that social entities exist in a reality external to, and independent of, social actors concerned with their existence" (Saunders et al., 2012, p. 676). I strongly believe that any truth in the realm of social interaction depends on that world the establisher of any truth inhabits. Thus, my ontological position is relativism and my epistemological stance is that of a subjectivist.

According to Guba and Lincoln (1989), relativist ontology and a subjectivist epistemology are the foundation to establish constructivism as a leading paradigm for research. My research was driven by the belief that the truth depends on who establishes it, thus constructivism/constructionism was my position.

In this research I did not try to find out what caused the effectiveness or ineffectiveness of the auditors' actions, I simply wished to examine and understand the processes which led to their being effective or ineffective. Thus, the position I take is constructionism because I was interested in the meaning-making activities of the auditors, not what caused them.

Nonetheless, the different realities (audit judgements) as a result of different audit processes in different business entities might have something in common. These commonalities are stipulated by the evaluation framework ISO 9001:2008, and methods and techniques used. However, the application and implementation of the evaluative framework depends on the individual auditor's skills, experience, and subjective interpretation, which results in the audit judgement. So far, investigations concerning the effectiveness of QMS audits were based solely on my subjective feeling, not knowing, until I began my research project, that there was no occasion to put certification audit processes under a research lens and analyse the findings. Essentially, I do not know what

auditors really do and in what way they interpret their findings and construct a truth about the conformity of the system in place.

This consequently led me to consider the naturalistic research approach (Gray, 2009; Bryman & Bell, 2009; Saunders, 2012), and I thought of looking at audit processes. To use an allegory: Much like a crime investigator, who investigates homicides and recognises after the second case that he or she is tracing a serial murderer due to finding repeated patterns. In addition, the result of looking at audit processes does not depend on the quantities, rather on the qualities of the audits I looked at.

4.3. **Ethnomethodology**

The literature review and the subsequent research questions (see section 4.4) indicate that I was not interested in the auditor as individuals as such, rather in their practice commonly used by members of the auditors' professional society. Thus, I looked for a way to understand and explicate the auditors' practice, processes, and practical action, and how audit order is created through audit action and their meaning. For this, Bryman and Bell (2007) offer ethnomethodology (EM) as the appropriate research approach. Here the researcher seeks to answer about "how realities in everyday life are accomplished" (Gray, 2009, p. 170). "In other words, while classical sociology is in the business of explaining social facts, the effort of ethnomethodology is directed towards an explication of their constitution" (ten Have, 2004, p. 2014). Ethnomethodology has a naturalistic orientation and is another form of phenomenology (Crotty, 1998). EM offers various strategies. Among these, conversation analysis is one approach. Another strategy is a strategy called studies-of-work programme. "In these studies, various methods for describing work processes as exactly as possible are used. The scope is enlarged from studying interactive practices to a concern with the 'embodied knowledge' that emerges in such practices as well as in their results" (Flick, 2009, p. 61). For this, "ethno-methodologists generally use methods that require immersion in the situation being studied. They hold it as an ideal that they learn to be competent practitioners of whatever social phenomena they are studying. The ideal is referred by Garfinkel as 'unique adequacy'" (Rawls, 2002, p. 6).

Nicolini (2012) adds "ethno-methodologists take, in fact, a radical stance and consider practices both as inescapable texture of everyday life and the contingent, on-going

accomplishment of the same practices. EM, therefore, investigates practices not as instances of something else (e.g., habitus, tradition, community, or mind), but as spatio-temporal accomplishments obtained by knowledgeable actors who use a variety of (ethno) methods, tools, techniques and procedures. These practical methods and procedures through which we constitute our daily scenes of action, in other words the actual competent 'doing' of something, constitute the object of study in this approach" (Nicolini, 2012 , p. 134).

As I am seeking to understand the work practices of quality management system auditors, I was not aiming "to elucidate the rational properties of indexical expressions by investigating the sequential structure of naturally occurring conversations" (Nicolini, 2012, p. 140). This would qualify my study as a conversation analysis-based work. The auditor conducts the individual audit and by that he tries to collect data as a basis for decision-making. The auditee is confronted with questions to be answered. Therefore, the conversation is not well-balanced or symmetrical. It does not consist of an argument and a counter-argument.

In the process of auditing, conversation does not occur naturally. The overall objective of an audit is to collect data to have enough information for judgement. For this, the auditor needs to act within a system of competencies determined by the respective standards and the individual context within the audit takes place. Thus, the talk during an audit is framed by the respective audit standard(s).

Additionally, my study was not aimed to shed light on the outer determinants or outer social variables; I rather looked for data which explicate the working process and the competence beyond. For this the study-of-work strategy is available. This "seeks to investigate members' methods and competencies involved in the production of complex activities. While such activities typically involve talk and therefore involve structures of sequential and categorical organization, attention to the detail of complex activities reveals additional structural features and other layers of locally accomplished organization" (Francis & Hester, 2004, p. 21).

The subject of studies-of-work is embodied knowledge, which is materialised through the obvious control of artful practices (Bergmann, 2015). With that, the studies-of-work are aimed to analyse sets of competencies which characterise a certain type of work.

Embodied knowledge is constituted by the information and practices we use and apply without conscious thought, performed as routines and tasks. The term indicates that physical actions should be observed. On the other hand, discussion—here, appearing as the auditors' activities to reveal information—also displays auditors' embodied knowledge. The conversational action is also part of the focus of the studies-of-work strategy. This is supported by Bergmann (1995) who explains that a work activity is observable and by that the activity observed itself manifests the order beyond. The tools to be used by auditors for collecting data are defined in DIN EN ISO 17021:2011 these include observation, interview, as well as the analysis of paperwork. Additionally, the auditor should record the evidence used as well as the information collected. Therefore, even the conversational activity of the auditor, the sequence of non-verbal action, as well as any kind of action processed by the auditor is of interest.

This indicates that the broad range of activity of interest needs to be observed within its local and timely context. Francis and Hester (2004) add that the researcher needs to "notice something that is observably-the-case about some talk, activity or setting." For this, Bergmann (2015) suggests that the 'products' of the activity or the work of interest has to be recorded. He adds that the researcher can use observational protocols, audio recordings, or further ways of collecting data.

Bergmann (2015) explains that the studies-of-work are used in various ways by using methods from different investigation approaches for analysis: According to him they can be content analysis, practices used by conversation analysis, as well as further approaches. Ten Have (2004) proposes various strategies. One of them "involves the study of ordinary practices by first mechanically recording some of their 'products', by the use of audio or video equipment, as it is in the standard practice in CA" (ten Have, 2004, p. 33). According to him, the recordings have to be transcribed. These transcripts then have to be used to locate some products which establish order.

So far, I have not discussed the application of interviews as a data producing activity. Usually, interviews are to be applied to collect facts. This is a common technique to be used in various qualitative inquiry strategies. On the contrary, ethnomethodology is not interested in facts, rather in how these facts are produced. “Most qualitative research based on interview data seems to use a factist perspective” (Ten Have, 2004, p. 73). Ten Have concentrates his discussion on the application of interviews in ethnomethodology wherein order producing practices “are seen as specifically local and situated. Although order-producing practices may have general features, their ultimate effect is considered to depend on their context-sensitivity. Because of these rather specific aspects, interviews are of limited usefulness. The reality to be studied in ethnomethodology is a local accomplishment of members’ practice” (ten Have, 2004, p. 75). In other words, the interviews conducted in the current study were dedicated to find out how individual auditors process instead of gaining information about what they think.

Earlier, I mentioned that the order-producing activities of the auditors are based on physical as well as conversational activities. During the course of the study, I considered interviews because I frequently could collect data about the outcome of the auditors’ evaluative process, but the process of evaluation that the auditor passes through became rarely visible. To uncover this process, or the stock of knowledge beyond, I pursued the idea of interviewing the auditors: The auditors are constructors (by conducting evaluation processes) of meaning, which is the actual judgement. And, the auditors are members of the audit community which acts on the basis of standardised procedures by using the same evaluation framework. Therefore, I applied interviewing, which I will assess this later in the data generation area.

4.4. **Emotions, risk and role conflict**

Methods used by ethno-methodologists require immersion in the activity being studied (see Section 4.3). This is also called ‘unique adequacy’, which is defined by Cuff et al. (1992) as the researcher’s ability to understand and to analyse the social world studied from a practitioner perspective, rather than from the position of a classical, social-science theorist. Thus, my knowledge of and experience with the audit frameworks and the

process of auditing were essential to understanding the observed processes and to analysing the data acquired through observation, tape-recording, and interviews.

During the research process and the following process of data analysis and data interpretation, I found myself placed in diverse roles. The ‘immersion’ required for the ethnomethodology approach influenced my role as a researcher within my research process. This immersion was defined by my knowledge about the audit framework, the audited management system, and the auditee team. My role was that of an outsider observing the individual audit process since I had the knowledge to understand the individual audit action.

On the other hand, I was part of the auditee team and therefore an insider too. This made the actual research difficult for me, because “the goal is not to become an insider but to see the world from, an insider’s perspective” (Ramsay, 1996:134). Sampson et al. (2008:923) noted that this potential role conflict ”has often been written about in relation to the sometimes difficult-to-maintain boundaries between counselling and research and the tensions experienced in a context in which the researcher possesses other qualifications or experience which would allow them to contribute practically to work and/or to fulfilling some need”. Before and during the research, I was aware of the potential tension related to emerging role conflicts. In addition, since an audit is usually imbalanced (see Section 4.3), my presence and anticipated support of the auditee team could disturb the power relations within and between the auditor and the audit team. Therefore, my participation in terms of answering questions and starting counter-argumentation was excluded during my research project. I carefully analysed the risks founded on my own experience as an advisor and auditor in advance. This risk analysis helped me to define my role as that of an onlooker instead of a participant in the object of interest itself. These considerations kept me from commenting on or discussing the process of auditing. In other words, my role was that of an observer to ensure that the auditor could position him or herself in the role of an auditor.

In addition, Lee-Treewek and Linkogle (2000:13) noted that “qualitative researchers experience a myriad of feelings” which can affect the quality of the research being conducted. According to them, emotions can appear as real distress and influence the

researcher's life. They define this as emotional danger, which is "a complex issue because research settings may produce diverse emotions in researchers and participants" (Lee-Treewek & Linkogle, 2000:13). During the research process, I was affected by emotions many times. I felt anger and disappointment as well as amazement and irritation. Dealing with these emotions was not easy, especially in cases when an auditor used coercive power to conduct the audit or behaved in a depreciative manner. It required much self-control not to interfere directly. On the other hand, it was rather easy to avoid indirectly interfering. During the observation, I placed myself behind the auditor, such that the auditor did not have an opportunity to see and interpret my physical and non-verbal expressions showing my emotions.

Before, and during my research project, I was aware that my presence as a semi-participant observer could produce emotions for the auditor, and to avoid this, I issued the consent letter described in the ethics section (see Section 4.5.2) of my thesis. Furthermore, I was aware of the potential impact on the auditor's behaviour produced by my presence in the researcher's role. By minimising my active participation during the audit and by not responding to the auditor's questions and not to start counter-argumentation or other kinds of interference I acted more as an onlooker. Even in the case I felt strong emotional discontent about the auditor's activities or behaviour I did not interfere. This occurred during at least one of the auditing processes and it was difficult not to interrupt the auditor's or auditees activity. Letherby (2000) stated that research is an emotional work for both, the researched and the researcher; in my research, this was the case for the auditor and me. Furthermore, she argued that there are positive and negative factors when using the self in research. In ethnomethodology, it is a core characteristic that the researcher becomes a source through immersion. Indeed, my research became emotional work, and to keep this emotional work away from the observed auditor, I maintained professional objectivity by not disclosing my emotions to the greatest extent possible the observed process of auditing.

Emotional work also played an important role while interviewing the auditors during my research project. As I intended to understand the hidden process of evaluation (process of thought), as processed by the auditors, I asked them how this individual process is

processed with open questions using vocabulary derived from the standard establishing the framework for evaluation. It was clear during the observation that my research produced emotional work for me, and during the interviews I recognized the emotional work that the auditors went through while trying to answer my questions. However, when I felt that an individual auditor could not respond and therefore became helpless or angry, I stopped the interview.

As mentioned above, the quality of research can be affected negatively by emotions. While I was emotionally aware during the observation and therefore able to manage my emotions, during the process of analysing the transcribed data, I did not exclude my emotions. Instead, I practised being reflective. By listening to the taped observations and interviews, and reading through the transcribed texts, the emotions appeared again. This initially led to case reporting that was judgemental instead of analytical. However, I overcame this using reflection as suggested by Johns (2009). During data production and data analysis, I regularly practiced reflection to overcome the difficulties caused by role conflict, the emotions produced through the research, and the participating auditors (see also section 4.5.3).

4.5. **Research questions and methods of data making**

The objective of my research and the literature review revealed areas of interest and a set of subsequent concepts (methods and approaches) to be considered, whereas the concept of interview in auditing needs to be considered as well as the review of paperwork and observation. They do not take place separately during any audit process.

Research Questions	Area of audit action	Method of data generation
1) In what way do QMS (qms) auditors audit? - What approaches do auditors use when auditing? - What techniques do auditors use when auditing)? - In what way do auditors judge?	Audit process Audit methods Audit techniques	Observation of the auditors' action while auditing.
2) In what way, if any, do auditors justify their judgement about the effectiveness of the management system audited?	Evaluation	Observation of the auditors' evaluative action while auditing Interviews with auditors

Table 5: Research questions and methods of data making

With the characteristics defined and the categories in mind, I still had to decide on what methods to use in studying audit proceedings. Every audit takes places in its individual setting (business entity), involving different people acting in different processes. As Patton (2002, p. 96) asks: "How have the people in this setting constructed reality?" whereby the people are the auditors and the reality is established by their judgement. I think observation is the best way to study first-hand the day-to-day experiences and behaviours of auditors in particular settings; and interviewing is the best technique to collect data about the decision process that auditors have to go through.

4.6. **Strategy of enquiry**

4.6.1. Case study approach.

As previously discussed, I carried out naturalistic research in which the researcher works "with people to understand how they construct their own reality within a social context" (Gray, 2009, p. 578). A case study approach appeared to be the best way to research how auditors act while auditing and evaluating the conformity of the QMS to come to a judgement because "naturalistic case studies offer opportunities for naturalistic generalization of the sort that will aid others in making wise decisions about what ought to be done in some program area in their social context" (Flinders & Mills, 1993, p. 63). This approach appeals to my ontological and epistemological perspectives described above. The further rationale is that each and every audit process, the business entity (the real-life context), and the auditors are all different. The business entity defines what a management system looks like within the frame of DIN EN ISO 9001. The audit process is mainly determined by the auditor and the methods and techniques he/she uses. Thus, I expected to get the best result by participating in audits, with a single auditor/audit constituting a case.

Gill and Johnson (2010, p. 225) mentioned that "a case study entails empirical research that focuses on understanding and investigating particular phenomena and their dynamics, within the context of a naturally occurring real life single setting, that uses multiple sources of evidence." This is further supported by Yin (2009), Saunders et al. (2012), and others. Flick (2009, p. 134) adds "case studies can capture the process under study in a very detailed and exact way. They are not restricted due to an intended comparability and are able to fully use the potential of certain methods." In this example the process under study is the audit process.

When I started to design my study I was aware that a single case would not deliver enough data to generalize from in terms of theoretical understanding because the auditor and the context could be too particular. Thus, I used multiple cases; five in total.

Yin (2009) suggests that multiple-case designs may be preferred over single-case designs: Single case-designs are vulnerable. More importantly, the analytic benefits from having more cases could be substantial. Yin (1984) and Eisenhardt (1989) note that the main

argument in favour of the multiple-case study is that it improves theory building. Qualitative, inductive, multiple case studies have already been successfully conducted in social constructionist research, for example by Collins and Whickham (2004).
"Concentration on one case often leads to problems of generalization - less in a statistical than in a theoretical understanding" (Flick, 2009, p. 134). Flick (2009) adds that one can solve this by using a series of case studies.
Therefore, I had to decide what criteria will establish a case in my research. I decided to establish cases when the following criteria were fulfilled:

- The case should take place during a certification or recertification audit because in surveillance audits the examination does not cover the whole QMS; I did not intend to compare the judgement of the auditor with my own assessment of the conformity of the management system audited, but my intention was to cover the complete auditing of the PDCA cycle.
- Secondly, the company in which the audit should take place had to be of a size that just one auditor was necessary for the completion of the audit. Otherwise, it would not serve my purpose because auditors act separately within an audit engagement for at least fifty percent of the time scheduled, so I could not be sure of being able to collect comprehensive data of the complete audit process.
- The auditor should be an experienced auditor, who also audits regularly. Rookie auditors, in my experience still struggle with the complexity of auditing, and so are not yet mature enough to derive generalizable data. Thus, the auditor to be observed had to have at least 5 years of experience of auditing.
- Additionally, the business the auditees run should be different, thus just the framework for auditing is the same but the industry is not.

I also had to decide what actually establishes a case: The auditor and its audit action did this, not the environment in which the audit took place. Therefore, the auditee and its action, as well as the audit location and the management system established the context within which the audit and the case study took place. This individual context of each case study was not the subject or object of the study, but the focus was aimed at the auditing process.

Another issue was how many cases I had to select. There were two considerations: Firstly, the accessibility of auditors and audit sites of interest and the timeframe available for study, and secondly the concept of saturation. The latter concept is explained by Strauss and Corbin (1998 ,p. 12) as follows: "…until (a) no new or relevant data seem to be emerging regarding a category, (b) the category is well developed in terms of its properties and dimensions demonstrating variation, and (c) the relationships among categories are well established and validated." Or as Gummesson (2009, p. 96) states, saturation is achieved when "the marginal utility of an additional case approaches zero." Although I was not about to look for saturation, the idea behind the concept of saturation seemed to be a suitable concept to look for a point of information on saturation.
Also, Kvale (2007, p. 43) notes in the case of an interview: "Interview as many subjects as necessary to find out what you need to know." Yin (2009) uses a positivist's viewpoint and notes that one should think on the decision about the number of case replications reflectively, and this number depends on the confidence the researcher would like to have in the study.

4.6.2. Ethical considerations.

"Ethics are principles of conduct about what is right and wrong" (Thomas, 2011, p. 68). This sound statement misses to inform the reader about what is right or what is wrong. At the very beginning and especially during the course of establishing the data generation strategy and pursuing the data creation, and even while writing up my research I considered what I think is right or wrong. Murchinson (2010, p. 79) put it this way: "You should not lose sight of the fact that your 'facts' or information are produced through human interaction. As such, these facts and information can have powerful social effects."

During my study I observed the interaction of the auditors and the auditees. I tape recorded what they said and noted what I had seen. Additionally, I interviewed the auditors and tape recorded their words.

To do this in a way that I considered as right, I informed the parties about the purpose of my research, its procedures, as well as about the use of the data collected. After this, the

future participants had the choice to deny their participation in my study at any time, even in the course of the study. With that, I made sure that the research subjects were fully aware that they were a part of my research study.

I also informed on how I was going to deal with the data collected, especially how they will be stored, dealt with, and made visible for others. I clearly made sure that names, locations, and issues connected with the businesses in which the observations took place would be held confidentially.

The auditors who were part of my study were not and will not be in a dependent situation to me in any way. In the course of the observational part, the research objects were always aware when I started and ended the recordings, regardless of whether the recordings were done in a technical or manual way.

When interviewing the auditors I consequently created a situation and asked questions to make sure that there was no imbalance in the power balance in place.

From the very beginning until I finished the study I cross-checked my activities and conduct by frequently reflecting on what I was doing and on what I was likely to do next. For this, I used the texts by D'Angelo (2012) as a checklist and the guidelines in the University of Gloucestershire Research Ethics Handbook (2008).

Details of the way that I conducted the research according to the ethical guidelines mentioned above can be found in the respective chapters.

4.6.3. Observation and data generation.

Due to Rawls' (2002) requirement of immersion and the necessity of collecting first-hand data, I simply had to deal with the decision between overt and covert observation and whether to be a participant. I was aware that overt observation could affect the behaviour of the participants so the data produced by the observed participants might have been influenced by my presence and thus have been unreliable. On the other hand, covert observation, where the problem of observer effects would not appear, was never an option: Covert observation causes ethical issues, such as the rights of the participants

to make informed decisions as to whether or not to participate in human research. Hence, I decided for the ethical sounder option to undertake overt research.
Secondly, partial or full participation was to be considered. Patton (2002) calls it a fundamental distinction in observational strategies. According to him, the extent of participation is on a continuum, starting by full participation on the one side, and ending at a spectator position. I think any form of participation introduces flaws into the data flow.
But, finally I acted as a participant observer; I took a role approved by the auditee (research participant). The risk of introducing a flaw is nearly nil due to market commonalities as I will explain later in this chapter.
The first task to be solved was access to relevant audit activities. My very first strategy in getting access and permission to the audits was to negotiate with executives of different certification bodies. The first one offered to appoint me as an auditor to certain certification audits and to do covert observation, recording the data by using a hidden audio tape. As already noted, covert observation was not an option at any time due to my ethical stance. The second executive, the CEO of another certification body, on hearing about my project, ordered one of her subordinates to organize every support I needed for my research project. Unfortunately, the negotiations with the audit clients were done by low level subordinates, not by me. The result of this was that I did not get access to the cases I needed. Therefore, I had no way to ensure that my project would succeed.
Thus, I changed my strategy and asked auditors and audit clients directly to volunteer for my research project. This appeared to be easy due to the fact that I had known most of these auditors for years, and they did not feel any discomfort about being part of a research project. I explained my project to the audit clients too. At the time I conducted my research project these audit clients had known me for some time because I had advised them during their process of implementing the QMS. Only one of the candidates made it clear that data recording was not permitted. However, observation of audits took place in organizations whose management system I knew well from past activities.
I chose those audit cases where availability was granted by the respective auditor(s) and auditee(s). Insofar, my approach applied was not what Bryman and Bell (2011) defined as

convenience sampling. According to them, a convenience sample "is simply available to the researcher by virtue of its accessibility" (Bryman & Bell, 2011, p. 190). The cases were chosen depending on the willingness of the prospective participants to take part in my study. For this, I negotiated with them carefully by introducing the study's aim and proceedings carefully. Additionally, the selection of audits to become part of my study was also strategic or purposive (see the case study approach section). With that I think I designed the study open-ended.

The parties, both the auditees and the auditors, I knew from before the individual case study in a professional capacity. There was no private liaison before and during the time the studies took place. As a participant observer, I was aware of the ethical problems that may be connected with choosing cases conveniently. Being cognisant of my own potential bias in terms of influencing the observation process actively, and trying not to be influenced by potential bias imposed by audit participants, I took extra care by acting as a reflective practitioner, as Schön (1983) put it. During the data production and data analysis stages of my research, I practiced reflection according to the typology for reflection as suggested by Johns (2009).

Furthermore, the ISO 9001:2008 allows auditees to liaise with external parties relating to the matters of which the quality management representative is in charge. Therefore, it is a very common issue that the advisers are part of the auditee team or onlookers; the auditors are used to this situation. In my ten years of experience, I regularly participated in the past as an adviser in audits or audited where the company's advisers participated. Thus, I could act as an audit participant as well as an observer, whereas the latter rather took a backseat.

In order to adhere to the ethical standards and to declare and document this process, I issued a consent letter, which every participant was asked to read and to sign in advance. A copy was left with each participant.

With the permission of the participants, I tape recorded the whole audit process at five sites. After finishing the audit recording, the collected data were transcribed, coded, and analysed. Additionally, during and at the end of every single observation, I noted the impressions I had about the tone the auditor used and any further issues. This information helped to enrich the transcriptions of the audit.

During the semi-participative attendance in every particular case, I was able to see and record the audit process related conversations, the sequences of the audit process steps, and questions asked by the auditor; even the tone used by the auditors and the way the auditors formulated their questions. However, analysing the results for coding I considered that there is not enough information to answer those research questions related to the evaluative process. This process was not always visible and carried out by the auditor solely. Therefore, I sensed it might be helpful to enrich the data generated by conducting additional interviews with the auditors who were previously observed.

4.6.4. Interviewing the auditors.

As Ten Have (2004) notes, in ethnomethodology (EM) interviews are of limited use because the interest of EM is not in individuals but in individuals as members, the practice of participants, and processes (see also section 4.3). This is "because ultimately ethnomethodology is interested in order-producing practices and this interest can be further narrowed to procedures of order production" (Ten Have, 2004, p. 75). Ten Have (2004) carried on by saying that interviews to be studied may provide useful insight into the patterns of the methods used in producing an understandable (intelligible) world. Gray adds that "EM seeks answers on how realities in everyday life are accomplished" (Gray, 2009, p. 170). Observation may reveal how the auditors act and which measurement they use to come to a judgement, whereas interviews are more likely to deliver information about the cognitive process behind the auditors' judgements. Thus, my interviews were dedicated to find out in what way the auditors accomplish the evaluation process, which then leads to an audit judgement. I was aware that in addition to the auditor's process of evaluating evidence some phenomenon might appear that constitutes patterns of action appearing in the cases analysed.

Creswell (2009) and Saunders et al. (2012) list four options for interviews as qualitative data production types. I considered that face-to-face interviews with auditors would provide information about the process of judging because a great deal of communication takes place physically. This would give me the opportunity to react to the interviewee's behaviour immediately.

In general, as Bryman and Bell (2011) suggest, qualitative interviewing seeks to grasp the interviewee's point of view, or in my study to explore the invisible process of the evaluative thoughts of the auditor. The interviewer can easily leave the pre-set guide being utilized. Thus, qualitative interviews tend to be very flexible (King, 2004) and have therefore the capability to deliver rich and detailed data though not strictly comparable with other cases. King (2004) adds that a qualitative interview goes well with the potential need to examine topics "in which different levels of meaning need to be explored" (King, 2004, p. 21).

I still had to decide what kind of interview to conduct. Literature offers semi-structured as well as unstructured interviews for qualitative research. According to Saunders et al. (2012), unstructured, also called non-directive, interviews are used to investigate a general area of interest in depth and use predetermined questions to work through. In contrast, the semi-structured interview is based on "a list of themes and possibly key questions to be covered, although their use may vary from interview to interview" (Saunders et al., 2012, p. 374). According to Saunders et al. (2012), the use of questions can vary depending on the specific context in which the interview is held.

Thomas (2011) suggests starting with a structured list of issues instead of specific questions called an interview schedule. Bryman and Bell (2011) suggest: "The researcher has a list of questions on fairly specific topics to be covered, often referred to as an interview guide, but the interviewee has a great deal of leeway in how to reply" (Bryman & Bell, 2011, p. 467). Kvale (2007) adds that the virtue of this kind of interview is its openness without standard procedures or rules.

Since auditing is an evaluative activity, I thought it was necessary to include the evaluation frame roughly into the creation of the interview questions which entailed analysing the DIN EN ISO 9001 first. This analysis was intended to apply the principle-like criteria (the application of the PDCA principle as well as every specific principle for every process in a business entity) to my research questions, and not to use the standard as a gadget to audit the audit. This would have imposed my personal judgement about what was right, and what was not, and would have been a contradiction to my ethical premises. The process of auditing, the process of collecting information to come to a

judgement was to be researched, not the judgement(s) the auditors arrived at. Thus, the answers of the auditees during the audit process were not of interest, rather the way the auditors collect information was of interest. This had importance for the analysis of the data produced, as I will show in later parts of my thesis.

As auditing is an evaluation process, the criteria for evaluation need to be applied in the interview.
During the observation I could see how the particular auditor proceeded. What I could not fully see was how the auditor applied the DIN EN ISO 9001 as the frame for evaluation in general (see appendix 8).
One major point of the DIN EN ISO 9001:2008 is the process approach, which is "the application of a system of processes within an organization, together with the identification and interactions of these processes and their management to produce the desired outcome" (DIN Deutsches Institut für Normung e.V., 2008, p. 6).

As a result of analysing the 'principle-like' criteria, (application of the PDCA loop generally and for each and every relevant process), I created an interview schedule depicted roughly below (see table 5: interview schedule). As the auditors chosen for the case studies have been doing their jobs for more than 15 years, I concluded that they were familiar with the standardized vocabulary used in the DIN EN ISO 9001:2008 and its sub-standard DIN EN ISO 9000:2005. Thus, because every clause of the standard starts with a generic sub-clause, defining the general requirements to be applied at every process detailed within further sub-clauses within the clause, I thought that it should be easy for the auditors to answer. On the other hand, and supported by my own experience, I formulated some semi-generic sub-questions in case they were needed to put the auditor at ease who was being interviewed (see appendix 8).

The schedule containing the research questions to be answered follows:

Theme	Research question	ISO clause	Interview question
System Approach as meta process approach	In what way, if any, do auditors justify their judgement about the effectiveness of the management system audited?	0.2	1) In what way do you find out whether the organization has applied their system of processes effectively in terms of the PDCA circle?
Process approach		4	2) In what way do you find out whether the organization has applied documentation requirements effectively?
Process approach		5	3) In what way do you find out whether the organisation has applied the management process requirements effectively?
Process approach		6	4) In what way do you find out whether the organisation has applied resource management processes effectively?
Process approach		7	5) In what way do you find out whether the organization has applied the product realisation requirements effectively?
Process approach		8	6) In what way do you find out whether the organization has applied the measurement, analysis, and improvement processes effectively?

Table 6: Interview schedule

With the first interview made with the auditor which established case 1, I tested the research questions. On the other hand, each of the 5 interviews undertaken had their own session. They took from between 20 minutes to about one hour. This depended on the ability of the auditors to understand and to address the interview questions appropriately. Sometimes, I had to work hard to draw the interest of the interviewee to the interview questions; in other situations the auditors responded without answering the interview question, or even did not answer at all. On the other hand, it was necessary to remark that the vocabulary used and the concept behind the research questions was what the auditors normally use or have dealt with already for ages.

5. Data analysis

5.1. **Content analysis**

Content analysis is, according to Patton (2002, p. 453), used to refer to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings." Flick (2009, p. 323) adds that "one of its essential features is the use of categories, which are often derived from theoretical material." This can be found in section 6 of my thesis which presents the conceptual framework of data mining. Mayring (2015) concludes that the (qualitative) content analysis is dedicated to analyse documented communication by processing the analysis systematically. Additionally, Mayring (2015) summarizes that content analysis is a category-driven analysis of texts.

5.2. **Conversation analysis**

One could argue that in studies-of-work conversation analysis is not the suitable approach for analysing data. The studies-of-work, as frequently mentioned earlier, are for shedding light on embodied knowledge and the competence system beyond. This suggests that embodied knowledge is just connected with physical action. But, auditors reveal their competence by using speech. As mentioned earlier, the communication in audits is not well-balanced; it is rather oriented to achieve a certain goal. Therefore, the overall communication within an audit is supposed to achieve this goal, which is the final audit judgement.

However, the interest of this study is not on how the auditor and auditee produce orderliness when communicating, I rather look at how the auditor acts when collecting data.

Conversation analysis and content analysis use transcripts of data, which are categorised and coded for analysis. Therefore, the analysis of the transcription of the communication between the auditor and the auditee are analysed by the application of conversation analysis with a strong orientation to content analysis.

Both of the approaches were applied by following what Francis and Hester (2004, p. 159) formulated this way:

1. "Notice something that is observably-the-case about some talk, activity or setting.

2. Pose the question: How is it that this observable feature has been produced such that it is recognizable for what it is?

3. Consider, analyse and describe the methods used in the production and recognition of the observable feature."

5.3. **Concept of analysis**

As the data generation as well as the data presentation is sequential, the analysis was done systematically: For this, I analysed 1) the transcribed observation of the audit process, 2) the written records containing data about the procedural and behavioural activities of the auditor, and finally, 3) the records of the interviews.

5.4. **Quality and Triangulation**

Ensuring the quality of my study was of major concern. Flick (2009, p. 405) suggests triangulation "as a strategy for improving the quality of qualitative research by extending the approach to the issue under study." Earlier, Patton (2002) said that triangulation strengthens a study. Saunders et al. (2012, p. 683) defines triangulation as "the use of two or more independent sources of data or data collection methods within one study in order to help ensure that the data are telling you what you think that they are telling you." Flick (2015) discusses the various ways to triangulate. Flick concluded that triangulation can be used as a strategy for validation, as a starting point for generalisation, and as a means for collecting additional insights.

From the very first starting point of my study, I was aware that only audio recording the auditors' activities only during the course of an audit would not produce sufficient data to understand in what way the auditor acts. Therefore, I decided to record the action of the auditors seen during the course of the observation. And even then, the data recorded about the way the auditors' assesses and concludes but did not deliver enough information about the actual process of evaluation the auditor conducts before judging

finally. Additionally, I also became a source of data through applying my professional competence as a part of the auditors' 'pack'. As already mentioned earlier, this imposed problems for me. Also for this, triangulation helped to overcome this issue during the course of my study. This delivers the justification for approaching data by using various methods (observation and interview) and sources of data (cases) within my qualitative paradigm.

For analysis, I used data triangulation as described by Gray (2009), analysing data case-by-case and merged the data theme by theme and technique used for collection.

5.5. **Data analysis strategy**

After every case was completed, I had four sources of data to be analysed:

- Transcripts of audio records of audit communication.
- Paper based notes of audit activities (observational part).
- Paper based notes of the auditor's behaviour (observational part).
- Transcripts of audio recorded interviews of the auditors.

As already mentioned in the EM section of my thesis, the approaches for analysis can be various. Ten Have (2004) and Bergmann (2015) refer to content analysis as well as to the practices used in conversation analysis. For the paper-based notes, I used content analysis.

I applied the same approach to the transcripts of the interviews. This is because the auditor was expected to describe his mental actions in applying the framework to come to an audit judgement. Although the interviews were semi-structured, the interview question did not lead the interviewee to answer in an expected way. The questions were rather constructed to give the responder the leeway for his/her own explanation of what he/she does when auditing and the relevant process. The answers to the interview questions were open ended. Thus, transcribing the interview and using content analysis for the data investigation appeared as the suitable technique. Although the data occurred in the interviews and the observations seemed to be different due to the way they were collected, the analysis was done by applying context analysis. Since the answers of the

auditors for the interview questions rested on the individual thought processes, the auditor became the author of the text to be analysed. Therefore, the transcript of the interviews appeared as a text in front of me.

6. Conceptual framework of data generation and data analysis

6.1. **Categorization**

"The researcher frequently starts out with a broad outline of a concept, which is revised and narrowed during the course of data collection" (Bryman & Bell, 2011, p. 393). As QMS auditing is a complex activity, firstly I needed to decide what to look at. In other words, for the data production and the subsequent data analysis activities I had to decide what to look at while collecting the data.

For this, Bortz and Döring (2006) say that (systems of) categories will be either inductively derived from material, or taken to the data deductively. In real life, they carry on, there are mixed forms applied by which an *a priori* (Bortz & Döring, 2006, p. 330) pre-produced raw system of categories will be refined while viewing the data.

Saunders et al. (2012) propose a similar position. They say that the identification of categories will be driven by the research questions and the objectives of the research. "Categories can be either developed in advance by consulting the literature (concept-driven category) or from the data collected (data-driven category), or both" (Saunders et al., 2012, p. 557). Ethnomethodology, when used for framing the inquiry strategy, requires the researcher to understand *what is going on*. As auditing is a complex activity, the researcher needs to be competent enough to understand what the sequence and the particular activity of the auditor means. Ideally, the researcher is part of the auditors' society, or a member. This applies to me. As it seems to be a positive circumstance, it also carries potential obstacles. I needed to separate my idea of what to do when conducting an audit from what the concept and the subsequent categories of interest suggest to look at.

Primary, the purpose of my research was to investigate the effectiveness of the current audit practice as defined in section 3.3.2 of my thesis. After the analysis of literature, I understood what was expected to be an effective audit. Additionally, I learned about the generic audit principles and their reduced application in the field of QMS auditing. The literature also delivered information about what factors might influence the effectiveness of audits: These are the auditors' competence in terms of knowledge, proceeding and mode, as well techniques to be applied, etc. The literature review revealed information

about what might be an effective audit, but there was no paper found that researched the current QMS certification audit practice. Thus, this determined my research questions, and it also caused me to apply EM as the main inquiry concept, and in particular the studies-of-work approach.

To answer my research questions I decided to observe audit processes by 1) recording the individual auditor's inquiry process, and 2) to monitor and write down the individual auditor's physical activities in terms of physical action and their sequence. Here it was of interest to record the auditors' activities regarding the application of checklists and the usage of methods, like the analysis of paperwork provided by the auditee. Finally, the interview was supposed to uncover the auditors' evaluative process.

The literature review as well as the DIN EN ISO 17021:2011 informed that auditing is evaluation, and the respective frame for evaluation is the DIN EN ISO 9001 in its current version. The DIN EN ISO 17021:2011 specifies the auditors' data collection activities: These are interview, document analysis, and observation. This then determined the first category to be looked at: Data collection activities with the sub-categories introduced by the DIN EN ISO 17021:2011. This category was supposed to collect information on what techniques auditors apply to elicit and collect information needed for evaluation as well as in what way the auditors conduct the audit in terms of its sequence.

Due to the character of an audit, interviewing the auditee is an imbalanced conversation, as I have explained in the ethnomethodology section above. On the other hand, an audit is not a pure question-answer game. It takes some verbal interaction, in which the auditor reacts to things seen and heard as a feature of the interview. This kind of audit action establishes the category of pre-evaluative action. Here, I intended to assign information showing how the auditor reacted to data that was found while auditing. This category was supposed to clarify in what way auditors include the evidence seen or heard into the audit process. This information was collected by audio recording the audit itself.

And once again: Auditing is evaluation. Therefore, it was of interest whether the auditor applied the standard and respective rules of the individual QMS when judging. This established the next category to look at and it was named evaluation. This clearly was

supposed to uncover the auditors' knowledge about the rules to be applied for judgement. This information was collected by audio recording the audit process and by interviewing the auditor.

In the section called factors influencing effectiveness, the term appreciative inquiry appeared. This is one, but not the only way that an auditor might behave. However, this made me establish a category called auditor's behaviour. This category was supposed to collect information about the general behaviour of the auditors recognized during the course of observation, in what way the auditors apply observation, as well as about how they deal with their paperwork (audit schedule, checklist, etc.). This information was collected by audio recording the audit as well as recording what I have observed during and after the audit.

The categories determined appear as the following concept for data generation:

Category	Sub-category	Data generation approach	
Auditor's process of data collection	• Interview • Observation • Content analysis	➔ Observation	Audio record
Pre-evaluative action	None	➔ Observation	Audio record
Evaluation	None	➔ Observation ➔	Audio record
Auditor's behaviour	None	➔ Observation	Audio record Record from memory

Table 7: Conceptual framework for data generation

6.2. **Validity**

Gummeson (2000, p. 93) says that "validity means in essence that a theory, model, concept, or category describes reality with a good fit, just as a good map properly describes Earth or an architect's blueprint is useful for erecting a functioning building. If the map did not reflect the terrain, most people would trust the terrain and abandon the map." Thus, the question is whether the map or the architect's drawing shows what it is supposed to show. In other words, is the drawing really depicting the reality, or do we really see what we think we see? Similar explanations of the meaning of the term validity can be found by Bryman and Bell (2011), Flick (2009), and Gray (2009).

Validity is a term that was obtained from quantitative research. In literature, there is a discussion to adjust validity to qualitative research by substituting this with

trustworthiness, which then is made up of four criteria. These criteria parallel the criteria's internal and external validity as well as reliability and objectivity (Bryman & Bell, 2011; Saunders et al., 2012).

Steinke (2015) reports on three initial positions: The first of them deals with the transferability of the criteria of quantitative research to qualitative research, which covers the criteria mentioned above similarly. Representatives of the second position, as Steinke (2015) informs, doubt in the transferability of quantitative criteria for validity to qualitative research. They discuss different criteria for quality. According to Steinke (2015), they are amongst others:

1) Compensation of one-sidedness, or distortions through the application of complementary methods, concepts, and/or database or additional research;
2) Validation of the interview situations through checking whether any work alliance or power imbalance exists between the researcher and the research participant;
3) Authenticity as a part of the criteria for qualitative (evaluation) research, which comprises the checking of the level of carefulness with which the researcher dealt with the data, participants, as well as with the systematic application of methods and techniques. Even the adequateness of the benefit of the research is of value here.

Finally, representatives of the third group, as Steinke (2015) reports, generally argue against the introduction of quality criteria for qualitative research.

It would have been comfortable if I had decided to follow the third group. On the other hand, throughout the whole process I practiced self-reflection. By reflecting on my thoughts, findings, and also on my own confusion, I actually did continuously what the second group introduced. Initially, I regularly reflected on my underlying research philosophy, which has not changed throughout my research. Though, I needed time to understand that the overall inquiry strategy that fits best would be ethnomethodology. This made me change the way I approached data generation: In the very beginning, I thought it would make data by simply observing the auditor’s action. After transcribing

and coding the data of the first case, I felt that there was not enough information to cover the whole process of auditing, or precisely, to answer my research question(s). Therefore, I additionally decided to triangulate within my study by interviewing the auditors. With that I compensated for distortions as well as I enriched the data base for analysis.

The participants within my study, especially the subjects under study, signed a consent letter beforehand. Additionally, they knew me as a market participant in the quality management business. I and the participating auditors or their employers are not depending on each other in any way; therefore it was ensured that there would not be a power imbalance in place at all. The same applies to the interviews conducted. This has already been described in the data analysis section.

6.3. **Coding**

After the categories were determined, I started sorting the incidents expected by defining codes and sub-codes. These codes were refined while coding. The result can be seen below.

After starting the pre-coding according to the categories determined, I applied computer-assisted qualitative data analysis software (CAQDAS). My initial coding strategy was to follow the pre-set categories and codes. While the categories fitted, the coding was to be refined, or rather expanded by the application of further sub-codes.

The research questions set imply that I had to look for action, thus process coding was then the actual dominant coding strategy. Process coding is also called “action coding” (Saldana, 2013, p. 96). This kind of coding is to be applied when looking for “ongoing action/interaction/emotion taken in response to situations, or problems, often with the purpose of reaching a goal or handling a problem” (Corbin & Strauss, 2008, pp. 96-97). As I understand it, the definition applies for EM and thus, for my research.

I felt that there was a fine line between incidents in and the process of auditing because processes are established by sequenced activities.

When I started coding, I had a vague idea of what might appear, but quickly after I started, some categories appeared accompanied with detailed codes related to them.

When I finished coding the first case, I reorganized my findings in terms of vocabulary and re-did the first case coding to adjust (or calibrate) the categories and codes found so far

by themselves. I tested the validity of my codes by re-coding them again and the result of this was nearly the same.
According to my philosophical stance of constructivism/constructionism and the idea that the auditor constructs the truth about the system audited on the basis of his or her subjective understanding as well as of the context in which the audit takes place, I was not interested in quantitative aspects. Rather, I was interested to look at what pattern-of-incident takes places. Here, I wanted to find out what action was dominant, and what was not, as well as what was missing.

Within the categories, various codes appeared which had been ignored for analysis because they were established by a single incidence. These were incidents which had not established a pattern occurring regularly within one case or even additional cases.
After the first cycle of coding, I recognized that the codes used did not fully allow me to pattern precisely the sub-categories of *interviewing*, *feeding back*, and *back-coupling*. Therefore, I went through the codes again by re-reading the transcribed text accompanied with listening to the spoken words. By doing that I included the tone of the auditor into the coding. The following result appeared:

Category	Sub-Category	Code	Sub-code
Auditor's process of data collection	**Interview**	Chain question	
		Open interviewing	Open questioning
		Directive interviewing	Suggestive commenting
			Suggestive questioning
			Closed questioning
			Asking for evidence
	Content analysis		Review of documents
			Review of records
	Observation		
Pre-evaluative action		Feeding back	Nodding
			Explanatory comment
			General comment
			Heuristic comment
			Referring back to documents
			Referring back to records
			Applying irrelevant requirements
			Discussing evidence
			Reflective comment
			Recommending
		Back-coupling	Referring back to what was said by the auditee
			Referring back to what was said before
Evaluation		Judging without reference	
Auditor's behaviour		Flags up a new theme	
		Violating rules	
		Confrontation	
		Withdrawal	
		Work-together comment	
		Plain conversation	
		Directive comment	
		Finalizing comment	

Table 8: Categories and codes

7. Data produced

In this part of my thesis, I will present data sequentially: The cases will be presented case-by-case and they will start with an introduction to the individual case settings. This will be followed by a short introduction of the respective auditor's *vitae.* The settings and the information regarding the auditors' backgrounds are presented in a way that no other individual, besides those related to the cases, would be able to identify the companies or the auditors. After this, the chapter presents excerpts of data that informs about what I have recorded in terms of the individual auditor's physical proceedings and his/her usage of paperwork, *et cetera*. The next four subparagraphs present examples of the utterances of the auditor(s) and in case needed – the responses of the auditee(s). The information under these subparagraphs mainly was fed into the categories developed in the section that defines the conceptual framework for data making and data analysis.

The penultimate subparagraph in this part of each case deals with the data produced by interviewing the auditors.

The final subparagraph in each case concludes the data presented before.

The description shown in the following section represents summaries only. The complete data recorded was at 80 pages for each case, or about 40.000 words per case.

7.1. **Case 1**

7.1.1. Introduction to the case settings.

This case study was carried out in a company that hires out leased workers to a casting company that produces products for the automotive industry. The service that the auditee conducts is to deliver and organise the workforce to groom, fettle, and polish semi-finished grey cast iron products according to pre-described product quality requirements. At the time of the audit, the company employed a workforce of about 100.

7.1.2. The auditor in charge.

The educational background of the auditor commissioned to execute the audit was a university degree in instrument engineering, as well as the formal qualification required to be appointed as a quality management auditor. He went through various quality auditor courses until the end of the 1990s, while the 1987 quality standard and its

revision in 1994 established the frame for auditing in the realm of quality. Furthermore, this auditor also did additional courses that equipped him with competence in the protection of data privacy.

In the early 1980s, he started working at a public company that operated in the field of precision and optical engineering. During this time, his duties developed from engineering activities to managing a quality assurance department.

Until 2001, he went through various courses which contributed further familiarity with content and knowledge pertaining to his quality auditing competence. Then, in 2001, he participated in a course which introduced the ISO 9001:2000 quality management system. In 2001, he was appointed as a third-party auditor by a certification body.

7.1.3. Observation record data.

The auditor prepared himself and the auditee for the audit by providing an audit schedule in advance that formally and fully fulfilled the regular and mandatory requirements. Earlier, he read/analysed the quality management system documentation, which was sent to him in advance. As a part of the auditee team, I witnessed the following activities: The auditor started the audit by emphasising his appreciation for the commissioning by the auditee and he explained the audit session, according to the audit schedule. After that, he started the audit and he was tempted to stick to the audit schedule. He did not explain the audit process as such nor its potential outcome and consequences. Then, the auditor collected the data for the number of staff employed within the organisation. Here, the auditor found that the number intended by the order differed dramatically from the reality. He noted the number of employees given by the order as the actual number.

During the course of the audit, this auditor mostly sat behind a desk and was prone to concentrate on the checklist in use.

When interviewing the auditee, he started to question and to speak with a loud voice; its intensity declined during the course of his speech until the auditor was rarely understood. Re-starting with a note of exclamation, he jumped from one theme of interest to the next one, led by the audit schedule and the checklist.

During the course of the audit, the auditor worked step-by-step through the audit schedule that was sent to the auditee before the audit. He started by discussing the quality management system documentation he had read before, which entailed the requirement of clause 4 of the standard. For this, he used about a fifth of the overall audit time as I discovered when I went through the audio record. Then, he audited the requirements of clauses 5 and 8, followed by those of clause 6. When he had finished that, the auditor turned towards clause 7 (procurement, sales, and production). For this, he spent about 50% of the overall audit time.

On the second day, he visited the shop floor, which is the place of auditing the parts connected with sub-clause 7.5 (control of production and service provision). Additionally, he considered the requirements related to the infrastructure (sub-clause 6.3 of the standard). I could witness at the site and by analysing the audio record that the auditor primarily used open questions on the shop floor. The auditor's shop floor activity consumed about a sixth of the audit time.

Whereas the auditor showed a very active and directive manner in the office, he changed his behaviour on the shop floor. There, he simply observed what the employees did and what the settings were; the actual inquiry took place in the office.

7.1.4. Audit communication record.

The auditor used three techniques for data collection: Interviewing the auditee (consisting of questioning and feeding back), analysing the content of documents, and observing activities. But, the auditor simply did some 'window shopping'. Thus, observation was not really used to collect data for decision making. The latter has already been described above.

The auditor's data collection activities:

Interviewing in this audit was marked by a kind of directive questioning. Its opposite called open questioning played a subordinate role:

"Where do you control the external SOP's [standard operating procedures]?"

The directive interviewing recognised was to be divided into various different activities and it needs further explanation. The auditor also used comments that suggested answers, although the wording simply sounded like a comment. After repeatedly listening to the audio record, I included the tone of speech of the auditor into the coding: There were various comments that ended with an exclamation and a question mark, e.g.:

> *"Well, you want to say: the service company provides you with five staff, one of them is...he produces non-conformities regularly within your processes, and with that you state: service company, that what you provided is not okay?!"*

Another way to gather information used by the auditors appeared as a kind of suggestive question. This occurred rarely:

> *"Erm, at the production site - I think there is anyone responsible for the manual?"*

During this audit, the very dominant way to interview was done by using closed questions, for example:

"Will that stay a separate office? Or will you relocate to the production site? "

The auditor also asked directly for a certain document or record:

"Practically applied - is there any sample? For example - non-conformity report?",

The auditor's other means of data collection was to analyse the content of the paperwork. This was divided into the reviewing of pre-given rules for actions and the reviewing of records of actions completed according to pre-given rules. For this he spent about one fifth of the audit time available. This was not incidental, it was a dominant process.

The reviewing of records occurred during the entire audit process and it was dedicated to finding evidence of an action prescribed in the quality manual or elsewhere:

"Okay, he [the customer] has ordered! Did you also ask for the quality assurance agreement? [Reading]: 'Details will be arranged in a subsequent quality assurance agreement'. Did your ordering party note! When he does not do it - you cannot force him to do so, but this is actually…."

The auditor kept the record(s), read through them loudly, and recorded the notes that were seen in his checklist. The auditor did not critically discuss the records; rather, he recorded what he read:

"Here are the personal leasing service companies listed, as well as the further suppliers. They have been evaluated."

It appeared to me that the auditor went through the records to find out what their contents were and what clause of the ISO 9001 (and the auditor's checklist) that they belonged to. Additionally, the tone used by the auditor appeared as very degrading to me as a part of the auditee team.

The auditor's pre-evaluative action:

The audit did not appear as a simple question-response game. It was rather a conversation in which the auditor obtained answers to his questions. He also reacted by commenting on issues that were seen or heard in three ways. These were used by the auditor for giving feedback. He referred to documents and records, and fed back by referring to something he knew from elsewhere. Sometimes, he also commented generally, which appeared as chatter that filled the gaps in the conversation.

The auditor referred back to the manual and subsequent documents for discussion, or even for making the meaning clear:

"Well, I tripped on one item: you defined exclusions [from requirements] in your manual. You excluded design, okay. And then you excluded validation, which means that you do not have processes, like adhesive bonding or

welding - where I can determine afterwards, when I destroy the workpiece whether welding was done well.... I understand! But what I am not clear about: why did you exclude the control of monitoring and measuring equipment?"

Another recurring incident was to refer to something the auditor knew from elsewhere and that he accepted as good:

"Well, erm, many companies say - we will wait for the result of document control and erm, when there is not a serious problem… I personally have nothing against…"

or

"These are the things the [name of the certification body] wants me to go through."

The next code that appeared dominantly was *occurring incidents*, which I noted above as chatter:

"Microsoft Excel? Because Excel is always nice, erm, even with the name, which means you can provide, erm, yourself a nice outline. Whereat, you don't have many, erm, you just have 10 permanent staff in that way. I'd say...a kind of qualification matrix then…because you can then easily update with Excel, filter the participants. XYZ what did he [do] in the past. Therefore, for example - my recommendation - this training schedule, once you have started it, actually don't scrap it or don't delete it. Well. This [the training schedule] has to be maintained for ages continuously. Well. Whether it makes sense for you or not! This is another question!"

Further feedback given by the auditor was recognised as explanatory comments, comments on requirements, recommendations, and the discussion of the value of evidence. They were rare in this audit and therefore negligible.

The auditor's evaluative action:

This part of the audit process took place during the audit process where evidence was seen, as well as at the end of the audit when the auditor summed up at the final meeting. At this audit, I found incidents where the auditor judged (evaluated) by not referring to any part of the evaluation frame given by the ISO 9001. Therefore, it appeared as a personal opinion of the auditor:

> *"In principle, I have nothing against it", or*
> *"New employment! Nice. I love it. In a language I do understand."*

Auditor's behaviour:

I witnessed a patronising tone used by the auditor during the audit phases that took place at the company's office during the site visit. However, the incidents coded appeared in the following way:

> *"Erm, potentially you might have already guessed: the 9001 is oriented on processes, sequences consequently, it rather does not deal with costs or any balance sheets….this is also bound by the fact…because we don't act with the 9001 within the so called mandatory area - which means you are doing that voluntarily, I am not a certified public accountant…."* or
>
> *"But, even to use the chance for remarking something positive, and not to go on about missing signatures...".*

Frequently, the auditor used directive comments whenever the auditor wanted to direct the course of the audit:

> *"Let's start with the training schedule…".*

Another incident appeared during which the auditor took the risk of confrontation with the auditee, for example:

> *Auditor: "Okay, but when I cannot work on this, I do not need to note this quality objective! This is a matter of course, otherwise I would not pick on this!*
> *Auditee: There is written: 'to be kept up'!*
> *Auditor: Yeah (shouts). You said 2 million [Euro].*
> *Auditee: ...means, that there are still two competitors which are not supposed to cannibalise [our turnover]. But that is it with the objective.*
> *Auditor: ...Yaeeh, erm…*
> *Auditee: But we cannot increase the turnover [by direct activities].*
> *Auditor: Yaehhe, erm, this is clear, but you don't want less. It is clear... I'll record that again… [withdrawal]."*

The last sentence of the excerpt of the interview marked incidents that appeared as the auditor's withdrawal from his position. This also occurred when the auditor interviewed suggestively.

For example, the auditor referred to what the quality management manual contains and his questioning about customer property:

> *"You only deal with customer property, insofar, erm, there is nothing related to product liability issues, or the like, thus you need to look into your contracts whether there are any requirements, which, erm, require any record, but surely, you did this already [withdrawal], otherwise you would have set any rule for archival… Okay [**merciful**], when you wish to have it this way…."*

Incidents in which the auditor violated audit conventions appeared rarely but are of importance because auditing is about conforming to the rules.As noted before, the auditee employees about 100 staff and the auditor's order contained 43 employees.

Auditor: "How many staff do you have?
Auditee: 60 (not aware of where the question is going)
Auditor: 60?
Auditee: Erm!
Auditor: Let's keep 43! As I understood - they are not permanent employees, the number changes by task…
Auditee: Up to 150!
Auditor: 150???
Auditee: there are 10 permanents…
Auditor: I see, 10 permanents, okay.
Auditee: On the shop floor are more employees.
Auditor: Erm, okay, and the 43 are to be added? Or are they integrated? Okay, I can deal with that in a 'sophisticated way', erm, whereat the [name of the certification body] is just interested in the total number of staff employed. When actually did you have the idea to start this business…."

7.1.5. Interviewing the auditor.

As this was the first case study for my research project, the interview conducted was also the first opportunity to test the interview questions and the schedule.

At this interview, I started by thanking the auditor for participating voluntarily in my research project. I applied this appreciative start to each of the subsequent interviews. Between the actual observation and the interview, some time had lapsed. Due to the time that had passed between the interview and the observation, I verbally repeated the content of the consent letter that was signed by the auditor. This was my general approach to interviewing all of the auditors in my study.

In this interview, I started with the interview question: *"*In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?*"*

The auditor responded:

> *"I cannot answer this question. Honestly, I've never thought about this!"*

Therefore, I tried to go into the subject differently: *"*You know, PDCA means plan-do-check-act and it describes a process. What does the term *process approach* mean?*"*

> *"I don't know. Ah, okay, I see: This means, when I have asked for some basics, and then go through the company - this means process oriented. It suits me when the auditee has process descriptions which give guidance through the entire entity for collecting examples [meaning records]."*

At this point, I left this question because I did not expect that the auditor could answer the question at all. I drew his attention to my next interview question: *"*In what way do you find out whether the organisation has applied the documentation requirements effectively?*"*

> *"It depends on what I [the auditee- verbally the auditor puts himself into the position of the auditee] want to achieve! I expect that certain basic requirements are addressed. From my point of view it has to be done in a way that produces a benefit for the company. What image of the company do I want to create for the public and internally - that defines the documentation requirements! It is important that there is any report of any kind that contains what I am apt to achieve and what status quo I have. That needs to be described!"*

I then tried to reformulate my question again for two times, but the auditor again did not describe what process he goes through. Instead, he again described what exactly he wanted to see. Therefore, I went to the next interview question:

*"*In what way do you find out whether the organisation has applied the management process requirements effectively?*"*

> *"It depends on factors [such as]: what the organization wants to be achieved, what customers have to be served, in what scope does the organisation act, requirements of the company's requirements…When I am [the auditee- verbally the auditor puts himself into the position of the auditee again] able to fulfil these factors, then I think that the measurements taken and the processes introduced will lead to success."*
>
> *"The first issues are, how the top management is committed [to the requirements of the ISO 9001], when interviewing one can find out whether the quality management representative (QMR) mainly responds, or whether the chief executive officer(CEO) has his own notions for the whole system [ISO 9001]. Well, when implementing [the system] practically - what benefit he [the CEO] sees with the system…or, in many small enterprises which I [the auditor] usually audit - from my point of view the system introduces a basic structure in a company. The main point for me is, whether the CEO is willing to introduce such a basic structure, that he cares for the subject [anyhow]."*

I reformulated my question frequently. Finally, by saying that I was interested in his thought process, but he did not answer at all. Therefore, I left this topic and drew his interest to the next three interview questions. The same as before appeared. The interviewee did not describe the process of data collection, data integration, and decision-making; he simply referred to records that he wanted to see as well as to his experience in different companies before as a point of reference for what was effective. Consequently, I finished the interview by thanking him for his patience.

7.1.6. Case conclusion

This case showed that the auditor basically used two approaches for conducting this audit: This was to follow the standardized audit checklist issued and created by the appointing certifier as well as an experience-based approach. The checklist mainly led the

audit progress. The experience-based approach used by the auditor established the foundation for evaluation as the observation (transcript) and the interview revealed. This finding addressed the research question for what approaches the auditors use when auditing.

The research question, *What techniques do auditors use when auditing,* can be answered for this case as follows: The auditor used questioning and content analysis for collecting data. Observation took a backseat in terms of data collection and their analysis. Closely related to the auditor's approaches for data collecting, another technique was used: pre-evaluative action (feedback), as mentioned in the first part of this case documentation.

The questioning was dominated by the auditor's directive action: Either the auditor asked directly for what he wanted to see, or he led the auditee to supply evidence by suggestively directing the auditee's action. As the second technique used by the auditor for data collection, the technique categorised as content analysis was identified. The analysis of documents was done by the auditor before the audit took place. This played a role in the category called *feedback*. On the other hand, the analysis of records was to be observed. The auditor recognized that there was a record, and mainly looked for the shape of the record but did not try to analyse whether the content of the record was right in terms of the fulfilment of the requirements of the ISO 9001.

When interviewing (*feeding back*), the auditor spent a lot of time on discussing the documentation that was read before the audit. Another finding was that the auditor commented on things seen or heard in the course of the audit heuristically. Both the directive way of questioning and the heuristic way of *feeding back* indicates that the auditor was pre-occupied with what was to be found and the point of reference was his experience.

This was supported by the auditor's further comments, at which the auditor offered his opinion (*general comment*) instead of referring back to the requirements to be applied.

The interview of the auditor revealed, and by that it supports the comments made before, that the auditor wanted to see certain things he expected, and his judgement was based on what he thought was right. The latter then was supported by the coding of the

case observation: The judgements of the auditor were not supported by any reference made to any requirement of the standard. It was not clear whether the judgements made were based on the auditor's personal opinion or not.

During the audit, the auditor used language and a tone that was degrading to the auditee. In addition, the auditor was prone to confrontation and there were incidents in which the auditor judged the auditee's action, but the auditee withstood. This could have been solved by referring to the requirement which had been violated. Instead, the auditor tried to force the auditee to agree. In each of these situations, as well as in other incidents, the auditor moved from his position because of the resistance of the auditee, rather than putting forward his argument. This indicates that there was no real argument, only an opinion. This finding was supported by the interview. The interview contained basic concepts of the standard that the auditor is trained in. The auditor's answers revealed that he was prone to collecting records, trusting in paperwork, and judging based on his experience. Furthermore, he could not describe the process that he went through to reach a judgement, nor could he explain what the underlying process approach and the PDCA principle were.

Another incident found was that the auditor was ready - for an unknown reason - to violate basic rules as described above. The auditor's behaviour indicates that he uses his position-based power. The resistance of the auditee, the subsequent reaction of the auditor, and the findings during the interview support this idea. The auditor does not show expert power as defined in the literature review. In accordance with the literature review, this auditor can be identified as a 'pragmatic auditor'. Although there were various incidents during this audit indicating that the auditor questioned the conformance of the audited management system, the auditor did not require corrective action. This can be identified as a self-interest threat to power (or independence) because of the expected future engagement.

7.2. **Case 2**

7.2.1. Introduction to the case settings.

The second case was conducted on a public company that has dealt with the transportation of goods for more than 15 decades. The current service carried out is threefold: The transportation of goods, the coordination and processing of logistics projects, and finally the execution of customs services related to cross border transportation contracts. The company describes itself as: A specialist for logistics and customs-clearance eastwards.

The company has already been certified for a couple of certification cycles. The observation took place during the recent re-certification audit.

7.2.2. The auditor in charge.

The auditor appointed to conduct this audit holds an engineering degree in process technology. Additionally, he participated in a university course dealing with industrial engineering. The latter is tailored to achieve competence in technical engineering as well as in business administration. These studies he passed in the early 1990s. After this, he worked in a tool construction and design company for about five years, and since then he has been a business consultant as well as a quality management system auditor. In 2003, this auditor passed the training necessary to become an appointed quality management system auditor.

7.2.3. Observation record data.

This auditor acted rather informally. Although very polite, his preparation for and the opening meeting of the audit did not address the formal requirements given by the audit standards, the pre-set procedures of the certification body, and audit conventions.

This auditor did not send an audit schedule in advance, nor did he follow the opening procedure presupposed by the ISO 17021 and his certification body. The auditor noted that “following the rules would make it less comfortable for the auditee,” which generally does not apply.

The auditor conducted the audit politely and partly followed a hidden schedule regarding the chronology. At the end of the audit, this auditor conducted a closing meeting at which he gave the result of the audit. It was at that time that he finally turned to the formalities set by the ISO 17021, the certification body, and also by the audit theory.

The auditor started the actual audit by listening actively to the CEO's report about the company's current status, the changes the company went through in the last period, and the review (reporting the performance results of the previous business year). Additionally, the auditor collected data about the future quality objectives and their planning as a result of the previous target-actual balancing, which were presented verbally by the CEO. The auditor also discussed with the CEO the general issues of staffing quantitatively as well as qualitatively. All this information was collected by simply opening the themes of interest, but then listening to the explanations of the CEO for long periods. In terms of the standard, the auditor investigated here the requirements of clauses 5, 6, and 8 without collecting paperwork superficially required by the standard. It seemed as if he was simply collecting information to be approved later during the further course of the audit.

After this intense listening period, which took about 30% of the time the audit, the auditor left the CEO and visited the CEO's assistant manager. Her task is to keep the records required by the standard according to clauses 4 and 5 and partially to clauses 6 and 8. Here, the auditor simply collected the records by asking open-ended questions as well as asking what the process that produced the documents was like. The auditor did not actively review (or discuss the content of) the records and documents that were seen; he looked at the content of the record and collected the name and the status to be recorded in the standardised checklist that he used and was supposed to use according to the certification body.

After this, the auditor he went to the shop floor where the customer-related processes take place. This shop floor is divided into a sales and service administration area. There is also a storage area where the company stores and then loads customers' property onto trucks.

In these areas, the auditor made an observational tour, and then started auditing here by first interviewing the heads of the departments. After a short 'meet and greet', the auditor started to frame the themes to be audited. This was followed by more narrowly asking open-ended questions. In cases when the respective interview partner started a 'journey through the entire universe', the auditor stopped them politely and reformulated the question by asking a rather directive question, as I was able to witness.

Before coding, the impression was there that the auditor used some 'interview rhythm' that led to a result but was not directed by pre-judgements or any pre-supposed evidence. It was rather a polite offer of a course that finally leads the auditee to an individual answer.

After the tour on the shop floor area, the auditor went back to the CEO. He started the closing meeting in which he reported his findings and the resulting judgement. This audit phase consumed about 10% of the overall audit time applied.

Although the auditor did not use an audit schedule, it seemed as though he had one in mind. Additionally, the information/evidence collected was recorded in a checklist predefined by the certification body. This checklist contained the whole list of the requirements of the ISO 9001:2008.

In the last phase that is dedicated to announce the auditor's judgment, the auditor did not refer to the ISO 9001 at all. It was not clear whether the audit outcome was based on the requirements of the evaluation frame set by the standard.

7.2.4. Audit communication record.

The auditor used two techniques for data collection: Interviewing and observation. Both techniques were conditional upon each other. Analysing documents and/or records did not take place; the auditor rather used the paperwork for checking whether the things said by the auditee could be proved by records.

The auditor's data collection activities:

A remarkable finding is that this auditor did not dissect the company's documentation at all and even the review of records was not found directly.

However, even this audit was dominated by directive interviewing. This kind of questioning appeared dominantly. Within this, a kind of suggestive commenting and closed questioning played a major role.

Suggestive commenting appeared as follows, for example:

> *"Well, since this is…this is obvious. When they [the customers] use Android that you use the, potentially - a Google link….application, or something like that!?"*

Even in this case, the wording itself did not determine the suggestive character of the comment. Even the tone used by the auditor was to be considered. Closed questioning appeared as follows:

> *"Who will be checked then? Every employee or those who received cars?"*

Occasionally, the auditor asked suggestively or asked for evidence directly. Both kinds of questioning appeared similarly, but played a minor role compared to the questioning described before.

The activity identified as asking for evidence, appeared in the following way:

> *"…and this is what I wanted to ask you personally: How do you process an order? Well, can you illustrate this with an example [evidence] you are working on right now?"*

As already mentioned, open-questioning activities played a minor role in this audit but it was not that under-represented as in case one. Additionally, I had to recognise the very first part of the audit in which the CEO appeared as a grateful interviewee, 'telling the story' without being asked. However, open questioning was applied throughout the whole audit, not following any pattern.

Finally, even in this audit I found serial questions like:

"Yes okay, what changes resulted? Erm, have you recognised suitable opportunities for improvement appearing from the last periods? Or did it remain the same?"

It needs to be noted that this kind of questioning did not appear at the first phase of the audit, when the auditor interviewed the CEO. This auditing activity took place on the shop floor exclusively. The kind of questioning (open, closed, or suggestively) appeared within this without a recognisable pattern. I witnessed that the auditor often used open questions to open a new theme of interest. After listening to the auditee, the auditor then directed the course of the auditee by more narrowly asking by using first suggestive comments and suggestive questions, followed by closed questions. With that, the auditor led the course of the audit.

The auditor's pre-evaluative action:
In this audit, the pre-evaluative action appeared in two categories: The auditor reacted by feeding back as well as by back-coupling to evidence or samples seen earlier in the audit. This is the first case in which *nodding* appeared my study. This kind of behaviour appeared here as an active communication tool of the auditor. It appeared as *humming* but also as a simple spat of *okay, I see*, whenever the auditee paused during their explanation of an issue. This nodding was not simply signalling the attendance of the auditor: It was an active encouragement for the auditee to carry on, as well as seemingly a sign of the auditor's recognition or understanding of what was explained. And again, it was the tone that made the *nodding* somewhat more than just a gesture or tone.

A special peculiarity of the auditor was found often: The auditor commented in an explanatory way by reflecting on what he has seen or heard and by that, showed his understanding of what was audited, e.g.:

"In this case it is a matter then, erm, for the folk which is in contact with customers; they need the means for being able to satisfy the customers' needs, which you have identified. Erm, how often someone needs to plan the contact with the customer in advance to produce the awareness of the customer. To bring it to the field…"

While collecting evidence at the secretary's site of the CEO, the auditor frequently referred to the documentation checked in advance as follows:

> *"Erm, okay. The manual has still the status, erm, of 2010 - which I have already recognised in the document control phase?!…the author of the manual released it in 2010."*

However, the code '*referring to documents*' took a backseat as well as '*referring to records*' too, in that the auditor read the records attentively, but commented rarely.

Furthermore, recommending and general comments appeared, but rarely too. Therefore, I ignored them.

The second activity used within the category *pre-evaluative action* was *coupling-back* and appeared in this case study first. This was not a feedback activity; it was an activity of connecting the earlier as well as the current parts of the audit.

This *referring to what was said by the auditee* can be exemplified as follows:

> *"What you did, erm, what you said before - the folk [employees] have a keyword: peripheral knowledge! Not everyone is equipped with the professional competence to act on the relevant market. But how do I produce the competence needed?"*

This kind of back-coupling was used by the auditor either to bridge themes or to refine his audit questions.

The other way of back-coupling was named as *referring to what was said before* and appeared as an attempt by the auditor to link things noted before in the course of the audit. They appeared in the following ways:

> *"This morning I already asked for the approach used, Mr. [name of the interviewee] could explain that fairly well, erm, that he also, erm, let's say*

that he has direct customer contacts there, even the, erm, customer [satisfaction] survey runs by using such a list."

Comparing the appearance of both the back-coupling activities, the '*referring to what was said by the auditee'* appeared dominantly.

The auditor's evaluative action:
Throughout the audit, the auditor rarely judged in an obvious way, but in some cases he judged without referring to the evaluation frame applied:

"… this is absolutely perfect. Insofar, it is conforming to the standard and well established. But, practically it will not be done in a convincing way."

Auditor's behaviour:
The auditor applied three different activities: *directive commenting*, *commenting conclusively*, and *violating rules*. For the latter, I have already mentioned in the introductory section for this case. That is, the auditor did not send an audit schedule in advance, which is a basic requirement of the DIN EN ISO 17021 as well as of each certification body.

The auditor used directive comments frequently to direct the auditee's action:

"Erm, what I'd like to ask you is, erm, the proceeding of your activities. Erm, the quality management [system] define certain issues of work proceedings at your site, right? And this is what I want to ask you personally, how do you work through the order?"

Commenting-conclusively statements appeared also frequently. This kind of comment marked incidents where the auditor left an issue or an auditee to carry on auditing elsewhere:

"Well, in terms of verification documents I do not have further questions at

the moment!"

The auditor did not apply audit as required by the audit conventions and the certification body (see appendix 14).

7.2.5. Interviewing the auditor.

When I started interviewing the auditor, I followed the general approach that I have already described in case 1.

In this interview, I started with the following question: *"*In what way do you find out whether the organisation has applied documentation requirements effectively?*"* The auditor replied [abbreviated version]:

> *"Thus, this [the documentation] is not a theoretical means, that had been written for the sake of any examination or auditor, or for any institution, but for those responsible to cover processes."*

Although both statements display the auditor's idea what the documentation requirements of the standard define, it did not explain how the auditor finds out whether it is applied effectively. Therefore, I formulated my interest again: *"*Okay, how do you find out whether the requirements you formulated are addressed by the specific documentation and whether it fits for the organisation?*"*

> *"… this is a documentation which is well accepted [by the employees] - this is an element which one can evaluate! And then, when interviewing auditees you can find out how the [process and employee] relationship to the documentation is - whether the supporting advisor wrote the documents or whether the CEO has ordered or produced them by himself - how the [reality] references to the documentation is. [This can be found out]… on the basis of either citations or through remembrance [displayed by the auditee] - or by [observed] application of the documentation."*

The interview question *"*In what way do you find out whether the organisation has applied the management process requirements effectively*"* was replied to by the auditor with a general statement:

> *"Well, the requirements of the standard are met, when I principally get the right answers. Paper [documents] are rather not required, but the proceeding…the fundamental question in quality management is whether the quality is ensured- and this will be done by processes [approaches], partially- if required- by records- but not necessarily [supported] by a documented rule- they can also be proved [audited] by explanation and declaration."*

"…and how do you find out whether the organisation has set suitable objectives and scheduled them suitably?*"*

> *"Here you can wonderfully audit what the organisation thinks what quality is... A quality objective might be a demand, an aspiration level that has to be achieved by, for example, a department. Therefore, I always ask what the auditee thinks that quality is."*

*"*In what way do you find out whether the organisation has applied the resource management processes effectively?*"*

> *"This is what I query [interview]: to what extent are the qualifications fulfilled for a planning of resources. This means: Is there any orientation within the company towards what resources are required?"*

After this, the auditor still explained what kind of examples he usually wishes to see or hear to come to a judgement. This might be a liquidity planning, a buffer store for resources to reduce the risk of failure of resources, *et cetera*. Observations as well as content analysis that are guided by interview procedures are the source of evidence for this auditor to resolve this interview question.

Then I asked the pre-set interview question regarding clause 7 of the standard: *"*In what way do you find out whether the organisation has applied the product realisation process requirements effectively?*" He responded*:

"This you can find out by sampling - that one [the auditor] discusses with the auditee: which relevant processes have to be examined. By sampling one can find out, by evidence. Well, through observation, through interview, as well as through comparison - whether the actual process follows the rules. They [the rules] might be provided in a written way, but there can be general regulations based on company practices…whatever…what are the actual criteria [to be fulfilled], what is the common standard… Interview, observations, comparisons, documents, and records...."

After this, the auditor replied to the interview question *"*In what way do you find out whether the organisation has applied the measurement, analysis, and improvement processes effectively?*"* He said:

"That is the association 'quality objectives'- what was the target and what has been achieved - otherwise it would not make sense! That is the target-actual comparison: The seen measurement processes need to be related to the objectives set by the top management, just this makes sense! Consequently, one can just compare targets with achievements. This again has to be audited by interview and content analysis of records."

This interview ended with the question *"*In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?*"*

"For me - that is the post-mortem-examination - principally, this is the evidence of successful planning, which will then be examined at the audit by sampling. That is the cross-linking of processes, for example the monitoring activity, which plays a role in clause 8 [of the standard], that one looks, how do I measure any status, how do I react to achieve the desired result."

7.2.6. Case conclusion

In this audit, the auditor was not really concerned about the basic documentation: He did not refer to the quality manual and its subsequent documents while auditing. Even records and their review were not of importance.

The research question, *In what way do auditors quality management system auditors audit,* can be answered for this case as follows:

This auditor did not follow a pre-produced audit schedule, but the auditor was procedure bound to the content of the audit checklist. On the other hand, because the auditor did not follow a pre-set audit schedule, he violated basic audit rules determined by various standards. This was not coded as such because it took place before the actual case was started. Although he had no schedule prepared in advance, he obviously had one in mind. The observational part as well as the audio recording of the case study shows that this audit was partitioned in 4 audit phases:

- Phase 1: In this phase, he collected as much information as possible that was connected with the clauses 5, 6, and 8 of the ISO 9001 by listening intensively to the CEO of the auditee. This phase obviously established the groundwork for the further audit proceeding, which was shown in audit phase 2 by what I called back-coupling. Stage 1 was marked by what I labelled as *open questioning*, and a great deal of *nodding* also took place at this stage.

- Phase 2: In this phase he collected evidence (documents) which was mandatory and individually required. At this point, the auditor researched what process produced these records, what had caused the content and what it was for, but he was not concerned about the content of the records, he simply recognized that they were there. Additionally, there were some incidents indicating that he looked to see whether the findings were in line with what the CEO had explained before (code: *referring back to what was said before*). Additionally, in this phase, the auditor often referred to what he had read before (code: *referring back to documents*). He also reflected often on what was said by the auditee in the course of the interview (code: *referring back to what was said before by the auditee*). At this stage, the auditor did what I labelled as using a *closed question* and *asking for evidence*.

- Phase 3: After the previous phase, the auditor made an informative tour through the shop floor areas followed by interviewing the heads of the respective

departments. Whereas the auditor started to audit the CEO by simply asking open questions [code: *open questioning*], at this level he led the audit by using interview techniques designed to encourage, to seduce [*directive interviewing*], as well as to push the auditee [code: *suggestive questioning* as well as *closed question*] into answering, but always in a very appreciative way. But, while using these techniques, there was no incident at which the auditor seemingly looked for certain expected evidence.

- Phase 4: This final phase finished the audit; the auditor went back to the CEO of the auditee. In this closing meeting, he reported the audit findings to the CEO and presented the resulting judgement by explaining what caused the various results.

In general, phases 2 and 3 of the audit were marked by a great deal of *directive interviewing* techniques: The auditor started frequently by asking open questions followed by some kind of questioning labelled with the code *directive interviewing*. It is remarkable that the auditor did not use this technique to get a certain answer or evidence; he rather used this to lead the course of the audit to come to any evidence. At every stage of phases 2 and 3, the auditor kept on reacting reflectively to information offered by the auditee. Additionally, the auditor also used further techniques for directing the audit: He often commented in a way that directed the course of the audit, and he also used a couple of times what I coded as a *finalizing comment*. He did this when attempting to leave a subject of concern.

As the case documentation shows, this auditor listened a lot and through this, he rather collected indicators (circumstantial evidence) rather than paper-based evidence. He led the audit in a way that provided information to collect data to understand how the auditee had implemented the system along with the PDCA principle. His way of auditing was dominated by listening to the auditee's presentation of his/her action, accompanied by questioning about why they were doing things in such a way, and what had to be achieved, as well as how the result will be measured and fed back.

As I have witnessed, the auditor listened and observed first before asking and collecting evidence.

What the auditor did not do during the course of the audit was to test whether any action had been carried out in line with the internal rules set out in the quality manual, as the underrepresented occurrence indicates of the code *referring back to documents*.

The auditor also used *explanatory comments* to what he had seen or heard: This appeared as an attempt to validate his understanding of what he had seen or heard. Seemingly, he expected the auditee to object/interject in the case that the auditor had misunderstood.

In principal, the audit was marked by clear or subtle appreciative comments as well as two-way communication. Additionally, the auditor did not just 'eat the food' offered, he also examined critically what was found and seen. When not satisfied, the auditor had further questions on a subject.

Basically, the auditor looked for certain records where required by the standard. But he did not just accept the paper itself; he also examined critically the content of the individual record.

The research sub-question, *What approaches do quality management systems auditors use when auditors audit,* can be answered for this case: His general approach to auditing was a process oriented one: He started with auditing the input for a process, and its transformation as well as whether the expected output of a process was there. While acting this way, he followed a (hidden) schedule comparable to the state-of-the-art in quality management system auditing.

According to this auditor, the PDCA circle is a principle to the audit, and qualitative as well as quantitative evidence is acceptable.

This auditor sees the quality management system documentation as documents to define what has to be done. According to him, the audit examines whether these rules are applied as set. I think this is somehow emphasizing his general approach to auditing, which seemed to be a process-oriented approach according to the PDCA principle. On the other hand, this auditor never examined the rules set in the management system

documentation in detail, thus I doubt whether he applied the documentation as a means for reference.

The research sub-question *What techniques do quality management system auditors use when auditing*, can be solved as follows: The auditor audited very reflectively (especially proven by the interview of the auditor revealing the auditor's mind-set towards the PDCA circle) by using interviewing linked to observation. Content analysis of documents/records was underrepresented and played only a role for filling in the checklist required by the certification body. During the entire audit time, the auditor did lead the audit in terms of directing the course of the interviews actively, but the auditor depended on the responses from the auditee or on the evidence seen.

This auditor used personal-based power to conduct this audit, expert power was identified. On the other hand, the auditor did not act critically. Since he is a freelance auditor, it can be presumed that he was not interested in losing the future audit engagement of this company. This can also be identified as a self-interest threat to independency. In addition, the auditor violated the audit rules by not sending the required documentation for the audit, creating an opportunity for threats to independence.

7.3. **Case 3**

7.3.1. Introduction to the case settings.

This case study took place in a company producing and selling biodegradable oils, soap, and other chemical products for industrial use as well as compounding various chemical products on request. This company is a limited business.

Five staff members constitute the blue-collar workers, running the manufacturing and the goods issuing processes as well as the control of incoming raw materials.

7.3.2. The auditor in charge.

The auditor assigned to run the audit holds two engineering degrees; the first is concerned with the use of water and its economics, the second with the technology of inorganic and organic chemistry. A great deal of her professional experience came from

water and chemical engineering until she went into the underground engineering business, chiefly concerned with structural hydraulic engineering. In the early 2000s, she worked for about five years in the consulting business as a project manager delivering services for quality, project, as well as innovation management. At the time of the case study, she was working as a project manager in an underground engineering business, installing infrastructure for telecommunication. She has been a part-time freelance auditor since 2008. She acquired her educational background about quality management system auditing in 2006.

7.3.3. Observation record data.

In this audit, the auditor sent an audit schedule in advance. This woman also went through every procedure pre-determined by the certification body, the audit standard, as well as the audit theory. She welcomed the auditee to the audit procedure and thanked the company for the order as such. Then she introduced the audit schedule, and both parties agreed to the pre-planned procedure. And at the end, she also conducted a final meeting by presenting her findings and recommendations. In that way, she kept to the formal requirements.

When interviewing and/or discussing with the auditees, her elbows were tight against her waist; her hands were always clasped together nervously. And just like in case one above, whenever the course turned into a strong discussion, she left this point without coming back again.

The introductory part of the audit took about a half an hour, during which the auditor introduced herself and the audit process fully. After that, the auditee and the auditor did a tour of the whole site, which took another further half an hour. After that, the auditor conducted the audit, and finished this by holding a concluding meeting for another 30 minutes. I noted this because the audit took about five hours, which means that one and a half hours were consumed on just the basics. Not forgetting, according to the audit conventions, the audit had to last for about eight hours.

This auditor put the audit schedule aside and used the audit checklist that was issued by the certifier.

She started with auditing the documented management system (clause 4 of the standard), followed by chasing the records that were usually expected to be shown and according to clause 5 of the ISO 9001. This was followed by collecting the records that were expected to be shown to prove the outcome of the processes required in clause 8 of the standard. After that, she audited the requirements of clause 6 of the standard, which means that the auditor collected the records that were usually shown. Finally, and before announcing the audit results, she audited the shop floor (clause 7) by interviewing the employees in front of a computer. This computer runs a production planning system software that also stores the data of the process results of the preceding production activities. But, the auditor simply asked for the documented outcomes of the processes.

Generally, this auditor acted politely, but neutrally, not showing any personal interest or emotion.

This auditor often used chain questions (e.g., *"*What is planned for the incoming goods inspection? Erm, will you analyse the incoming goods? What is planned and how do you record the incoming goods inspection, and the goods receipt?*"*), but she never asked critically or even why the auditee performed a particular activity. Primarily, the auditor looked for certain aspect and it appeared as if she had certain expectations of the auditee. She brought up themes to be audited by asking suggestive questions or commenting suggestively. On the other hand, chasing paper was a big deal for this auditor. She asked actively for particular records as well as grabbing for them to fill in the checklist.

As I witnessed, this auditor was sometimes concentrated on analysing records. Analysing does not mean that she looked for the content of the record; rather she was prone to checking whether document control rules were properly addressed, and even she looked at the grammatical and stylistic quality of the record.

During the whole audit, the auditor did not actually lead the audit; the communication was an imbalance. The auditee reacted to her questions, but also chatted about day-to-day activities or even his private issues without being interrupted by the auditor. Additionally, the auditor was quiet for long periods as she dealt with her paperwork.

Sometimes, the auditor recommended things but it was not clear what requirement it belonged to. When she was asked what the recommendation was for, she could not explain. She simply responded, *I like it* (code: *judging without reference*).

This auditor changed her behaviour when it came to the shop floor part of the audit. Here the frequency of asking increased dramatically. At this stage, the auditor simply audited the records held by the computer; no observation of production activities took place at all, as I already mentioned above.

7.3.4. Audit communication record.

The protagonist of this audit used two techniques for data collection: Interviewing the auditee, which consisted of questioning, feeding back, and also referring-back to things audited before, and the second technique was observing activities. The observational part has already been mentioned above.

The auditor's data collection activities:

Even this auditor used the interview techniques identified before: *open questioning* and *directive interviewing*. Although the latter appeared dominantly, the *open questioning* was not under-represented. This technique made up about a third of the overall questioning.

It appeared in the following way:

"How do you process the communication with the client regarding the customer's satisfaction [survey]?"

Often, *open questioning* appeared as part of what I named as *chain question*. The latter was used often. Here, *open questioning* was regularly meshed with *directive interviewing* or appeared solely:

> *"Erm, what do you need to consider? What changes appear potentially during the next periods? Did you install any mechanism [for analysis]?".*

The content of the questioning illustrates that this auditor is rather prone to looking for documents or records instead of processes. This was dominant in this audit.

Commenting suggestively was to be recognised often, whereat *closed questioning* and *suggestive commenting* appeared equally, but dominantly. In this audit, *closed questioning* was heard this way:

> *"Do you have a basic assortment of products to be purchased?"*

Suggestive commenting appeared in the following way:

> *"Well, you mentioned sub-contractors, by this you also meant suppliers?!"*

As in the cases before, the tone turned the assessing wording into a provocative statement that signalled an expectance of any answer by the auditee.

Suggestive questioning was found in the following way:

> *"Well, who does the laboratory jobs? You or also your employees?"*

In this audit, the auditor frequently asked for certain documents, records, or similar. This was labelled as *asking for evidence*:

> *"Okay, well, I would like…a record. One is enough. Simply only [one]… [I] need to collect records. Which means… for my ordering party [certification body]."*

The auditor's pre-evaluative action:
In this audit, interviewing activities were compartmentalised into questioning, *feeding back,* as well as *back-coupling*. Within *feeding back* and *back-coupling* no new activity compared to the cases before was found. However, *feeding back* was dominated by *general comments*, which appeared about twice as a *reflective comment*. In this audit, the auditor also commented in an explanatory way. Even *commenting heuristically* surfaced at various times. *Recommending* and *referring to documents* emerged rarely.

Commenting on requirements could be heard rarely but also needed to be mentioned. The auditor audited occupational health and safety issues, which are not part of the ISO 9001 and thus not to be audited.

As in the case before that was introduced, in this case the activity I named as *nodding* appeared frequently. And even here, the tone of the *mmh* or *yeah* or the like, characterised its meaning for the communication between the auditee and the auditor: In this case, the *nodding* appeared rather not as a sign of interaction and understanding; while nodding, the auditor dealt mainly with her checklist and simply signalled her presence with this.

Commenting generally appeared in the following way:

> *"Well, I mean: this is always a weighing of the economic efficiency and...when one needs this for a longer period - one needs of course…anyhow needs to be able to afford in this moment."*

Commenting reflectively emerged about half as often as *commenting generally*. They looked like:

> *"Well, I haven't seen anything that was not integrated - so far, even in the suppliers list. Well, the samples I have seen I have found here within [the management system]. [The case] Mannheim not immediately, but as I noticed, you have it… erm…there in. That fits."*

Commenting explanatory surfaced less than one fifth as often as *commenting generally*:

> *"Well, I am supposed to use the checklist provided by the certification body. Erm, we auditors are required to - every auditor is equipped with the same audit documents. Erm, of course - subjectivity always plays an important role, but in a way that we [the auditors] work off every normative requirement - therefore the checklist. And that we collect and record evidence necessary [to fill the list]."*

This auditor used sometimes what I called *commenting heuristically:*

> *"Okay. Now I would…one evidence. One is enough. Simply for…I need to supply the evidence… Which means: for my principal [certification body]."*

Recommendations and '*referring to documents'* appeared rarely, thus they are negligible. The other communication technique used by the auditor and labelled as *back-coupling* emerged as *referring to what was said by the auditee*. This was applied in the following way:

> *Auditee: "We looked a long time for a new employee, and we think we found the right one finally….he is here for about two months in the meantime."*
> *Auditor: "But he is employed by contract?"*
> *Auditee: "Yes!"*
> *Auditor: "Because, you mentioned before that one had started in 2013!?"*

The auditor's evaluative action:
This action by the auditor took place during the audit and also in the final meeting. Even this auditor did not explain or signal what her judgement was based on. She did not even notice what the frame for the evaluation activities were:

> *"I think this is fairly good [judgement]…", or*
>
> *Auditor: "You have an amazing company."*

Auditor's behaviour:
In this audit, I found just three categories. Two of them are already known from previous cases, but one was new: This I labelled with *flags up a new theme.* Although it simply appeared three times, I think it is remarkable in terms of how the auditor led the audit. It appeared like a fracture between two sections of the audit in the following way:

> "*Annual turnover! Staff development! Have you started as [name of the business] with three employees or as a one-man company?".*

The other directive action that was labelled as *directive commenting* was recognised fairly often:

> *"Erm...according to the audit schedule one [the certification body] has given that one starts after the opening meeting , erm, that you quickly show me the enterprise. That I can get an idea, erm, how the process [of the audit] will be later. And then we will start with [reviewing of] your documentation: management review, internal audit. The things which I will need as proof [to be recorded in the checklist]…"*

The third code recognised in this area appeared just once, but is of importance in terms of abiding by the rules for auditing:

> "*Well, this is also always an issue, erm, of improvement. It can't be at the first sight that everything is perfect, but it is…there are always things where one says: one will schedule this. And these are objectives for the next period!.*

The auditor did not apply audit as required by the audit conventions and the certification body (see appendix 14).

7.3.5. Interviewing the auditor.

Also in this interview, I started with thanking the auditor for the participation and time provided for the interview.

At this interview, I started with raising the question: *"*In what way do you find out whether the organisation has applied documentation requirements effectively?*"*

Because the auditor did answer the question I reformulated and detailed the question repeatedly and arrived at the question:

*"*How do you recognise a requirement to the documentation?*"* And the response was:

> *"Erm, as soon as one non-conformity appears… or different approaches or different statements [appear]. As soon as non-conformity appears anywhere… I have the problem… that, erm…."*

At this point, the auditor stopped talking and stared a bit helplessly. Since I did not intend to direct the auditor's responses, I stopped dealing with the documentation requirement issue. I turned towards the question: *"*In what way do you find out whether the organisation has applied the management process requirements effectively?*"* The quick response of the auditor was:

> *"That is the question: were there customer complaints, where there deviations, were there non-conformities in the company!"*

Since this response did not answer the question, I remarked upon the headline of the proper clause of the standard's section plus I refined the question: *"*Management responsibility: How do you find out whether the top management is committed?*"* The auditor said the following:

> *"Obligatory is always… someone of the top management is there [participates in the audit]…from the point of view of the auditor - is anyone [top management] there who scheduled the day when the audit takes place… or, was it [the audit process] delegated to the quality management representative: according to this - you can ask me… But not just participation counts… also the statements of the top management… why they implemented the management system... why do they process it, what do they want [to achieve] with it! Also the statements of the management review… but at least the readiness for the participation in the opening meeting… and the records - that it will not just be presented by the quality management representative, but from the CEO… that he is really committed [the CEO].. not just reads - there you are!"*

After shortly pausing, she carried on:

> *"There are mandatory requirements for the content of the quality policy! Depending on the size of the company and the statements [of the top management] - what do I want to achieve - it [the policy] has to mirror anywhere: why do I run a quality management system - how important is*

its application within the company - how important is the customer for me as the objective of my activities to supply a proper quality!"

By using the vocabulary word *objective*, the auditor directed my questioning to another more detailed question: *"*In what way do you find out whether the quality objectives set by the top management are appropriate? *"* She replied:

"Appropriate? I think - are they [the objectives] process oriented? Are they set for the value adding processes and suitable to control processes: regulating factors for processes! Erm, it might be the annual turnover… turnover per customer… that is, erm, it can be designed flexibly, it needs to… it makes no sense when quality objective… let's say: illness statistics - that is what I have to record anyway!"

Still not having clarity about my initial question, I dived deeper into the related sub-clause of the standard: *"*In what way do you find out whether the quality planning audited fits?*"*

"You have good questions [laughing]: It needs to be made sure that the management system still functions while the company works! Quality planning… that it is adequate, erm, means: that I identified the processes… that I think about how the processes might be developed… no chance hit… but continuous improvement!"

She paused a moment and carried on:

"I actually don't know what you are heading for… the planning… certainly the quality objectives which are set by the companies are always dedicated to: if possible less non-conformities and a maximum of target attainment… it needs not to be 100% of attainment!"

At this point of the interview, the interviewee seemed to feel uncomfortable with this subject; therefore, I turned to the next question: *"*In what way do you find out whether the organisation has applied the resource management process requirements effectively?*"* The auditor responded quickly:

"I always look for the existence of customer complaints and non-conformities. If there are none to be found the processes work well!"

Due to the clear-cut answer of the previous question, I turned to the next: *"*In what way do you find out whether the organisation has applied the product realisation requirements effectively?*"* She responded unambiguously:

"When there are no non-conformities, no customer complaints, and the turnover is good… the processes fit to the requirements!"

And even here, this statement shows that this auditor has a clear idea about what to look at. Thus, I turned to my next question: *"*In what way do you find out whether the organisation has applied the measurement, analysis, and improvement processes effectively?*"* While raising the question, the auditor showed helplessness, and the response revealed why:

"Measurement and analysis processes! I actually have no idea, I don't know!"

As described above, the last question is the 'CA' (check-act) part of the PDCA circle imposed by the ISO 9001. I asked the auditor: *"*In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?*"* And the response was:

"You can ask, whether they [the auditee] are satisfied with their results. Sure, they [the auditee] can have a specified planning - what they want to do. But this is… I actually don't know where your question is heading for this!"

Due to the time available for this interview and the increasing level of indisposition of the interviewee, I finished this interview by thanking her for the time spent with me and for her patience.

7.3.6. Case conclusion

In this audit the auditor applied two approaches to conduct the process of data collection: She used the checklist issued by the certifier for progressing as well as her expectations (experience-based approach) of what was to be found. This was revealed by the audit observation (transcript) as well as the interview. The latter showed that the auditor reduced the answer to the question the auditor had to answer (*Does the system audited conform to the requirements of the standard?*) by simply looking into whether the system and its processes produce non-conformities or not. Even the outcome of the coding indicates that the auditor had a general idea of what was to be found (outcome). She did not audit whether the inputs as well as the transformation of the input results in any pre-determined result. This again indicates that she had a clear idea of what was to be found, regardless of what the auditee's company was like. Through her way of questioning, the auditor led the auditee to certain responses or to the presentation of paperwork. This finding addressed the research question of *What approaches the auditor used when auditing*.

In this case the question, *What techniques do auditor use when auditing,* can be answered as follows: This auditor simply used interviewing as a data collection strategy. Although she sometimes referred to records that were seen, she actually did not review the contents of the records in terms of their relevance to the process audited. Thus, the existence of the records was of concern but not their meaning.

The auditor analysed the management system documentation in advance at her office. She never referred to the documentation.

Even observation of her audit data collection strategy or technique did not play any role. She did not try to audit production as well as production processes at all.

As the use of a *chain question* and *directive interviewing* were dominant, the interview technique can be understood as very directive. This was emphasized by the category of behaviour, where the auditor was prone to directing the auditee by headlining the theme to be audited (code: *flags up a new theme*).

When *feeding back* as part of the interview, the auditor did not add something that really addressed the issues of the processes audited, instead she used general phrases as a communication tool.

The way the auditor collected information, the directive way that leads the audit as well as the lack of detailed feedback, indicates that the auditor was pre-occupied by what was to be displayed by the auditee.
In this audit the auditor's judgements seemingly are based on her personal opinion of what was to be found: She never referred to the underlying rules. This is complemented by the result of the interview held with the auditor: According to the auditor, the underlying concept for judging positively, or either negatively is whether the system under control produces non-conformities, or not. Although the interview questions simply used the standard's vocabulary the auditor is trained in, she did not display a full understanding of the concepts included.

By initially acting according to the rules for conducting audits the auditor demonstrated personal-based power. But, the auditor did not show any power during the audit. She simply consumed evidence as presented by the auditee and her questioning was non-critical. Her physical behaviour and the lack of intervention in the case of the auditee disturbed the audit by leaving the subject of interest. In addition, this auditor offered recommendations for improving the management system but could not link them to any requirement of the standard. The interview also depicted that the auditor does not have personal (expert) power in terms of the framework for conformance evaluation. She can be identified as an accommodating auditor according to the literature review. In addition, the auditor is a freelance auditor who depends on orders. Therefore, there might be a self-interest threat as well.

7.4. **Case 4**

7.4.1. Introduction to the case settings.

In this case, the observation took place in a service company that offers service around the purveyance of standardised and of customised bearings. Additionally, this company offers supply chain management activities that are based on Kanban and Just-In-Time approaches. A further service is the cleansing of parts and the assembling and delivery of various predefined sets of parts and components. Finally, this auditee runs consulting services around the logistics regarding the provision of bearings.

7.4.2. The auditor in charge.

The auditor of the fourth case has a university degree in railway wagon construction and has a very long track record of auditing. While most of the auditors mentioned are aged between 47 to about 55, he is in his 60s and is already looking forward to retirement.

He has a proven track record of quality assurance, research, and development, as well as production management at various management levels. During the late 1990s, he established his own consulting business and became a freelance auditor. However, his educational background related to quality management reaches back to the time before the latest release of the quality standard.

7.4.3. Observation record data.

After the introduction, the auditor negotiated the audit schedule he had sent in advance and he went through the audit in a very polite, but clear way. This audit was a recertification audit, but the auditor had been newly appointed to conduct the audit in this company. Thus, as well as being new to the auditee when conducting certification audits, he was fully new to the settings as well as to the auditee team. The only difference was that he reflected on the previous audit through having read the audit report of the last year's surveillance audit. The old audit report contained some recommendations given by the previous auditor.

In this audit, I frequently had to stop tape recording the session because of ethical issues: Often, partners of the auditee team members telephoned them. During the call, the respective auditee representative and the caller discussed business or other issues. The phone call was not part of the audit and not even of interest. Additionally, the caller was not aware that an observation was taking place; he or she had not signed the consent letter.

As already indicated above, the auditor of this case study sent an audit schedule in advance. This audit schedule was based on the quality documentation of the auditee, which the auditor had analysed at his home office and he followed the pre-fabricated form of the appointing certification body. With this, the auditor obeyed the rules specified by the certification body as well as the audit standard DIN EN ISO 17021:2011.

Even in this audit, as a member of the auditee team, I witnessed the auditor's action: The auditor expressed his sincere appreciation for commissioning the certification body to deliver the audit service. Additionally, he basically explained the certification process and discussed the audit schedule in terms of adjusting this with the auditee's day-to-day activities. At the very beginning, this auditor offered and discussed the form sheet called a print order. With that, he anticipated the positive outcome of the audit process.

This introduction phase took about a half an hour and also included the interpretation of the mandatory quality management documentation provided by the auditee in advance. In this phase, the auditor also collected and reviewed the company's data, such as the number of current employees, or the scope of the firm. This was followed by a walk-through of the facility.

In this case, the auditor used the checklist on a portable computer. While walking he used a small notebook to record information that was seen or heard. Whenever he got to the desk where his computer was, he transcribed his scribbles into the electronic checklist. When working in front of the computer, he simply followed the logic of the checklist by scrolling down and working through the issues as they appeared on this checklist and as they were assigned to the company's structure. He rarely jumped around within the checklist; the checklist led his action. As I sat next to him, I could see that the checklist was already pre-filled with findings that were not yet seen.

After the walk-through phase, the auditor started with the themes listed in clauses 5, 6, 7.2, as well as clause 8. These themes were to be presented to the CEO and the quality management representative. This was followed by auditing the company's practice according to further sub-clauses of clause 7 of the standard. This took place in the room where the audit was being conducted, but was sometimes interrupted by a short visit to the place of the audited action. This interruption did not establish an observation; this was to look at the action records directly where they arose.

At the end of the audit, the auditor held a final meeting to inform about the outcome of the audit. This was not summarising the actual audit; it was rather to inform that the auditor had completed the action he thought he was supposed to do. The overall audit

time was about five hours; the introduction phase took about thirty minutes, the walk-through consumed fifteen minutes, and the final meeting took another fifteen minutes. The overall time allotted for this audit according to the company's size and the regulations was supposed to be about 1.25 man days (equals to 10 hours audit time) including the review of the company's quality documentation. Although the auditor did this in advance, this simply can be calculated as about one hour. Thus, the auditor did not spend the overall audit time as required.

It still needs to be mentioned that the auditor spent a lot of spare time on the restoration of vintage cars and motor bikes. This is relevant as the auditor asked the auditee to deliver a specific bearing, not easily available on the open market. The discussion about the specification, time period, and costs, consumed some time. Although the auditor was not trying to get the bearing for free, I think this discussion cannot take place whilst auditing. This issue and the time spent for the overall audit was later marked by the code of *violating rules*.

7.4.4. Audit communication record.

In this case, the auditor used two techniques for data collection: Interviewing the auditee (consisting of *questioning*, *feeding back*, and *back-coupling*) and analysing the content of documents and records. Observation did not take place at all; the walk-through activity as well as the interruption of the interviewing in front of the computer to go to the place of action was not to be defined as observation. No monitoring of production activities took place at all.

The auditor's data collection activities:

Even in this audit, *directive interviewing* dominated the data collection. Its opposite that is labelled as *open interviewing* appeared in the following way:

"What have you scheduled for the next period?"

Directive interviewing was also divided into *closed question*, *asking for evidence*, *suggestive question,* and *suggestive comment*. *Asking for evidence* appeared dominantly, for example:

"Let's look for two examples. Please, also bring the letter of appeal for the quality representative along!"

Asking for evidence was followed by the *closed questioning*:

"They were trained? Do you have a training record?"

Suggestive commenting and *suggestive questioning* appeared similarly. The latter looked like:

"This is this blast, erm, blast machine!? Isn't it?"

As in the previous audits, the wording itself would not establish the suggestive part of the sentence; it is the tone the auditor used for saying it. *Suggestive commenting* appeared in the following way:

"Locked by the customer!? Not locked by you but by the customer! You just stored this for the customer!"

In this audit, *chain questioning* appeared a few times. Those questions looked like:

"Have you anything prepared for, erm, for roller bearings? And then, erm, for the washing?"

Content analysis was rarely used for data collection. Both, '*reviewing of documents'* and *reviewing of records* were identified rarely. Therefore, I ignored their appearance. In the case of *reviewing of records,* the auditor simply collected the name of the document after looking at it, especially at its appearance and headline as well as the revision data. These were the data to be included in the audit record.

The auditor's pre-evaluative action:

Even this audit was not marked by asking-response activities. It appeared as a real conversation. Within the *feeding back* appeared dominantly what I already mentioned as *nodding* in a previous case. With that, the auditor reacted to an action or comment by the auditee by using an agreeable sound or word such as, *hmm, yes,* or the like. The tone and the physical action witnessed gave the impression that the auditor signalled active

listening as well as immersion into the content of what was said. On the other hand, while doing so the auditor mostly dealt with recording evidence that was seen or heard. Whereas the message given by *nodding* was rather understood intentionally, there were also feeding back activities with real messages. This, which I named as an *explanatory comment*, appeared often:

> *"Well, okay. We already have this. I noted this already in advance [on the checklist at home], because: I phoned Mr. ….and asked for a couple of things. Which I have processed already…"*

General commenting appeared nearly equally as often as *explanatory commenting* and in the following way, for example:

> *"But there should be an objective which can be influenced by the employees. Of course, they should be negotiated with them with the aim that they know that the company…."*

Besides *nodding*, *explanatory*, and *general commenting*, *feeding back* dominated. Occasionally, *recommending* appeared. This was found in this case in the following way, for example:

> *"If I were you I would consider: do you have employees who stamp [any record]. A stamp that enables you to trace back whether it was washed, and secondly: who did it. Just a consideration! No mandatory requirement. One can see it often in mail order companies: the delivery note is stamped with what is in the parcel as well as who packed it. This way you can track who has washed this. In case of a complaint you can track then what went on!"*

In the latter recommendation, the auditor used an example he knows from elsewhere to substantiate his recommendation. *'Referring to records'* also often appeared:

> *"Here [in the management review record], you wrote that the deviations found in the internal audit have been solved and [the result] is well established in the enterprise. What about the external*

audit?"

Referring to documents appeared rarely, so I shall ignore this here. Although the auditor's activity called *applying irrelevant requirements* was heard rarely, in this case it also needs to be considered because the auditor discussed, and therefore consumed audit time on issues not belonging to the requirements of the standard framing the audit, e.g.:

> *"Rack inspection: Well, the inspection you can do on your own. Well, those who have technical understanding can inspect the rack on their own…."*

Other incidents framed with the term *back-coupling* contained the auditor's activities of *referring to what was said before* and *referring to what was said by the auditee*. The first activity mentioned here appeared rarely, which means the auditor did not refer that far back to processes audited within the audit, but the second incident appeared often:

> *Auditee: "We have two drivers!"*
>
> *Auditor: "Two employed drivers! Well, okay!", or*

The second way to collect data used by the auditor was labelled as *content analysis*. In this category both the codes of *review of documents* and *review of records* seldom occurred. Thus, they may be disregarded.

The auditor's evaluative action:
Even in this audit, the category of *evaluation* was a hidden process. Contrarily, the activity labelled as *judging without reference* appeared occasionally:

> "*This is bad!"*

Auditor's behaviour:
This audit provided six different issues to be recognised. The dominant finding here was named *directive commenting* and showed up in the following way, for example:

> *"…I would discuss the document checking with the top management, we look at it firstly. Mr. …, in the meantime you can already prepare the records of the last audit."*

Another incident found occasionally was named *plain conversation*. This kind of conversation consumed time that was not spent on the process of auditing. Also in this audit, the sub-code *flags up a new theme* appeared a few times:

> *"Audit: audit schedule, audit record - I'd like to see this meanwhile!"*

This kind of comment was used to alter the themes of interest. Another activity of the auditor covered statements of the auditor to frame the way he audits. This comment was named as a *working-together comment*:

> *"I attach great importance to partnership [in an audit]. You are an equal partner…!"*

The last issue found in this audit was *violating rules*. This was recognised once but remarked upon here because it compromised the whole audit in terms of its validity. The auditor started the final meeting at 3pm, and the audit was supposed to last until 6pm:

> *"I could carry on this way; I have time, until 6pm!"*

Finally, he did not apply the time appointed for this audit as already mentioned above (see also appendix 14).

7.4.5. Interviewing the auditor.

This interview started with the same procedure as every interview conducted before in this study. Also in this case, the observation and the interview took place with a greater time lapse between both activities.

In this interview, I started with the following question: *"*In what way do you find out whether the organisation has applied the documentation requirements effectively?*"* The auditor replied:

> *"Firstly, I deal [analyse] the organisational structure [organisational chart]. After I have learned how they are structured, erm, this defines what I expect in terms of descriptions..."*

I felt that there was a need to detail my question a bit more, so I asked: *"*In what way do you find out whether the organisation has defined the interrelationship of processes

effectively?"

> *"Erm, there needs to be a certain document structure - the document structure, erm… It is not about the detailedness of descriptions…there is a need for addressing certain principles!..."*

This answer did not address my question, so I refined my question again: "How do you find out whether the documentation fits to the organisation?"

> *"I need to find the scope and the process landscape [common document] applied in the organisation!"*

Still not satisfied, I detailed my question again: "Well, you have seen and read the company's documentation [quality management manual]: How do you actually find out whether the documentation and the organisation fit to one another?":

> *"I need to find the processes which I found in the documentation in the company by scrutinising this in departments..."*

"And how do you find out that the findings that are seen fit to the requirements of the standard?"

> *"I compare with the standard, the standard is engraved in my brain – I compare [laughs as if he was caught]…I compare this with my experience I've had since 1994…I've been working in this area for about 20 years…and have gained experience…of course, by the jobs I did before and as a consultant. That helped me to understand the standard better."*

I had the impression that I would not get additional information if I tried to dig further at this point. Thus, I turned to the next pre-set interview question: "In what way do you find out whether the organisation has applied the management process requirements effectively?"

> *"Employees have to be deployed in the organisational structure [names in the organisational chart], which know their job. The jobs have to be described in job descriptions containing the authority (power) needed. Thus,*

I look for documents [that can prove this]. But [I look] also for a competence matrix. Well, there are documents that prove this!"

I expanded my question by asking: *"*How do you find out whether the company's structure fits to the quality policy, and therefore supports the objectives of the company?*"*

"This [evaluation] is based on my experience. There is a need for certain structural units. I compare this with what I have seen in different companies!"

Still not satisfied, I went back to the question: *"*What is the role of the company's quality policy?*"*

"Quality policy! According to my opinion - this is a double-edged sword. Mostly, it is pre-defined by the consultant [that supports the company by implementing the QMS] and simply adopted by the company. And this without understanding is what is meant by that. I just accept the quality policy as it is."

The auditor carried on:

"Well, I always try, erm, by auditing I always try to lead the company systematically [to conformity]. I have the intention, erm, that I say - the standard [requirements of the ISO 9001] is a mountain, the peak is far away - and we want to reach the peak together. And when I [the auditee] want to climb the peak [conformity] in the first audit - it can be that the company does not achieve [the certificate] what it is intended to. I understand the certification process as an action to assist the company's further development. I identify myself as a partner…"

Since this part of the interview was concerned with the content of clause 5 of the standard establishing the essential requirements of the 'P' in the PDCA circle, I meant in this interview to dig a bit deeper: *"*How do you find out whether the quality objectives set by the company are appropriate?*"*

> *"… [Heading for] Objectives should also be a struggle! But, I actually cannot evaluate [them] in terms of the conformity required. Despite having done that already for 20 years. I am always happy when there are any objectives!"*

This honest statement signalled that it made no sense working further on this question. Therefore, I turned to the next interview question: *"*In what way do you find out whether the organisation has applied the resource management process requirements effectively?*"* The auditor replied:

> "*At first there need to be job descriptions, then that the company deals with the structure of the qualification of its employees. This ends up in a competence matrix!"*

Since the auditor's reaction informs about what paperwork he expects to see, I tried to focus the auditor's thoughts on my actual question: My question is: *"*How do you find out whether the process led by the company is effective?*"*

> *"I check whether there is a document called competence matrix! That they provide the means for trainings! I look for the training schedule - and check whether those means are included and approved by the top management. That exists in many companies, erm, such as a cost schedule!"*

Since human resources are just one of three resources to be considered according to the standard, I tried to expand the auditor's focus by asking: *"*And what about infrastructure and work environment?*"*

> *"I ask about how they maintain their machinery and how the employees will be trained for being able to manage the machinery!"*

Still dissatisfied, I carried on asking: *"*How do you find out then that - for example - enough machine capacity is provided…even enough staff capacity…? Purely quantitative?*"*

"That is the task of production planning! Is there a residue planning - how do they deal with the issue - are there meetings, erm, sales, production, process engineering, design…!"

Due to the fact that the interviewee responded to the question by heading towards production, I went to the next question: *"*In what way do you find out whether the organisation has applied the product realisation requirements effectively?*"*:

"I ask for residues. What caused them? And have they held a meeting…and if there is no meeting [meeting minutes] available…I must confess that I deal with that differently at every company…!"

Due to the time so far lapsed, I turned to my final interview question: "In what way do you find out whether the organisation has applied the measurement, analysis, and improvement processes effectively?*"* The auditor returned:

"Well, I need to say that this is a tightrope walk for me: I myself am …with the results… or how I do shape it [the audit process]…I am much discontented with myself. With myself, but also with the auditee! Erm, let me say that this way: when I look for the requirements, then I often see that it is scanty! ... Well, this is what I actually don't understand well!"

Appreciative of his honesty, I finished the interview by expressing my gratitude for the time that he spent and the information given!

7.4.6. Case conclusion

Even in this audit, the auditor used a checklist-based approach to conduct the audit. He used the standardized list to be filled in. This list was managed electronically. Additionally, this auditor applied an experience-based approach. This was observed as well as indicated by the data collected during the auditor's interview. Furthermore, the auditor expressed honestly that he sometimes lacks the competence to understand the audit findings/requirements of the standard. With that the research question, *What approaches auditors use when auditing,* was addressed.

In this case, the research question, *What techniques do auditors use when auditing*, can be answered as follows. The auditor simply used questioning for collecting data. A review of the documents and records did not apply here. Although the auditor asked for records, he simply asked for them, but he did not analyse the content and their effectiveness. But, it should be noted that the review of the quality management system documentation took place before the actual audit. On the other hand, the auditor did not refer to the documentation when *feeding back*. This indicates that the documentation satisfied him well, but was not used by him to analyse the effectiveness of the application of the system described in the documentation.

Even in this audit, the questioning was directed by the auditor's directive action: *Directive interviewing* dominated the interview. Within this, the questioning clearly directing the auditee's responses or actions dominated.

Although *directive interviewing* dominated the questioning, the auditor left enough space for the auditee to have his say. This is marked by *open questioning* as well as the feedback activity called *nodding*. Further, activities within the category of *feeding back* showed that the auditor did not act that reflective to evidence that was seen or heard, as he simply took the evidence as provided. On the other hand, this auditor used *heuristic comments*, *explanatory comments*, as well as *general comments* to feed the communication process.
Also, this auditor spent time on issues not related to the requirements that weren't part of the DIN EN ISO 9001:2008.

As the mandatory documentation was seemingly not important for the audit process, *referring back to records* was to be recognized. The auditor discussed the records that were seen. This, the questioning, as well as the incidents collected within the category *back-coupling* established a balanced communication. Within *back-coupling*, the auditor's activities of linking things noted before in the course of the audit can be ignored, as they were rare. Otherwise, *referring back to what was said by the auditee*, which means to speak about a comment/answer given by the auditee previously, appeared regularly.

The other way of *back-coupling* was coded as *referring back to what was said before* and appeared as an attempt by the auditor to link things noted before in the course of the audit that can be ignored.

The evaluative action was marked by the remarks of the auditor that rather established his opinion than being a reference to any requirement. This was emphasised by the interview: The auditor stated at various times, with welcome honesty that he lacks the competence or the ability to apply requirements. His action, and thus his judgement, is based on 20 years of experience, but not on the standard itself.

Within the category of auditor's behaviour a new code was found: This auditor applied what I called the *work-together comment*. With that and the findings in the course of my interview, I could see that his audit is a support activity. The auditor was not about to find out whether the system audited conforms to the requirements, rather he sees auditing as a tool for improving the auditee's system. This contradicts the actual objective of an audit! While coding another rule violating incident took place. The auditor did not apply the time allocated for the audit. This issue and the time spent on auditing issues not related to the requirements (*applies irrelevant requirements*) reduced the effective audit time.Additionally, the auditor spent time on negotiating a private need with the auditee, which threatened the autonomy of the auditor.As the techniques used by the auditor for collecting data have already indicated, the audit was marked by the directive action by the auditor. The codes of *flags up a new theme* and *directive comment* both support this impression.

Initially, the auditor presented himself as an expert (personal power), but later, various activities of the auditor introduced many threats to independence. By offering 'partnership' the auditor makes himself an advocate of the audited firm. In addition, the auditor asked the firm to solve a private issue and additional self-interest might be present because of the self-employment of the auditor. The interview conducted with the auditor after the observation and the usage of a pre-filled checklist during the audit show that the auditor has no personal power founded on expertise. The auditor did not clash in any way with the auditee. This identifies him somehow between a pragmatic or accommodating auditor (see literature review).

7.5. **Case 5**

7.5.1. Introduction to the case settings.

This last case study took place in a company that is located in Germany but was acquired by a Canadian company in 2012. This company is specialised in dealing with industrial and machinery projects, especially in the handling and logistics of these kinds of tasks. This company calls itself officially a solution provider, whereas they simply organise solutions instead of acting. In other words, this company acts as a broker. For this, they also offer project management; their offer consists of a portfolio of necessary services, including, but not limited to: dismantling, loading, export crating, marking (labelling), export documentation, letters of credit consulting and negotiation, trans-shipment, intermediate storage, unloading, unpacking or uncrating, erection, and turn-key installation, as well as insurance coverage and customs clearances, *et cetera*.

The German subsidiary is a limited company and consists of two locals who, thanks to the internet, can deal with overseas colleagues as if they were sitting at the same desk.

7.5.2. The auditor in charge.

The auditor appointed to conduct the audit is employed by the certification body; he does not work on his own account at all.

The auditor of this case holds two university degrees: The first one in communication technology and the second in plastics engineering. In the mid-80s, he joined a public company that acts worldwide in the scope of electronics and communication technology. At this company, he was employed in quality assurance departments until he became the head of the department. During this time, he conducted product as well as supplier auditing worldwide.

In the mid-90s, he left and became employed by a UK-based worldwide acting certification body. At this time, he passed the trainings necessary to be appointed as an auditor. Additionally, he went through special trainings conducted by the certification body. Through this, he acquired additional knowledge regarding the industrial scopes he

was appointed for. In 2000, he left this certification body and was then employed by another one, and he still works for this company.

7.5.3. Observation record data.

During the course of the audit, the auditor showed a friendly, informal behaviour. Furthermore, he often made attempts to decrease the atmosphere of an examination by leaving the subject of concern for short times and/or by starting plain conversation about themes not belonging to the audit. Then he often slid back to the subject of concern in a very subtle way.
The audit started with an informal welcoming. The auditor then introduced himself and spoke about some parts of his career path and the audit scheme superficially. Additionally, he discussed the audit schedule sent in advance.

This was followed by auditing the themes belonging to clause 4, 5, and 8 of the standard. After this, the auditor audited the issues related to the provision of the resources (clause 6). And then the auditor looked for the value adding chain (clause 7 - production). Whereas the part before took place in a separate room and was based on digging through paper, the latter took place in front of a computer that was used to record the activities of the company. This computer stored potential customers' requests for proposals and the subsequent communication. Even the monitoring of service delivery took place via computer or by telephone.

After the auditor finished off the actual auditing procedure, he positively concluded the audit verbally and discussed the print order of the future certificate to be issued by the certification body. When concluding, the auditor did not refer to the individual requirement to be applied; rather he offered his opinion regarding the status of the management system.

During the audit, the auditor used a short self-developed checklist, as he noted on request. This checklist contained the themes and sub-themes to be audited, but was not a common checklist. Common checklists usually contain not only themes; they also contain parts of the text of the standard. In this case, the checklist simply contained headlines, as

if this list was dedicated to help with the audit comprehensively by reducing the risk of forgetting to consider every issue.

The audit took about three and a half hours. According to the auditor, another two hours were spent on document control at his home office. As in the cases before, the auditor violated the rules for auditing (see appendix 14).

7.5.4. Audit communication record.

In this case, the auditor used two techniques for data collection: Interviewing the auditee (consisting of questioning, feeding back, and back coupling) and analysing the content of the paperwork. The review of documents took place in advance and was not observable. During the time of the audit, there was no business activity to be processed by the auditee. Thus, there was rather no chance to observe the activities. Also, I could not witness any attempt by the auditor to monitor such activities.

The auditor's data collection activities:

In this audit, the main technique used was what I call *directive interviewing*. *Open questioning* played a tangential, but not prevalent role. *Directive interviewing* appeared in this case as a *suggestive comment*, *suggestive question,* and *closed question,* as well as *asking for evidence*. Whereas the latter appeared rarely, the other three ways to require information within directive interviewing arose with similar frequency. *Asking for evidence* was used in the following way, for example:

> *"Well, let's work through successively: The management review. Please, show this again!... "*

Also in this audit, *suggestive commenting* was used to provoke the auditee to act as expected by the auditor:

> *"Let's look for the case where you order something: You surely have any [suppliers] within your portfolio [of suppliers] where you think: okay, this is the one we choose!?"*

Again, when *suggestive commenting* was applied, the tone used when formulating a sentence was a provocation for the auditee to react. Its close relative *suggestive questioning* was found less:

> *"… At this stage, you need to care for the logistics for [the part of the contract regarding the shipment between] Hamburg and Russia, right?"*

Both of the suggestive questioning techniques dominated the directive questioning. *Closed question* also appeared regularly, for example:

> *"Is it the same as with deposit palettes? Does it exist with containers too?"*

The auditor's pre-evaluative action:
In this audit, interviewing was divided into questioning, feeding back, and back-coupling. In general, the auditor asked more than to use *pre-evaluative action*. Within that, *feeding back* dominated the pre-evaluative action. *Nodding* appeared here as the most frequent action. In this case, *nodding* appeared as a simple gesture or as an indication of *okay* or *yes*. Another frequent action of the auditor was what I labelled as an *explanatory comment*. This appeared half as much as *nodding*. *Explanatory comment* appeared in this audit this way:

> *"Well, I like to learn from others: … Well, this is very interesting. Such a welding procedure sheet, and how it looks when it was welded then. When one processes destructive testing…when one has the chance to observe this…this is fun, and therefore I learn a lot [while auditing]."*

By this the auditor explained his own curiosity that exists when auditing any company for the first time. On the other hand, the auditor also explained the standard processes that were seen or expected by the standard as follows:

> *"This is very very important! It is of great importance when selecting suppliers! When evaluating suppliers! It is an ongoing process. Well, and, erm, let me say that this way: evaluating the suppliers per delivery is one part. It is like an examination to be written…and then the supplier rating*

that one does once per year, erm, for example…the Frenchman X or the Englishman Y did this or that, that is like a year end supplier valuation. Like a summary, like a testimony."

Another activity of the auditor was what I named as *recommending*. This took place a couple of times but did not determine the audit process.
When auditing, the auditor occasionally referred to records that were seen:

"Well, that's good! Well, now we have here the XXX Equipment [companies name; the auditor analyses a contract]! This is the Canadian equipment which was produced by him!"

As noticed, this took place occasionally, but not often. The incident that I named as *referring to documents* took place more rarely. But it needs to be mentioned because it indicates that the auditor analysed the documents in advance effectively, as mentioned in the first part of this case report:

"Standard operating procedure! I have seen that elsewhere!".

Reflective commenting appeared just once, therefore it can be ignored. The other incidents within incidents called a *pre-evaluative action* was found and that was named *back-coupling*. These auditor's actions appeared as *referring to what was said before* and *referring what was said by the auditee*. Within *back-coupling*, the latter appeared dominantly:

Auditor: "…which needs to be agreed, right!? But the objective itself is not important at all. Whether I transport raw eggs or dynamite or, erm, 20 containers. This is not important!"
Auditee: "Well, one needs to negotiate what the action has to be, right?...Sometimes, an entry criterion to enter the suppliers list is just a criterion. It depends on what it is! And this one needs to, erm… a standard does not exist. Right?!
Auditor: "Well, it is pointless to mention that - in case that one has a quality system then - he performs better by 20% than others do!"

As *referring to what was said by the auditee* established a direct action, the other sub-code of *referring to what was said before* established the auditor's action of referring to incidents that were seen or discussed earlier in the audit, and therefore when different processes were audited. This appeared a third time to the immediate referring: I could witness this the following way:

> *"And now the customers' complaints. No complaints? Well, nobody wishes complaints. But I …we spoke about that!"*

The auditor's evaluative action:
In this audit the auditor rarely evaluated things that were seen or heard. Just three incidents were recognised as *judging without reference*, for example:

> *Auditor: "Well, it is that easy [judgement]: All done and dusted [indicating the end of auditing]."*
> *Auditee: "Ready?"*
> *Auditor: "Yes!"*

The auditor's behaviour:
In this audit, I found three activities in this category. Although the code of *violating rules* appeared just once, it needs to be remarked:

> *"As the earlier we can finish [the audit], the better!"*

I actually don't know how much time the auditor spent for reviewing the documentation at his home office, but the overall audit time the auditor was supposed to perform the audit was set to take about eight hours. The time measured was less than three hours in this audit.
The other activities to be mentioned and found were *plain conversation* and *directive commenting*. The latter appeared in the following way:

> *"Okay. Well. Okay, okay. I understand what you do. But, I need to see something tangible [records or the like]! Shall we go to your workplace*

where the disposition takes place? Shall we there? And you will briefly explain what takes place there, and I will interview you incidentally!"

Plain conversation appeared in many cases and dominated the audit. The auditor often often told of his experience, for example:

"Today, there are more trains in use. The tube station in Jing Ling is very clean. And everything is glassed! You can't fall onto the rails! But also in big tubes there is no chance for it!"

The auditor did not apply audit as required by the audit conventions and the certification body (see appendix 14).

7.5.5. Interviewing the auditor.

At this interview, I also started by expressing my gratitude for having had the opportunity to observe the auditor's work as well as to interview him. Unfortunately, the interviewee informed that the time for the session was limited due to travel concerns. Therefore, and also because there was no chance for meeting him next time, I had to optimise the interview as such.

I started with the sub-question: *"*In what way do you find out whether the processes are defined and applied effectively?*"* to the interview question, *"*In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?*"* The auditor replied:

"There is no requirement in the ISO 9001 - and it can't be a requirement of the standard that interrelationships between processes have to be defined! It depends on how the applicant of the standard deals with the subject - his key process [production or service process]. One can simply ask what the impact of the qualification on their key process is! And when I get a good answer - then I know that he [the auditee] has understood well that he needs a proper sub-structure to steer its key process well…"

*"*Well then, you look for the availability of resources?*"*

> *"Sure, it cannot be that I [the auditor puts himself in a position as if he was the auditee] present myself poorly because of a lack of resources! I mean, nobody would do that. But many 'turn this qualification screw'!"*

*"*To what extent is this linked to the quality policy?*"* I asked then the auditor to address a sub-question of the interview question: *"*In what way do you find out whether the management has applied the management processes effectively?*"* The interviewee replied:

> *"Well, those who don't understand their processes - the interrelationships of the impacts - also the different kinds of processes…procurement, measurement tools, the kind of insurance like operator self-tests, which I can just do on my own [means an auditee] when I am trained well: All this determines the objectives…!"*

I recognised that the interviewee was showing some discomfort; therefore, I left the issue and turned to the question, *"*In what way do you find out whether the organisation has applied the documentation requirements effectively?*"*

> *"I can't know it in advance before meeting the partner [the auditee] for the first time. But I can do that in the audit. Depending on the size of the sampling in [the auditee's] processes…! I do it on-site and check: Has he [the auditee] described [in the documentation] what he does! And then the process owners have to show me where they [the process owners] are to be recognised within the quality management system!"*

I added another sub-question: *"*To what extend do they have to describe their action?*"* And he responded:

> *"…I [the auditee- again- the auditor puts himself in a position as if he was part of the auditee team] don't need to tell an unskilled worker how to*

blow his nose, but it [the documentation] needs to be established through operational necessities. Thus, I can't define in advance that this and that have to be described - I need to have a look at it!"

Pleased with this clear answer and due to the shortage of time, I turned to the next interview question: *"*In what way do you find out whether the organisation has applied the resource management processes effectively?*"* The auditor said:

"I can just determine by observation what - according to my opinion - has influence on work safety, quality - like lighting, tools - what has been supplied - also staff and machinery - of course!"

*"*But what about the staff? How do you find out whether the right staff is there, qualitatively and quantitatively?*"*

"It depends on how the process owner - who is responsible for a certain process - plans his resources…!"

With the time available in mind, I turned the interview to the requirements of clause 8 of the standard: *"*In what way do you find out that the organisation has applied the measurement, analysis, and improvement processes effectively?*"* The auditor responded but did not understand my question or was confused. Therefore, I simply commented: *"*Sorry, but we will deal with clause 8 for the moment!*"*

"*I see! Okay, in the end I cannot wait to see afterwards whether the services have been successful. I need to establish this at every service. Do I need to test every service, is there any situation, which requires a measure!"*

However, the interviewee did not respond to the actual question, thus, I needed to adjust this again and I asked: *"*While you conduct an audit, you will find measurement, analysis, and improvement processes. How do you find out whether they are effective?*"* He responded:

"I know what the enterprise does [produces or services], what is contracted with the customer - and I look for whether what is there – corrective and/or

preventive action fits for the customer requirements. That needs to be ensured!"

I again recognised his increased discomfort. Therefore, and due to the time available, I turned to my last interview question: *"*In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?*"* The auditor looked at me angrily and started heavy sighing:

"This is that what you can recognise in the PDCA plan: 'plan do check act' has been applied at suitable occasions: corrective and/or preventive action! And that the enterprise supplies suitable resources for this! And plan - this is knowledge management!"

Although this did not answer my question, I stopped the interview. I did not want to over-strain his willingness to support my project. Therefore, I finished here and thanked him for his patience.

7.5.6. Case conclusion

This case was the shortest in terms of the duration of time for the audit and the interview. In this case, the auditor used two approaches for the audit: He followed an audit schedule sent in advance as well as an experience-based proceeding. For the latter, the auditor used a checklist, which was created on his own. But the checklist was not used to lead through the audit: It served as a to-do list.

Both of the approaches used established the foundation for evaluation. This was revealed by the transcribed observation and the interview. This finding answers the research question: *What approaches do auditor use when auditing*.

The research question of *What techniques do auditors use when auditing?* can be answered as follows: The audit technique of observation had no place at all. Although the auditor audited at the work place of the auditor and looked for process records, no real life incidents were examined. The auditor just looked for records [process outcomes] of past activities. Additionally, although the auditor reported on the review of the

documents, which was reportedly done in his home office, the auditor rarely referred to the documentation. Even the review of records cannot be witnessed. The auditor did not really read the records, he simply collected record description features, as I could observe.

The technique for data collection used by the auditor was questioning. As a supplement to questioning, the auditor used pre-evaluation. It consisted of *feeding back* and *back-coupling*.

The questioning was dominated by *directive interviewing*. This was characterized by a very suggestive proceeding. Open questioning took a backseat in this audit. However, the auditor led the auditee to the provision of evidence.

This auditor was very talkative while interviewing. The pre-evaluative action called *feeding back* and the code of *plain conversation* as a part of the category called Auditor's behaviour prove this. The variety of codes in the sub-category section of *feeding back* was limited; the actual action was dominated by an *explanatory comment* and *nodding*. The latter ranged from simply *humming* to a response of *yes* or *okay*. This shows that the auditor simply consumed the evidence offered by the auditee. This impression was enforced by the time spent by the auditor on reporting things he experienced worldwide (category of Auditor's behaviour).

The other pre-evaluative action, called *back-coupling* implies that the auditor frequently referred back by following-up on the explanations given by the auditee. In some cases, the auditor referred back to incidents or processes seen at a greater time span earlier in the audit. This indicates that the auditor tried to understand the system, or at least the workflow of the processes.

In the category of Auditor's behaviour further incidents were found: This auditor also violated rules. By doing this the auditor depreciated the audit as such.

The other incident in this category called *directive comment* underlines the impression produced by the way the auditor questioned: The auditor used comments to direct the action of the auditee.

Finally, the auditor judged a couple of times without referring verbally to the frame (ISO 9001) for judging. Therefore, the judgement appears rather as a personal opinion.

The interview conducted with the auditor revealed that he rather looks for process results

than for how the results are produced and what input was necessary to start the process. Additionally, he seemingly thinks that a process is good when the staff is qualified and sells its activities well. On various occasions, the auditor seems to evaluate things by comparing them with experiences he had elsewhere. On the other hand, sometimes the auditor left the impression that he had no complete understanding of the PDCA cycle introduced by the standard. Thus, judgements in this case seemed to be based on opinions, at least partially.

Although the auditor began the audit according to set rules during the audit and in the subsequent interview, the auditor did not show expertise. Rather, he tried to construct an impression that he has personal power by presenting his great wealth of knowledge and experience. As such, he did not exert personal-based power; he tried to impress the auditee instead of exerting power through the presentation of expertise. During the audit, the auditor was responsive to the management. Therefore the auditor can be identified as a pragmatic auditor in accordance with the literature review. This auditor is not a freelance auditor and is near to retirement. There was no indication that he has any personal interest threatening his independence.

8. Discussion

In the chapter in which I discussed the case study approach, I arrived at the conclusion that my case studies would be complete when I did not find any new information that was essential. The data that was collected addressed the conceptual framework and the subsequent categories were filled (see Appendix 6). Although I could have stopped here, I reflected it would be helpful to validate this decision. Therefore, I conducted another case, which did not add any new information.

I do not intend to cast doubt on the conformance of the various quality management systems involved in the current study. Therefore, I am not assessing the accuracy of the decisions made by the respective auditors while releasing a conformance certificate, done in each case observed throughout the course of the study. The focus was on how auditors collect data as input for their decisions, their approaches, and their techniques. I do not claim that every auditor acts in the same way as those observed in my study. Moreover, I am not raising concerns about the reliability of all issued conformance certificates. The purpose of the research was to determine whether the auditing practice provided an effective process associated with the good practice of auditors.

8.1. **Rooting auditor competence**

Comparing the backgrounds of the auditors demonstrated that they had one or more university degrees in technical engineering. Two different kinds of auditors were identified: auditors employed by a certification body and freelance auditors working for different certification bodies. Only the auditor from case 1 had qualifications in business administration, which he acquired through courses in industrial engineering (a semi-degree in business administration acquired in Germany). Furthermore, none of the auditors had proof of any experience with managing a business and only two auditors had provided some consultancy in the realm of quality management at the time of the study. Thus, the selection of auditors for this study represents the range of available auditors. It is considered that notwithstanding the lack of direct business experience, the auditors observed, properly reflected the population of auditors practicing.

Three auditors received the necessary training to be appointed as an auditor in the 1990s; at that time the quality system paradigm was still predominant. The other two auditors passed the training in the early to mid-2000s. At this time, as I experienced myself, the training was provided by auditors who had acquired their competence about the evaluation frame in the realm of quality in the late 1980s and the 1990s.
The literature review (LR) identified that audit effectiveness rests on the qualification and competence of the auditors who are conducting the audits. The LR section on factors influencing audit effectiveness explains that the competence of the auditors is also dependent on social research qualifications and knowledge about the disciplinary background in which the auditee operates. The latter need seemed to be fulfilled because the auditors were appointed to audits within a certain industry based on their university degree disciplines. On the other hand, the auditors' *curriculum vitaes* did not demonstrate qualifications in social research methodology as suggested in the literature review. Therefore, it is possible that the auditors still audit from the perspective of a quality system instead of a quality management system. Consequently, most auditors in the current study did not explore the ways principles of the ISO 9001 were applied and whether these principles were fully addressed.

After the appraisal of coded data (see Table 8), there was another activity of the auditors questioning the competence of the auditors: The main code *back-coupling,* was detailed in incidents, either marking the immediate action or the auditor's attempt to link findings that were seen or heard throughout the audit:
The sub-code called *referring back to what was said before* establishes auditor's attempt to refer to the process action or process input as well output system- wide. This sub-code marks the auditor's action of discussing the features of the PDCA circle. This was found differently in each case. In cases 1 and 3, it was not recognized at all and in case 2 it appeared frequently.
The remaining sub-code, which establishes the auditors' immediate action of discussing the information that was supplied by the auditee, appeared dominant in case 2. However, in case 1 it was not found at all.

The rarity of the action of the sub-codes of *back-coupling* questions creates uncertainty around the competence of the auditors in terms of understanding, and thus the auditing application of the PDCA circle to the micro (process) and the macro (system) level. This uncertainty was amplified by the interviews that were conducted with each auditor. As the auditor of case 2 understands the auditing PDCA circle as a post-mortem examination, the answers of the other auditors underlined the impression acquired when asking about the analysis and decision-making process for the requirements of clause 8 of the standard: The majority of the auditors who participated in my study did not know what the leading concept of this standard was about. My reflection is that the auditors did not synthesise evidence. The consequence of this could be that auditors processes audit and assess sequentially, instead of through a process and system oriented approach. This decisively influences the effectiveness. The interviews were designed for my ethnomethodological approach. On the other hand, because I had not read what the auditors analysed when examining documents or records and I could not sense how the auditors connected findings, the interviews were conducted to clarify the auditors' data analysis and evaluation process competency. While interviewing the auditors, I was prone to learn about the processes of thought the auditors go through when auditing. Most of the auditors did not describe processes of thought or action. Rather, their answers indicated that they have different ideas about issues related to the ISO 9001's requirements.

The interviews revealed that the documentation that the auditees must provide differs, depending on the opinion of the auditors. It ranges from fulfilling the set requirements of the standards and providing a written description of what has been done to the idea that, in addition to the compliance component, the documentation found is useful for the quality of the processing of activities within the organization. The usefulness of documents supporting processes was introduced by the auditor of the second case. The first auditor noticed that he used a subjective approach when deciding on the appropriateness of the documentation and records that were found. Another auditor said that the documentation fits the requirements when the auditee does what is pre-described in the documentation. Although the auditor of case 2 noticed that the

documentation is dedicated as a tool for communication and usage, he did not explain why it is necessary to communicate via documents or what defines the need for their usage.

The auditor of case 1 could not answer the third interview question, which reveals the decision-making process regarding the requirements of the management processes. The other auditors had different responses, including the requirement that the processes conform to the standard when top management participates in an audit or when quality objectives are set. In addition, a lack of customer complaints are perceived as proof of effectiveness and conformance to the management system being audited. In case 3, the auditor introduced the concept that the business entity's management activities and the quality management system are two separate issues. Only the auditor from case 2 provided the impression that the effectiveness (correctness) of what the auditee does and says contributes to the evaluation of the conformance. The overall impression in the area considering requirements for management processes was that most auditors accept information that they have learned elsewhere. However, a consequence for the current study's research question is that auditors dominantly have no clear idea about the requirements of this standard's section. The implication again is that the auditors do not audit processes. They are outcome oriented based on commonalities, making auditing an arbitrary act.

This was also found when interviewing participants about the auditors' decision-making process for the conformance of the resource provision processes. Most of the auditors introduced the idea that if there are no customer complaints, then the resource management processes can be perceived as optimal. One auditor noticed that resource management processes are an example of production planning processes. Only the auditor from case 2 noted that every process conforms to the standard when the transformation of any process produces the intended result; he used sampling to understand the process (the transformational part). The other auditors were pre-occupied with what was to be found. This is an evidence-orientated (or paper-oriented) approach to auditing, compared to auditing the resources quantitatively and qualitatively.

The implication for my research question is that auditors presume a process as capable when evidence can be found according to the auditor's idea on how the evidence has to look like.

When interviewing the auditors about the conformity of the production management processes, they had no clear answers. In one case, an auditor mentioned that the production processes conform when there is no production residue, which is also an output-oriented finding. Referring to what the auditor of case 2 noticed about the decision concerning the resource provision processes, which are a part of the production planning processes, there is no consistent method through which the auditors identify information and act on it.

Interviews with the auditors about their auditing and decision-making processes regarding the requirements of clause 8 of the standard indicate that four out of five auditors were not aware of the accuracy of the measurement, analysis, and improvement processes. The auditors frequently stated that they did not know what the requirements are. These requirements are a decisive part of the PDCA circle, as they are dedicated to internally checking and monitoring the grade of the auditee's performance, conformance, and compliance against the standard as well as the objectives set (according to clause 5). it is a decisive part of the PDCA circle and so I was surprised by the answers and the vocabulary that was used when interviewing the auditors was verified. The terminology that was applied when asking questions was fully aligned with the ISO 9000 family.
I actually thought that the auditors, who are supposed to be experts, would be familiar with the standard and its vocabulary. Only the auditor of case 2 easily answered the respective interview question. He saw the requirements as a target-actual comparison, which provide information about the need for new actions and objectives. The data that was produced through observations and interviews demonstrates that the competence of the auditors differs and the required competence cannot be found. As such, Schandl's (1978) principle of norms (see LR)—which requires the auditor to understand the norm that is applied for evaluation—is violated. This makes quality management system auditing and its subsequent evaluative action arbitrary.

Ethno-methodology was the primary inquiry strategy in my study. My research questions aimed to reveal the process action of the auditors when collecting evidence and making judgements. For this, I applied the *studies-of-work* approach to answer the research questions. This approach is used to reveal 'embodied knowledge' and 'competence systems' beyond what is visible, which is I discussed in the methodology chapter of this thesis. Thus, this leads me to refer to the code of *withdrawal* and the result of the interviews. As some of the auditors initially insisted upon their stance regarding evidence to be provided by the auditee, they could not substantiate their claim and withdrew their position without providing justification. Thus, it seems that some auditors were not certain of the requirements imposed by the ISO 9001. This finding was supported by interviews with the auditors that aimed to understand the hidden cognitive processes of decision-making by asking the auditors about their knowledge and understanding of the requirements of each of the standard's clauses and the all-encompassing PDCA circle imposed by the standard. The interviews demonstrated that the auditors found it challenging to provide answers to questions about their evaluation processes, and they did not provide consistent knowledge of the requirements set by the standard. This again suggests that quality management system auditing is somewhat arbitrary. Reflecting on this, it appears that due to their competence, the auditors audited non-critically.

Although every auditor appointment is based on the same competence requirements, the auditors showed different levels of competence or incompetence. Since effectiveness is clearly defined as 'doing the right things right', the audit principles imposed by Schandl (1978) are discussed. The principle of unity (see LR) requires that the norm, or the evaluation framework, be understood. The interviews resulted in doubts regarding the auditors' understanding of the standard, which might affect the effectiveness of an audit. Schandl's (1978) principle of objectivity requires the exclusion of personal ideas because they might lead to incorrect judgements. This principle has been violated by the heuristic manner of auditing and the introduction of irrelevant requirements to the audit.
The principle of validity might also have been violated by the auditors, which requires the existence of a judgement. It is not clear whether a judgement existed when ignoring the auditors' opinions (see audit records).

8.2. **The use of pre-redacted audit documents**

The observational components of my study demonstrated that most of the auditors sent an audit schedule in advance. In addition, the actions of the auditors did not differ broadly. They often began by auditing the requirements of clause 4 of the standard, followed by clauses 5, 6, and 8. This then was followed by auditing the actual value adding chain in terms of clause 7 of the standard.

To produce their audit notes the auditors used a pre-created checklist that was either provided by the certification body they worked for or, as in case 5, pre-produced by the auditor. Auditors used the pre-produced checklists for different purposes. One auditor used the checklist to ensure that items were not missed and another auditor pre-filled part of the checklist with expected findings. Furthermore, most of the auditors used the audit schedule and the checklist to lead them through the audit. As observed, the audit schedule was not at the centre of the auditor's action; rather, the checklist provided space to record the findings.

During observations, it was not clear how the auditors worked through the business processes. They worked through the respective clause of the ISO 9001 without trying to connect the requirements to processes or to other requirements from different clauses of the standard. Their approach appeared sequential instead of systematic. This finding indicates that the auditors' main purpose was to fill in the checklist with evidence that was accepted. Given that none of the auditors dedicated the required amount of time to the audit, it seemed that the auditors wanted to audit as efficiently as possible by completing their form sheet (checklist). This indicates that some of the auditors have a clear idea of what evidence has to be found in an audit, although the standard simply offers principles and some record requirements. Most of record requirements are not precisely defined. Moreover, it appears that the auditors act within a narrow scope.

Chen et al. (1999) and Huigang et al. (2007) discussed *heuristic processing* and characterize this audit mode as an attempt to make a minimal effort or spend minimal time on auditing. When observing the auditors' activities, their objectives and their perceptions of a certification audit's objectives were unclear.

I could recognize that the auditors did not attempt to audit according to the individually constructed structure and value adding chain of the respective business entity. Furthermore, the auditors worked through the individual chapter by auditing the clauses' requirements and did not look for the correctness of the inputs and the transformation of the input or the interrelationship of the processes where applicable. Rather, they looked for the output presented by the auditee and whether it was correct in terms of what the auditors expected to see. The main action of the auditors was to find records or documents that could be fed into the checklist that was used. The checklist establishes the audit record that will be sent to the certification body.

Since the case studies occurred in production companies and service companies, there was an opportunity for the auditors to observe input as well as transformational activities; this did not take place in four of the cases. The outcome of the interviews was not accepted as evidence of conformity to the standard, as all statements had to be proven by the record.

The auditor from case 2 made a difference by spending time listening and observing, and the paperwork produced for and during the processing of the company was treated as an appendix to what was said or seen. This auditor seemed to try to understand the nature of the processes and their relationships. Although the general approach described above was followed, this auditor used a more adaptive approach. He adjusted his actions to the individual business structure on a detailed level, in contrast to the other auditors who seemed to look for items that established a common practice. For example, the auditor from case 4 used a pre-filled checklist containing evidence that he expected to see.

The auditors in my study primarily applied Sidorowicz's (2012) task approach and clause approach to checklists and audit plans (see LR). As such, the auditors focused on the requirements that they anticipated would need to be addressed rather than on the individual business. This approach to auditing was identified by Sidorowicz (2012) as ineffective. As mentioned in the LR, an audit's effectiveness is also influenced by the identification and application of contextual levers that affect the individual business that is being audited. During this study, only one auditor tried to adopt and understand these factors thoroughly. Thus, the audits were primarily controlled by pre-redacted

documents, and were not conducted as a phenomenal evaluation process. According to Chapman (2013), this may hinder effective auditing and is referred to as a 'limited mind-set' (see LR).

8.3. **Obedience to rules vs. arbitrariness**

This study found that the auditors violated the audit conventions in different ways. Either they did not dedicate the required amount of time to an audit, according to the number of employees, or they discussed private issues. Two of them announced that they saw themselves as supporters of or partners in the future development of the system of conformity. Furthermore, the auditor did not send the audit schedule in advance in one case. This violates the principle of evidence (see LR), which requires operational independence of the auditor.

The transcript of the audio record produced during observation delivered indicators (see Table 10) that highlight the arbitrariness of the auditors regarding audit conventions. The code *violating rules* appeared in every case and marked activities related to audit conventions, such as the formal requirements or the readiness of the auditors to accept non-conformities at this stage of the management system. The latter was found when the auditor directly or indirectly characterised the external audit as a tool to help the business entity develop its management system within the audit periods. The code *work-together comment* emphasized this impression. In case 2, the auditor did not violate the audit conventions verbally, but he did violate them through his actions. Therefore, this code did not appear in this case.

Finally, no auditor explained his decision of conformity to the audited system by referring to the ISO 9001evaluation framework. The judgement ranged from *I am done* to no verbal judgement at all. Therefore, it is not clear which evaluation framework the auditors used for their judgement: their personal opinions and common practices or the ISO 9001 and it is likely that the auditors did not judge completely. The LR outlines principles of norms to follow and the auditors did not define the purpose or the objective of the certification audit. Therefore, which norms to apply, which judgement to make, and which type of evidence to collect were not defined. This violates Schandl's (1978) principle of

exclusiveness. One could argue that defining the norms that will be applied might not be necessary because everyone knew that the audit was a certification audit according to the ISO 9001. But it is not just the ISO 9001 norm to be applied, also the norms defining the action of the certification body offering certification services, which is the ISO 17021:2011 as well as the norms defining the audit duration (see appendix 14).

8.4. **Approaching evidence: process vs. process product**

Since auditing is a human evaluation process (Schandl, 1978), the auditors' data collection for evaluation is based on observations, interviews, and analysis of process documents. This is maintained and required by the DIN EN ISO 17021:2011, which established the framework for certification bodies and their personnel who conduct the audits. An interview establishes the immediate action between the auditor and the auditee. Therefore, I think, the communication style is important as it reveals the approach to arriving at the individual objective of concern and the actual objective of the auditor. The coded and merged data are presented in Table 9.

Category	Sub-Category	Code	Individual sum	Overall appearance
Interview		Chain question	63	63
	Open interviewing	Open questioning	296	296
	Directive interviewing	Suggestive commenting	254	
	Directive interviewing	Suggestive questioning	131	
	Directive interviewing	Closed questioning	315	
	Directive interviewing	Asking for evidence	118	818
Pre-evaluative action	Feeding back	Nodding		711
	Feeding back	Explanatory comment		174
	Feeding back	General comment		200
	Feeding back	Heuristic comment		98
	Feeding back	Referring back to documents		131
	Feeding back	Referring back to records		41
	Feeding back	Applies irrelevant requirements		16
	Feeding back	Discussing evidence		4
	Feeding back	Reflective comment		55
	Feeding back	Recommending		41
	Back-coupling	Referring back to what was said by the auditee		197
	Back-coupling	Referring back to what was said before		41

Table 9: Findings in transcriptions: Interviewing and pre-evaluative action

In the category called interview, the sub-category *directive interviewing* clearly dominates the auditors' data collection activities. The code *directive interviewing* falls within different sub-codes which were applied with various frequencies. The dominance of both of the codes *closed questioning* and *asking for evidence* outweighing the interview activity coded as *open questioning* produced this impression in most of the cases. The codes *suggestive interviewing* and *suggestive commenting* were identified as other ways to find

the evidence that was expected and desired. Thus, most of the auditors who were observed seemed to have an idea or theory about what evidence and answers have to be provided by the auditees. The auditor from case 1 used this method most frequently, followed by the auditor who was observed in case 4. Regarding counted and calculated appearance, the auditors from case 5 and case 2 utilized the fewest sub-codes of the code *directive interviewing*.

This way of analysis would scatter the data that was collected and the overall research paradigm:

The incidence of *directive interviewing* cannot be interpreted in isolation, particularly when including action that is categorized as pre-evaluative action. In this category, the sub-code *nodding* from the code *feeding back* appeared frequently, primarily in case 2. Here, as mentioned above, the auditor used *nodding* to signal active listening to the auditee; this was also the auditor who frequently used *directive interviewing* to "get the ball rolling". No *nodding* was observed in case 1 and the auditor of case 3 used *nodding* to signal her attentiveness while recording evidence in her checklist; this was not interpreted as active listening. *Directive interviewing* is used for different purposes, ranging from collecting expected evidence to controlling the progress of the audit.

The sub-code *heuristic commenting* from the category *pre-evaluative action* suggests that the auditors predominantly search for expected evidence. The sub-code *heuristic comment* from the code *feeding back* appeared in three of the five cases. In case 1, the auditor primarily commented on his findings by comparing them with information experienced during his career. This incident also appeared in cases 3 and 4, and cases 2 and 5 did not provide data for this code. *Heuristic comment* was used by the auditors to link their question to information that they had seen beyond the respective audit, or that was common in the audit market. This appeared as a defective attempt to understand how the business entity audit is constructed, or to identify the cause of a process and its transformational component within the net of the processes within the business entity. This effort seemed to be oriented towards common practices.

Directive interviewing and its variations are the dominant modes of auditing. Most of the auditors directed the auditees towards an expected outcome of the process being

audited. In addition, as the auditors primarily followed the pre-redacted checklist, they did not do what Chen and Rossi (1989) named black-box evaluation or theory-oriented orientation (see LR). The auditors looked exclusively for process outcomes since the standardized checklists and the pre-redacted audit plans addressed functions instead of process sequences. These findings have two implications for the research questions: the auditors accept the process outputs as evidence that the relevant process is capable, as per the scope of the ISO 9001, and the auditors direct the auditee to provide certain answers and evidence. The latter implication is an example of heuristic processing (see LR). Huigang, Yajiong, and Liashen (2007) state that heuristic processing supports judgement efficiency, but not judgement effectiveness. Thus, according to the data, the applied audit mode is sequential and rigid rather than systematic.

The feeding-back incidence, called *referring back to documents,* appeared often. However, it was applied differently by the auditors, suggesting that most of the auditors had a clear theory about what information would be found. This code was dominant in case 1, as this auditor spent much time and effort referring to the manual and subsequent ruling documentation. In this case, the auditor treated the documentation and its content as the central feature of the system. However, he did not connect this documentation with the audited process action or output. The auditor in case 2 did this often but in a different manner; he simply asked about, but did not discuss, the features of the documentation. For the auditors in the other cases the documentation did not appear to be at the centre of their concern.

The other paper-related code, *referring back to records,* presented in different ways. In case 4, the records were the output of a process of establishing evidence and this code was noticeable. The auditor did not connect the record with a process feature. Instead, he used the records that were discussed to find additional information and obtain missing evidence according to his pre-filled checklist. In case 5, this code appeared frequently, as the participant tried to obtain more information by referring to the contents of the records.

The most common techniques used by the auditors for data collection were directive interviewing and asking for, or leading the auditee to, the presentation of the results of the respective activities. This indicates that the auditors had a clear idea or theory about

what information would be found. Furthermore, the under-representation of *open questioning* indicates that the auditors were not investigating how the results (audit evidence) were produced. As such, the auditor simply looks for process outcome and not for the capability of the relevant process to provide required outcomes. Thus, it is not effective. My reflection is also supported by the fact that the auditors rarely discussed evidence. The auditors did not occupy a critical position since the evidence provided by the auditee was accepted. If the evidence expected by most of the participating auditors was missing, the auditor led the auditee to the provision of the respected paper-based evidence using directive interviewing, suggestive questioning, and suggestive commenting; auditors often asked for certain evidence directly. This suggests that auditors at times produce evidence.

In one case, the auditor used *directive interviewing* to lead the auditee through the individual process of interest. Other auditors directed auditees through the audit process using directive comments or by naming the headline of the clause or sub-clause of the ISO 9001. The interviews occurred by simply asking for expected evidence, using a form of interrogation, and playing an answer-response game. This also appeared to be rigid or scientific.

Most auditors did not demonstrate an attempt to understand the input-transformation-output relationship, which is considered the process approach. Moreover, they did not audit the if-then relationships (cause-effect) imposed by various clauses of the ISO 9001. The literature review delivered information about Chen and Rossi's (1989) understanding of evaluation approaches. They differentiated between the evaluation of the relationship between input and output and the evaluation of the transformational relationships between transformational processes and outcomes, as well as contextual factors. The method through which the auditors collected data (or evidence) for the evaluation did not produce information for both kinds of evaluation. As presented in the study background section of my thesis, the focus of the QMS scope and of auditing is the demonstration of an organisation's ability to consistently provide products (or services) at the anticipated level of quality and to enhance customer satisfaction through the

purposeful application and management of processes. Thus, the organisation must have capable processes that are managed purposefully. The auditors did not audit the capability of the processes; they seemingly accepted the expected process outcome as evidence to record in their checklist. They seemed to conclude that a process is *good* because it provides expected *evidence*. Only one auditor clearly showed an interest in process-action, whereas most of the auditors demonstrated a heuristic approach. The auditor of case two collected information through an in-depth investigation of the processes. On the macro-level, this auditor also tried to understand the processes' interrelationships of the and how management adjusts them.

As I have seen, most of the auditors included in my study only accepted written evidence. Verbal expressions and information generated through observation were not included in the data collection, which was demonstrated by the under-representation of observational activities. Moreover, four of the five auditors used observation to spot documented evidence, or when observation was supposed to take place according to the audit schedule. Only in one case did the auditor request a full explanation and presentation of the processes that he observed. My reflection is that auditors believe that evidence can only be accepted in a paper-based written form.

The interviews that were conducted by the auditors cannot be separated from *pre-evaluative action* as a part of the auditors' data collection activities. Although the auditors regularly reflected on the documents, and occasionally on the records, this is not proof of any attempt to understand the paperwork that was observed. In two cases, the auditors did not review the paperwork at all. These auditors simply noted the name of the individual paperwork; this is not an example systematic processing (Chaiken,1980) which leads to more reliable judgements. This method is recognised as an attempt to collect the paperwork instead of understanding the necessity for it. The auditors recognized the existence of the paperwork but did not discuss the content of the paperwork or its relationship to the processes. The cause of the content in terms of input and transformation was not identified since only the existence of the documents or records was important. This finding was also emphasised by the feedback activities, which were

mostly explanatory in nature or general in character. It seemed that the auditors examined, instead of auditing, the processes and their interrelationships.

Most of the auditors' pre-evaluative activities (which were considerably different) showed that they did not attempt to understand the construction of the individual business or why the processes within that individual business were organized as they were. Considerably often, three of the five auditors cited, commented, or even compared findings, 'missings', or versions of evidence with what they knew from earlier experience (and which they have accepted as benchmarking evidence). For example, the auditors asked for training schedules but did not check whether a training schedule could be found due to the requirements of the particular business. Once the schedule passed, the management system under consideration was in conformance with the respective clause of the standard. However, the standard requires action in the case of need. Thus, a training schedule was one output of a beforehand control to determine whether skills were missing compared to pre-defined needs. This process was not audited and the standard requires appropriate records, but not a schedule.
The LR describes Schandl's (1978) principle of directness, which address the quality of evidence that is established by sampling or collecting indications or clues. Most auditors in this study collected paperwork (outcomes) and did not collect evidence about the ability of the processes and activities that aim to enhance customer satisfaction by auditing the relationship of input-transformation-output with the necessary number of samples. Therefore, this principal was also violated and the lack of competence might influence the choice of evidence. The auditors mostly accepted a process outcome as evidence that the respective process was capable, which does not address the ISO 9001's definition of capability.

8.5. **Assessing**

As described in the LR, judgements must be based on a relationship between the evidence used for evaluation and the applied norm, including the exclusion of personal opinions and commonalities when evaluation and judging. Furthermore, the auditor must judge completely and communicate the judgement fully. The data produced from this

study shows that the auditors did not relate their judgements to any norms.

Table 9 shows the appearance of the category evaluation and marks the obvious judgement activities of the auditor. None of the auditors related their judgement verbally to the respective standard's requirements, mandatory and legal requirements, or the system defined by the business entity. Each auditor used terminology that created uncertainty as to whether the judgement was an opinion or the result of the evaluation as a comparison of the findings with the set requirements.

Category	Code	Overall appearance
Evaluation	Judging without reference	65
	Judging by referring to the evaluation frame	0

Table 10: Findings in transcriptions: evaluation

A lack of knowledge was identified (see the competence section above) in terms of the ISO 9001 and social research competence. This might explain why the auditors judged without reference, which came across as an opinion instead of the result of evaluating of evidence against the requirements. None of the auditors referred to the standard at any time during the audit. Furthermore, when the auditee from two cases withstood or had contrasting views about the requirements, the auditors abandoned their position without attempting to explain the reasoning for it.

8.6. **Relationships**

As highlighted in the literature review (LR), effectiveness is influenced by the inquiry process. This inquiry process can be positively influenced by appreciative inquiry. In terms of power-balance, auditing is asymmetrical as the auditor has the most powerful position. This power originates from the auditee's desires to pass the audit successfully, for the same reason that the business entity has applied for certification. The auditee expects that the auditor has more expertise in terms of the standard and a great understanding of the field of business to which the auditor is appointed. This requires the auditor to carefully manage this power for ethical reasons. To determine "what is 'right' in an organisation" (Watkins & Cooperrider, 2006, p. 6), the most powerful actor in the inquiry

process must create a situation that encourages the auditee to present reality (Communale et al., 2003) or the "what is" (Preskill & Catsambas, 2006, p. 1). Cases within study have shown that auditors handle power differently. For example, the auditor from the first case patronised the CEO and was confrontational, whereas the auditor from case 5 presented himself as a friendly companion.

While recording and observing the audits, and in addition to nodding (see Table 8), another sub-code from *feeding back* appeared: *explanatory comment*. This code was used by the auditors to explain why they asked for something, why they acted in a certain way, or what an issue was useful for. This can be interpreted as an attempt to adjust the auditor's definitions to the understanding of the auditee and to overcome communication barriers. This method of communication was utilized to various degrees. The auditors from cases 2 and 5 used this method frequently, while the auditor from case 1 rarely used *explanatory comments*. This finding indicates that the auditors expect the auditee to have different interpretations of the auditors' use of terms regarding the standard. As the auditors used explanatory comments more frequently, the questioning appeared increasingly polite.

The sub-code *general comment* was found frequently in cases 3 and 1, while cases 2 and 5 did not demonstrate this finding. This code was set to mark incidents in which the auditors offered an opinion that was not directly related to the audit action and which appeared as chatter. Nevertheless, the code often appeared as a feedback activity. A *general comment* establishes feedback activities in which the auditor comments on items that were seen or heard by offering his opinion. It is not clear how this code belongs to the audit procedure or the related requirements. Moreover, the sub-code *reflective comment* appeared in this study in only one case where the auditor reflected by commenting on evidence that had been seen or heard before. This appeared frequently in case 3 and the comments here were of a general nature.

During the observation, the category *auditor's behaviour* appeared. In this category, various activities were recognized that were related to the use of power. Table 10 provides an overview of events that occurred:

Category	Code	Overall appearance
Auditor's behaviour		
	Violating rules	5
	Work-together comment	2
	Confrontation	8
	Withdrawal	14
	Flags up a new theme	7
	Directive comment	143
	Finalizing comment	7
	Plain conversation	76
	Patronizing	12

Table 11: Findings in transcriptions: auditor's behaviour

Certain codes that were related to the category 'auditor's behaviour' mark incidents which are bound to a single auditor. For example, *confrontation*, *withdrawal*, and *patronizing* were only found in case 1. Withdrawal marked incidents that appeared because of resistance from the auditee, either after a confrontation or another non-confrontational requirement of the auditor. The code *patronizing* was applied when the respective auditor directly exerted pressure on the auditee.

The code *directive comment* appeared in every audit and was most common in case 4. This code was applied whenever the respective auditor informed the auditee about the next action in the course of the audit. One auditor applied this action to direct or force the auditee through the course as defined by the checklist. Alternatively, the auditor from case 2 applied this action to lead the audit participants through the processes. Other auditors did use *directive comment* to lead auditees through the themes which appeared to be defined by the clauses of the standard because the checklist that was used mirrored the standards' shape. Moreover, certain incidents were found (cases 3 and 4) in which the respective auditors initiated a new subject of concern by applying *flags up a new theme*, which means that the auditor simply mentioned headings from the standard's clause or sub-clauses to inform the auditee about a future action. In case 2, the auditor finished the action by clearly saying it; this was coded as a finalizing comment.

The last code, *plain conversation,* was found only in cases 4 and 5, and it appeared more frequently in case 5. For this code, the auditors discussed items that were not related to any of the audit objectives. The auditors used their power during the audit process differently; they used questioning and further conversation to make the auditee provide the requested evidence. One-way communication dominated the audits of cases 1, 4, and 5 and only the auditor from case 2 used his power to direct the course of the audits. The auditor from case 3 was weak and simply 'harvested' information that was offered by the auditee. Moreover, the auditor tried to over-power the auditee in case 1. Overall, the auditors used their power to process their jobs instead of providing the auditees with opportunities to express their opinions.

8.7. **Power and culture**

As highlighted in Section 8.1, most of the auditors within my case studies do not appear to possess the competence required to conduct audits effectively. When using the term competence, I refer to the auditor's ability to apply knowledge and experience to conducting any audit effectively. Thus, they also do not have the opportunity to apply personal-based power when conducting the audit. The auditors either used coercive power or acted in a manner as though there was a 'pre-negotiated' deal between the auditor and the auditees. According to the classification provided by Windsor (1995), the auditors can be divided into the categories of 'pragmatic' and/or 'accommodating'. Based on my research, I felt that none of the auditors could be considered 'autonomous'. However, the auditors might perceive themselves differently.

Furthermore, these cases provide evidence that there were threats to the auditors' independence, caused by non-compliant behaviour to audit rules. In one case, the auditor used power to clash with the client, but finally he withdrew his initial (heuristic) position. Most of the auditors were auditing non-critically. In addition to lacking expert power, this might be caused by the client's ability to influence appointments for future audit engagements. In addition, one auditor negotiated a private issue with the audit client; all the auditors did not process the audit time as set by the certification body. Thus, they became open to potential corruption. According to Guénin-Paracini et al. (2015), there are

two dimensions of independence (see literature review). In the case studies, there is no operational-independence was identified. Accordingly, organizational independence was also not identified.

In the literature review, I presumed that audit effectiveness depends on the culture in which the individual auditor is embedded and committed to. In my study, I observed the practice of five auditors, who were mainly freelance auditors, though the auditor of case 2 was initially an employed auditor before he became self- employed. The protagonist of case five was still employed at the time of the case study and two of the other auditors had been freelance- auditors for a very long time. They were both appointed by the same certification body. It can be presumed that the observed auditors represent common practitioners in the field of QMS auditing. Therefore, it may be concluded that the organisational culture of the certification bodies delivers not the necessary framework to ensure and improve the independence and competence of the auditors. On the other hand, it may also be concluded that the organisational culture of certification bodies is not oriented towards the organizational and operational independence (see literature review) of the auditors.

In all cases, the auditors did not conduct the audits according to the time required (see Appendix 14). None of the auditees complained about this although they were aware of the amount of time the individual audits should to take. Finally, all the auditees agreed to and paid for the calculated time for processing the audit. This indicates that there is an accepted ‘best practice’ in the QMS market that is not effectiveness oriented.

9. Conclusions and Contributions

9.1. **Contribution to Practice**

Several incidents including pauses and reflections on completed activities shaped this study over time. Initially, data was collected, transcribed, and interpreted during observations by wearing pre-occupied lenses. As such, the analysis became judgemental. After I understood the problem I redid the coding by removing my opinion from the auditors' actions. This changed the coding completely. Furthermore, the introduction of ethnomethodology (EM) in my study did not make the analysis and reflection easier. The EM approach to workplace studies addresses embodied knowledge that is presented by the physical action of the research subject. Although the auditors used their bodies to communicate, body language was excluded from this study. Rather, the conversational action of the auditors appeared as a method for understanding the auditors' process of the proceeding and determining their competence. The data produced by observing the general action of the auditors over the course of an audit was a useful source.

According to the literature (see methodology chapter), interviewing as a source of data creation was less useful. Using interviews, I attempted to understand the auditors' thought process of connecting information collected during the audit to analyse the greater picture of the quality management system being audited. Unexpectedly, the auditors did not provide information about this process; they stated that they do not conduct such a process. The interviews demonstrated that the auditors are unaware of the basic concept of the ISO 9001 called the PDCA circle.

The data produced by analysing the training and experience pathways of the auditors as well as the information provided by the interviews show that most of the auditors in my study do not have the required knowledge to apply the ISO 9001 as the leading evaluation framework. In addition, the auditors applied rules and principles arbitrarily. Using directive action, the auditors acted rigidly and were outcome oriented. Their proceeding was mainly guided by pre-produced checklists and audit schedules, which makes their audit approach sequential. The auditors also do not actively reflect on the ISO 9001 as the leading framework for auditing, and they accept evidence as provided by the auditee without critical assessment. The evidence accepted by the auditor was mainly printed

documents and records. Furthermore, power was used in different ways by the auditors, though most used their power to lead the auditee to provide the desired evidence. This appeared as an evidence producing action. The leading technique that the auditors used was interviewing and no observation occurred. Finally, the auditors finished the audit without clearly judging.

The research question 'In what way do QMS auditors audit?' and its sub-questions have been answered. The second research question 'In what way, if any, do auditors justify their judgement about the effectiveness of the management system audited?' is answered by saying that they do not justify their judgements. Thus, it seems necessary to introduce a new model for future audit practices. The literature suggests that in process-oriented auditing, the auditor should not only audit the input, output, and transformative features of a process. The auditor should also audit the progress of the audit within set boundaries, as this would deliver measurable information about the capability of any process. Furthermore, the planning and processing of audit action should be guided by the individual contextual levers of a business entity, as this context shapes the organizational construct. Therefore, standardized checklists and audit schedules are obsolete and auditors must have competence in business administration.

The auditor's judgement should be based on a broad range of evidence including observed actions, discussed information, and analysed records. The analysis should then lead to a picture that allows the auditor to make a judgement based on evidence and indicators.

As in the reflectionary part above, the auditors frequently violate fixed rules and principles that are provided in theory. For an audit to be compliant with rules, the auditors must know, understand, and apply the rules.

As I observed, the auditors mainly accepted the evidence that was provided. They did not view the evidence provided by the auditee under a critical lens; they simply accepted the evidence. They also did not connect the evidence to any real action of any process by comparing it with its determinants.

The auditor should not only audit in an appreciative manner, but should encourage the auditee to 'tell the truth'. Therefore, the auditor should not use their power to force the

auditee to perform any action. The analysis of observed exertion of power and the identified uncertainty of independent audit conduction and judgement calls for a revision of the appointment practice of auditors and for reviewing the current practice in the quality management market, regarding the certification as well as on the auditee site.

The conclusion of my study proposes a revised practice that includes the following key elements:

- Progress-oriented auditing: The auditor conducts the audit as the process action of the audited processes progresses.
- Contextual auditing: The auditor starts with and processes the audit by including the internal and contextual levers that determine the individual business entity.
- Evidence and indicator oriented evaluation: The auditor uses complete information produced by the audited process as an indicator for the conformance evaluation.
- Compliant with rules and principles: The auditor knows and obeys all rules governing the audit theory and subsequent audit standards.
- Encouraging: The auditor encourages the auditee to fully share information.
- Detailed: The auditor collects and analyses information critically and in detail.
- Pressure-free: The auditor is free from any pressure from any person or organization, including competition-led influences while conducting audits and judging, such that the audit outcome does not influence future engagements.
- Leading by exerting expert power: The auditors and their appointment scheme must be revised; the auditors need to be competent.
- Led by a strong organizational culture: auditors need to be embedded in and controlled by a strong organizational culture, because of the competition between the certification body. This should be actively maintained and controlled by an

independent (governmental) organization on an immediate and operational level (open to whistle blowing)

Table 12 provides an overview of intended, observed and suggested future practice:

Intended practice (see LR)	Observed practice	Suggested practices
Process- oriented auditing	Outcome- oriented	Progress-oriented
Systematic processing	Sequential processing	Contextual
Objective evidence	Evidence- oriented evaluation (paper-based, haptic evidence)	Evidence and indicator-oriented evaluation (haptic, optic, and acoustic evidence)
Principle-based	Arbitrary	Compliant with rules and principles
Appreciative	Dominant	Encouraging
Critical	Non-critical	Detailed
Independent and autonomous	Pragmatic or accommodating	Pressure-free
Leading	Manoeuvring through the schedule and checklists	Leading by exerting expert power
Ethical conduct	Prone to being open to blackmail	Led by a strong organizational culture

Table 12: Comparing theory, actual and suggested future action

9.2. **Limitation**

One limitation of my study was the restricted number of cases, as it was based on 5 cases in various industries. Each of these cases occurred in common service or production companies that were identified as small enterprises. This enabled complete audit processes throughout the requirements of the standard, and the individual company's value chain and structure. On the other hand, the size of the companies established another limitation: in every case, there was only one auditor required to conduct an audit. Therefore, the effectiveness of a potential audit team, consisting of two or more auditors could not be studied. A third but important limitation was introduced by the researcher; the coding and the reflection are based on individual perception.

However, my exploratory study did not try to deliver typicality. Rather, it provides insight and patterns that form themes. The findings from this study are not of a general nature and therefore, can produce bias (Yin, 2009).

This study concentrated on the auditor's conduct of the process of auditing, which establishes the rationale for the ethnomethodological approach. My study was limited to answering 'how' questions and did not determine why the auditors acted as they did on the systemic level. The findings indicate that the competence of the auditors varies, which partially explains the auditors' actions. However, beyond the selection and the appointment of auditors is a staffing process that is led by the certification bodies. That staffing process was not included in this study.

The relation triangle between the sales staff of certification bodies, consultations services, and (freelance) auditors and their interests was deliberately excluded from this study. The emerging forces of the interest of the sales person to sell, the interest of the consultant not to be identified as a non-qualified consultant, and the (freelance) auditor's interest to be contracted again was not included in this thesis. As I am still a market participant, I think it is best not to discuss this issue in my study.

9.3. **Future Research**

The limitations of my study present several alleys for future research. I think it would likely be beneficial to investigate issues related to audit engagements forming audit teams consisting of two or more auditors. In addition, the effectiveness of this kind of audit could be analysed. The information flow between auditors and their collaborative evaluation forms a collective judgement, which raises the question of how the auditors decide on a collective judgement. For example, how do auditors deal with different competencies when they come to different conclusions?

For this type of audit, it could be beneficial to study how auditors form an effective audit team and how they deal with power internally as well as externally. Furthermore, it could be advantageous to research the motivation behind auditors' actions. Other questions that should be answered include: What role do the objectives of the certification body

and its internal proceedings play in audit documentation (checklists *et cetera*). And, what influences do certification body objectives have on the qualifications of auditors?

Future standardized ISO management systems and QMS according to the ISO 9001 must provide contextual justification on which the individual management system is constructed. This requires the auditor to understand the standard being applied, the company's internal and external context, and the position that the company decides to take within this context. It would be beneficial to research the approaches that the auditors will use to cope with this challenge and the approaches of the certification bodies when appointing and training auditors. As the requirements for the management system auditors' competence are defined by the DIN EN ISO 17021:2011, future research should analyse how auditors are appointed by inquiring about the interpretation of the competence requirements stated by the DIN EN ISO 17021:2011 for the appointment of auditors. In addition, future research should analyse whether basic and continuing training of the auditors is dedicated to improving the auditors' performance. Future research could provide information on how the auditors' financial dependence on the appointing and audit ordering certification body impacts auditors' performance. Future research could address these power relations and their impact on auditors' independence caused by the various interests described in Section 9.2. Furthermore, there is a wide discussion about the relationship of organizational culture, organizational performance and the value-for-money concept in public service, (e.g. Prowle et al., 2016). No research on this subject in the realm of the semi-public service of quality management service auditing is available. Thus, as the discussion in Section 8.7 indicates, the performance of personnel provides insight into the organizational culture of the company that the individual works for. It could be beneficial to interview the auditees about 1) how they experience an audit, 2) what their expectations are, and 3) whether they expect and experience value as a result of an audit. Finally, it could also be useful to understand 4) how auditees evaluate the real value for the fees raised for an audit service. Future research could also provide insight on the impact of the auditees' organizational culture on the production and provision of audit evidence in an audit.

9.4. **Relevance**

The ISO 9001 is known worldwide and applied in nearly every industry and there are other modern management system standards issued by the International Standardization Organization in use. These management system standards are based on Deming's PDCA circle, and they differ in their detailed requirements and scope of application. Since this study is the first (to my knowledge) study to research the certification practise of professional (quality) management system auditors, it is relevant.

9.5. **My Research Journey**

Now having reached the end of my research journey I look back and find myself surprised that I still have not found detailed research on the effectiveness of third-party auditing in quality management after the introduction of the process-oriented release of the ISO 9001 in the year 2000.

However, although I was an experienced and well trained auditor, I learned a lot while reviewing the literature at the beginning and in the course of my study. Looking back into the history of auditing, the term audit and its connotation became different for me: Before that, I recognised the term as *hearing* from *to hear*. After diving into the history, I understand that an audit is a hearing in which someone (the auditee) gives an account for the righteous application of facts that fulfil the requirements to whatever degree of predetermined requirements, or duties. As the auditee is the direct customer and the demander of a certificate stating the conformance to a predetermined requirement of the indirect customer, they both have the right of getting a true and fair statement of the status of the management system audited. My initial question that made me want to do my study, whether the auditor does exactly this, was answered.

Establishing my ontological and epistemological position, once after I understood what it means, was not demanding. But, establishing a suitable inquiry strategy appeared to be not that easy. The first issue I had to deal with was my own competence as an auditor. I constantly had to struggle with my preconceived opinions about what was wrong and what was right in terms of the auditors' activities. This made me regularly judgemental

and produced ‘unasserted opinions or claims’. I judged on the phenomenon, or outcomes instead of interpreting the findings. But my research questions derived from literature were dedicated to looking into the processes of audits, and beyond that to find out whether the auditors were doing the right thing. It took a while to identify and to understand ethnomethodology as the suitable approach and within the study-of-work the practical proceeding. Even identifying the suitable data analysis strategy was demanding.

During the course of my study, I changed my behaviour when auditing: I started to use the standard DIN EN ISO 9001:2008 in my paper for justifying my comments or decisions on the findings when auditing the processes and the respective management system. In doing so, I felt that the auditee recognised me differently.

While studying ethnomethodology, I came to understand that the auditors’ inquiries should be fairly similar. The DIN EN ISO 9001:2008 introduces principles to be accomplished on the micro and the macro-level of a management system: On the level of individual processes the auditee has to determine the input to be transformed in a predetermined manner to an expected outcome; on the management system level these processes have to be orchestrated to transform the input of the customers to an output that is requested by a customer. For this, the PDCA circle has to be applied. But, in what way the auditee accomplishes this is up to the auditee. The auditor then has to understand whether the way the auditee has set-up these activities is capable. This understanding gained has made me a different auditor. The more I progressed with my research, the more I applied the wording in the ISO 9001 directly to the relevant issue being audited. This makes auditing more factual and helps to objectify discussions about what is right, or in conformity with requirements, which has great influence on the power relations and with that on the independence of an audit. Furthermore, experiencing and practicing reflection has impacted my work as an auditor as well as a consultant. One unexpected benefit is the knowledge gained that management system auditing is closely related to approaches used in ethnomethodology. Since, there are just principles in the ISO 9001 that auditees are required to conform with, the auditor needs to identify the individual methods that the auditees use to conform to these principles. Therefore, this study was also relevant to my own professional life. Finally, the literature review, the

interviews, and the experienced ‘best practice’ made me decide to produce a manual to help future auditors understanding the adaption of the concepts delivered by audit theory, audit history, and the Deming-circle (PDCA) and their applications to the field of management system auditing. Insofar, the study was also of relevance for my own professional life.

10. References

Arter, D. R., Ciafrani, C. A., & West, J. E. (2012). *How to audit the process-based QMS* (2nd ed.). Milwaukee, Wisconsin: ASQ Quality Press.

Beck, J., & Fibich, E. (2013). Board evaluations -- we're doing them, so why do we still have non-effective directors? *Keeping Good Companies (14447614), 65*(10), 592-597.

Beckmerhagen, I. A., Berg, H. P., Karapetrovic, S. V., & Willborn, D. O. (2004). On the effectiveness of quality management system audits. *The TQM Magazine, 16*(1), 14-25.

Bergmann, J. R. (1995). Studies of work - Ethnomethodologie. In U. Flick, E. v. Kardorff, H. Keupp, L. v. Rosenstiel, & S. Wolff (Eds.), *Handbuch Qualitative Sozialforschung* (3rd ed.). Weinheim: Beltz PsychologieVeragsUnion.

Bergmann, J. R. (2015). Ethnomethodologie. In U. Flick, E. v. Kardorff, & I. Steinke (Eds.), *Qualitative Forschung: ein Handbuch* (11th ed.). Reinbek: Rowohlt Taschenbucherverlag.

Bhagwati, M. dasWirtschaftslexikon.com Retrieved on2014-04-20, from http://www.daswirtschaftslexikon.com/d/qualit%C3%A4tsmanagement/qualit%C3%A4tsmanagement.htm

Bortz, J., & Döring, N. (2006). *Forschungsmethoden und Evaluation für Human- und Sozialwisssenschaftler* (4th ed.). Heidelberg: Springer Medizin Verlag.

Brown, R. G. (1962). Changing audit objectives and techniques. *Accounting Review, 37*(4), 696.

Bryman, A., & Bell, E. (2011). *Business research methods* (3rd ed.). London: Oxford University Press.

Burton, J. C. (1968). Management auditing. *Journal of Accountancy, 125*(5), 41-46.

Carnero, C., & Delgado, S. (2008). Maintenance audit by means of value analysis technique and decision rules: A case study in a bank. *Journal of Quality in Maintenance Engineering, 14*(4), 329-342.

Causholli, M., Chambers, D., Payne, J.,(2015). Does selling non-audit services impair auditor independence? New Research Says, ‘‘Yes’’, *Current Issues in Auditing,* 9(1), P1-6

Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5), 752-766.

Chapman, K. (2013). What's your evaluation process? *Plumbing & Mechanical, 31*(9), 58-60.

Chen, H. T., & Rossi, P. H. (1989). Issues in the theory-driven perspective. *Evaluation and Program Planning, 12*, 299-306.

Chen, S., & Chaiken, S. (1999). The heuristic-systematic model in its broader context. In Y. Trope (Ed.), *Dual-process theories in social psychology* (pp. 73-96). New York: Guilford Press.

Cohen, P. Deming’s 14 Points. Retrieved on2013-06-16, from http://www.realisation.com.au/site2/Articles/Deming%2014%20points.htm

Collins, G., & Wickham, J. (2004). Inclusion or exploitation: Irish women enter the labour force. *Gender, Work and Organization, 11*(1), 26-46.

Comunale, C. L., Sexton, T. R., & Gara, S. C. (2003). The auditors' client inquiry process. *Managerial Auditing Journal, 18*(2), 128-133.

Copley, F. B. (1923). *Frederick W. Taylor: Father of scientific management* (Vol. 2). New York: Harper & Brothers.

Corbin, J., & Strauss, A. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). London: Sage Publications, Inc.

Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.

Cosserat, G. W., & Gill, G. S. (1996). *Modern auditing in Australia* (2nd ed.). Australia: John Wiley & Sons Australia Ltd.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London: Sage Publications Ltd.

Cuff, E.C., Sharrock, W.W., Francis, D.W. (1992). *Perspectives in Sociology*. (3rd ed.) London, Routledge

D'Angelo, J. (2012). *Ethics in science: Ethical misconduct in scientific research*. Baton Rouge, London: CRC Press.

De Paula, F. R. M. (1922). *The principles of auditing: A practical manual for students and practitioners*. Bath, Melbourne, Toronto, New York: Sir Isaac Pitman & Sons, Ltd.

DeFliese, P. L., Jaenicke, H. R., O'Reilly, V. M., & Hirsch, M. B. (1990). *Montgomery's auditing* (11th College version ed.). New York, Chichester, Brisbane, Toronto, Singapore: John Wiley & Sons, Inc.

Deming, W. E. (1967). Walter A. Shewhart, 1891- 1967. *American Statistician, 21*, 39-40.

Denzin, N. K. (1989). *Interpretive biography*. Newbury Park, London, New Delhi: Sage.

DIN Deutsches Institut für Normung e.V. (2000). *Quality management systems- Requirements (ISO 9001:2000) Trilingual version EN ISO 9001:2000* (pp. 66). Berlin: DIN Deutsches Institut für Normung e.V.

DIN Deutsches Institut für Normung e.V. (2005). *Quality management systems- Fundamentals and vocabulary (ISO 9000:2005)Trilingual version EN ISO 9000:2005* (pp. 68). Berlin: DIN Deutsches Institut für Normung e.V.

DIN Deutsches Institut für Normung e.V. (2008). *Quality management systems- Requirements (ISO 9001:2008) Trilingual version EN ISO 9001:2008* (pp. 44). Berlin: DIN Deutsches Institut für Normung e.V.

DIN Deutsches Institut für Normung e.V. (2011a). *Conformity Assessment- Requirements for bodies providing audit and certification of management systems (ISO/IEC 17021:2011 German and English version EN ISO/IEC 17021:2011*. Berlin: DIN Deutsches Institut für Normung e.V.

DIN Deutsches Institut für Normung e.V. (2011b). *Guidelines for auditing management systems (ISO 19011:2011) German and English Version EN ISO 19011:2011* (pp. 86). Berlin: DIN Deutsches Institut für Normung e.V.

Dittenhofer, M. (2001). Internal auditing effectiveness: An expansion of present methods. *Managerial Auditing Journal, 16*(8), 443-450.

Dunlap, C. A. (2008). Effective evaluation through appreciative inquiry. *Performance Improvement, 47*(2), 23-29.

Dunn, J. (1991). *Auditing: Theory and practice*. New York, London, Toronto, Sydney, Tokyo, Singapore: Prentice-Hall International (UK) Ltd.

Easterby-Smith, M., Thorpe, R., & Lowe, A. (2002). *Management research: An introduction* (2nd ed.). London: Sage Publications Ltd.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review, 14*, 532-550.

Emby, C., Davidson, R.,(1998) The effect of engagement factors on auditor independence: Canadian evidence, *Journal of international accounting, auditing & Taxation*, 7(2) 163-179

Flick, U. (2009). *An introduction to qualitative research*. London: Sage Publications Ltd.

Flick, U. (2015). Triangulation in der qualitativen Forschung. In U. Flick, E. von Kardoff, & I. Steinke (Eds.), *Qualitative Forschung: ein Handbuch* (11 ed., pp. 309-318). Reinbek bei Hamburg: ohlt Taschenbuch Verlag.

Flinders, D. J., & Mills, G. E. (1993). *Theory and concepts in qualitative research*. New York, London: Teachers College Press.

Ford, C., & Rosam, I. (2003). *Process management auditing*. Essex: British Standards Institution.

Francis, D., & Hester, S. (2004). *An invitation to ethnomethodology: Language, society and interaction*. Thousand Oaks, London, New Delhi: Sage.
Fraser, S. (Producer). (2011, 30.12.2013). The risk-based audit approach. Retrieved from http://www.charteredaccountants.com.au/News-Media/Charter/Charter-articles/Audit-and-assurance/2011-07-The-Risk-Based-Audit-Approach.aspx
Gabler Wirtschaftslexikon. (1997). (14th ed.). Wiesbaden: Gabler Verlag.
Gill, J., & Johnson, P. (2010). *Research methods for managers* (4th ed.). London: Sage Publications Ltd.
Glendinning, R. (1988). The concept of value for money. *International Journal of Public Sector Management, 1*(1), 42-50.
Gomez, C. (2012). *Auditing and assurance: Theory and practice*. New Delhi: PHI Learning Private Limited.
Gray, D. (2009). *Doing research in the real world* (2nd ed.). UK: Sage Publications Ltd.
Gray, I., & Manson, S. (Eds.). (2005). *The audit process* (3rd ed.). Australia, Canada, Mexico, Singapore, Spain, United Kingdom, United States: Thomson Learning.
Grix, J. (2004). *The foundations of research* (1st ed.). Great Britain: Palgrave Macmillan.
Guba, E. G., & Lincoln, Y. (1989). *Fourth generation evaluation*. London, Newbury Park, New Delhi: Sage Publications Inc.
Gue´nin-Paracini, H., Malsch, B., Tremblay,M. (2015) On the Operational Reality of Auditors' Independence: Lessons from the Field Auditing: *A Journal of Practice & Theory Vol. 34(2)*
Gummesson, E. (2000). *Qualitative methods in management research* (2nd ed.). Thousand Oaks, London, New Delhi: Sage Inc.
Gyani, G. J. (2008). Effectiveness of QMS certification process. *Total Quality Management, 19*(3), 263-279.
Hayes, R., Dassen, R., Schilder, A., & Wallage, P. (2005). *Principles of auditing: An introduction to international standards on auditing* (2nd ed.). Essex: Pearson Education Limited.
Holiash, I. (2011). Formation of audit development and paradigms. *Journal of European Economy, 10*(3), 339-346.
Hood, J., Koberg, C., (1991).Accounting firm cultures and creativity among accountants, *Accounting Horizons* (12)
Huigang, L., Yajiong, X. U. E., & Liansheng, W. U. (2007*). Auditor effectiveness and efficiency in workpaper review: The impact of regulatory focus*. Paper presented at the Academy of Management Annual Meeting Proceedings. Proceeding retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=26508075&site=bsi-live
International Financial Publishing Ltd (Ed.). (2006). *ACCA Paper 3.1: Audit and Assurance Services UK Stream*. Surrey.
Jenkins, Deis, Bedard, Curtis (2008) . Accounting firm culture and Governance: A research synthesis *Behavioural Research in Accounting, 20(1)*
Joe, J. R., & Vandervelde, S. D. (2007). Do auditor-provided nonaudit services improve audit effectiveness? *Contemporary Accounting Research, 24*(2), 467-487.
Johns, C. (2009). *Becoming a reflective practicioner* (3rd ed.). Chichester: Wiley-Blackwell
Kaminske, G., & Brauer, J. (1993). *Qualitätsmanagement von A- Z: Erläuterungen moderner Begriffe des Qualitätsmanagements*. München Wien: Carl Hanser Verlag.
Karapetrovic, S., & Willborn, W. (2000a). Quality assurance and effectiveness of audit systems. *International Journal of Quality and Reliability Management, 16*(6), 679-703.
Karapetrovic, S., & Willborn, W. (2000b). Generic audit of management systems: Fundamentals. *Managerial Auditing Journal, 15*(6), 279-294.
Karapetrovic, S., & Willborn, W. (2001). Audit and self assessment in quality management: Comparison and compatibility. *Managerial Auditing Journal, 16*(6), 366-377.

King, N. (2004). Using interviews in qualitative research. In C. Cassell & G. Symon (Eds.), *Essential guide to qualitative methods in organisational research* (1st ed., pp. 11-22). Los Angeles, London, New Delhi, Singapore, Washington DC: Sage.

Knechel, W. R., Sharma, D. S. (2012). Auditor-provided nonaudit services and audit effectiveness and efficiency: Evidence from pre- and post-SOX audit report lags. *Auditing, 31*(4), 85-114. doi: 10.2308/ajpt-10298

Kotler, P., Ang, S., Leong, S., Tan,C. (2001) *Marketing Management: An asian perspective* (3rd ed.) , Singapore, London, New York, Toronto, Sydney, Tokyo, Madrid, Mexico City, Munich, Paris, Capetown, Hong Kong, Montreal

Kotler, P., Bliemel, F. (2001). *Marketing- management* (10th ed.). Stuttgart: Schäffer- Poeschel-Verlag.

Kvale, S. (2007). *Doing interviews*. Los Angeles, London, New Delhi, Singapore: Sage.

Laudon, K., Laudon, J.,(2006). *Management information systems: Managing the digital firm* (9th ed.). New Jersey: Pearson Prentice Hall

Lee-Treweek, G., Linkogle, S.,(eds)(2000). *Danger in the field: Risks and ethics in social research*, London: Routledge

Letherby, G. (2000) *'Dangerous liasions: auto/biography in research and research writing'* in Lee-Treweek, Geraldine and Linkogle S (eds). Danger in the Field: Risks and Ethics in social Research, London: Routledge

Leung, P., Coram, P., Cooper, B., Cosserat, G. W., & Gill, G. (2004). *Modern auditing & assurance service* (2nd ed.). Milton: John Wiley & Sons Australia Ltd.

Marquis, L. K. (1969). A comprehensive framework for analyzing the management of a business enterprise. *Nebraska Journal of Economics & Business, 8*(3), 38.

Martindell, J. (1950). *The scientific appraisal of management: A study of the business practices of well-managed companies*. New York: Harper & Brothers.

Mautz, R. K., & Sharaf, H. A. (1961). *The philosophy of auditing*. Florida: American Accounting Association.

Mayring, P. (2015). *Qualitative Inhaltsanalyse: Grundlagen und Techniken* (12th ed.). Weinheim Basel: Beltz Verlag.

Meffert, H. (2000). *Marketing- management* (9th ed.). Wiesbaden: Verlag Gabler.

Mironeasa, C., & Codina, G. G. (2013). A new approach of audit functions and principles. *Journal of cleaner production, 43*, 27-36.

Mish, F. C.(2005) (11th ed.). Springfield, Massachusetts: Merriam Webster, Incorporated.

Muil, D.). *The process approach: Adding business value and minimizing risk*. Intertek.

Murchinson, J. M. (2010). *Ethnography essentials: Designing, conducting, and presenting your research*. San Francisco, CA: Jossey-Bass.

Ni, Z., & Karapetrovic, S. V. (2003). Perennial self-audit: Model and applications. *Managerial Auditing Journal, 18*(5), 363-373.

Nicolini, D. (2012). *Practice theory, work & organization: An introduction*. UK: Oxford University Press.

Packard, R. (2012). How to train an auditor on the process approach. Retrieved from http://13485cert.wordpress.com/2012/06/08/how-to-train-an-auditor-on-the-process-approach/

Palmes, P. C. (2009). *Process driven comprehensive auditing: A new way to conduct ISO 9001:2008 audits* (2nd ed.). Milwaukee, Wisconsin: ASQ Quality Press.

Patton, M. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc..

Peddle, R., & Rosam, I. (2009). *Process management auditing for ISO 9001:2008*. London: British Standards Institution.

Pine, B. (2008). A risk-based approach to auditing financial statements. Retrieved from http://pakaccountants.com/what-is-substantive-approach/

Popova, V. (2013). Exploration of skepticism, client-specific experiences, and audit judgements. *Managerial Auditing Journal, 28*(2), 140-160.

Porter, B., Hatherly, D., & Simon, J. (2008). *Principles of external auditing* (3rd ed.). Chichester: John Wiley & Sons, Ltd.

Praxiom Research Group Limited. (2000, 30.11.2013). ISO's process approach. Retrieved on 2014-05-05, from http://www.praxiom.com/process-approach.htm

Preskill, H., & Catsambas, T. T. (2006). *Reframing evaluation through appreciative inquiry*. Thousand Oaks, London, New Delhi: Sage Publication Inc.

Prowle, M., Kalar, M., Barrow,L. (2016) New development: Value for money (VFM) in public services-the importance of organisational culture. *Public Money & Management*

Rajendran, M., & Devadasan, S. R. (2005). Quality audits: Their status, prowess and future focus. *Managerial Auditing Journal, 20*(4), 364-382.

Ramly, E. F., Ramly, E. S., & Yusof, S. r. M. (2007). *Effectiveness of quality management system audit to improve quality performance: A conceptual framework.* Paper presented at The Fifth International Conference on Quality and Reliability (ICQR 2007), Chiang Mai, Thailand

Ramsay, K.,(1996) *'Emotional labour and organisational research: How I leaned not to laugh or cry in the field'* in S.E. Lyon and J. Busfield (eds), Methodological Imaginations, London

Rawls, A. W. (Ed.). (2002*). 'Editor's introduction' In H. Garfinkel (Ed.), Ethnomethodology's program: Working out Durkheim's aphorism*. Lanham, Boulder, New York, Toronto, Oxford: Rowman & Littlefield Publishers, Inc.

Russell, J. P. (2000). *The quality audit handbook* (2nd ed.). Milwaukee, Wisconsin: ASQ Quality Press.

Russell, J. P. (2009). Gauge audit program value. From American Society for Quality. http://asq.org/quality-progress/2009/06/standards-outlook/standards-outlook-effective-audit-programs.html

Saager, A. (1924). *Henry Ford: Werden- Wirken*. Stuttgart: Wagnerische Verlagsanstalt.

Saldana, J. (2013). *The coding manual for qualitative researchers*. London, Thousand Oaks, New Delhi, Singapore: Sage.

Sampson, H., Bloor, M., Fincham, B. (2008) A Price worth paying? Considering the 'cost' of reflexive research methods and the influence of feminist ways of 'doing', *Sociology*, (5):919-34

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students* (6th ed.). Harlow, London, New York, Boston, San Francisco, Toronto, Sydney, Auckland, Singapore, Hong Kong, Tokyo, Seoul, Taipei, New Delhi, Cape Town, Sao Paulo, Mexico City, Madrid, Amsterdam, Munich, Paris, Milan: Pearson Education Ltd.

Sawyer, L. B. (1993). Why internal auditing? *Internal Auditor, 50*(6), 43.

Schandl, C. W. (1978). *Theory of auditing: Evaluation, investigation, and judgement*. Houston, Texas: Scholars Book Co.

Schön, D. (1983). *The reflective practitioner: How professionals think in action*. London: Temple Smith.

Sidorowicz, F. (2012). *The value of using the process approach for internal auditing*. Arvada, CO: Orion Registrar, Inc.

Soltani, B. (2007). *Auditing: An international approach*. Essex: Pearson Education Limited.

Spicer, E. E., & Pegler, E. C. (1921). *Practical auditing* (3rd ed.). London: H. Foulks & Co., Ltd.

Steinke, I. (2015). Gütekriterien qualitativer Forschung. In U. Flick, E. von Kardoff, & I. Steinke (Eds.), *Qualitative Forschung: ein Handbuch*. Reinbek bei Hamburg: Rowohlt Taschenbuchverlag.

Stone, W. E. (1969). Antecedents of the accounting profession. *The accounting review: A journal of the American Accounting Association, 44*(2), 284-291.

Teck-Heang, L., & Ali, A. M. (2008). The evolution of auditing: An analysis of historical development. *Journal of Modern Accounting and Auditing, 4*(12).

Ten Have, P.. (2004). *Understanding qualitative research and ethnomethodology*. London, Thousand Oaks, New Delhi: Sage Publication Ltd.

Thomas, G. (2011). *How to do your case study: A guide for students and researchers*. Thousand Oaks, London, New Delhi, Singapore: Sage Inc.

Tricker, R. (2005). *ISO 9001:2000: Audit procedures* (2nd ed.). Amsterdam, Boston, Heidelberg, London, New York: Elsevier.

Waters, M., & Mehay, R. (2010). A deeper look at constructivism- ontology and epistemology. Retrieved on 2014-04-08, from www.essentialgptrainingbook.com/.../A%20Deeper%20look%20at%20Constructivism.doc

Watkins, J. R., & Cooperrider, D. (2000). Appreciative inquiry: A transformative paradigm. *OD Practitioner: Journal of the Organization Development Network, 32*(1), 6-12.

Web Finance, I. (2014). www.businessdictionary.com Retrieved on 2.02.2014, from http://www.businessdictionary.com/definition/management.html#ixzz2sAao3bDc

Windsor, C., (1995). The effect of client management bargaining power, moral reasoning development, and belief in a just world on auditor independence. *Accounting, Organizations and Society*, 20(7-8), 701-720

Wood, J., Chapman, J., Fromholtz, M., Morrison, V., Wallace, J., Zeffane, R., Schermerhorn, Hunt, Osborn (2001). *Organisational behaviour: a global perspective (3rd ed.)*: Milton: Wiley

Yin, R. K. (1984). *Case study research: Design and methods.* Beverly Hills, CA: Sage.

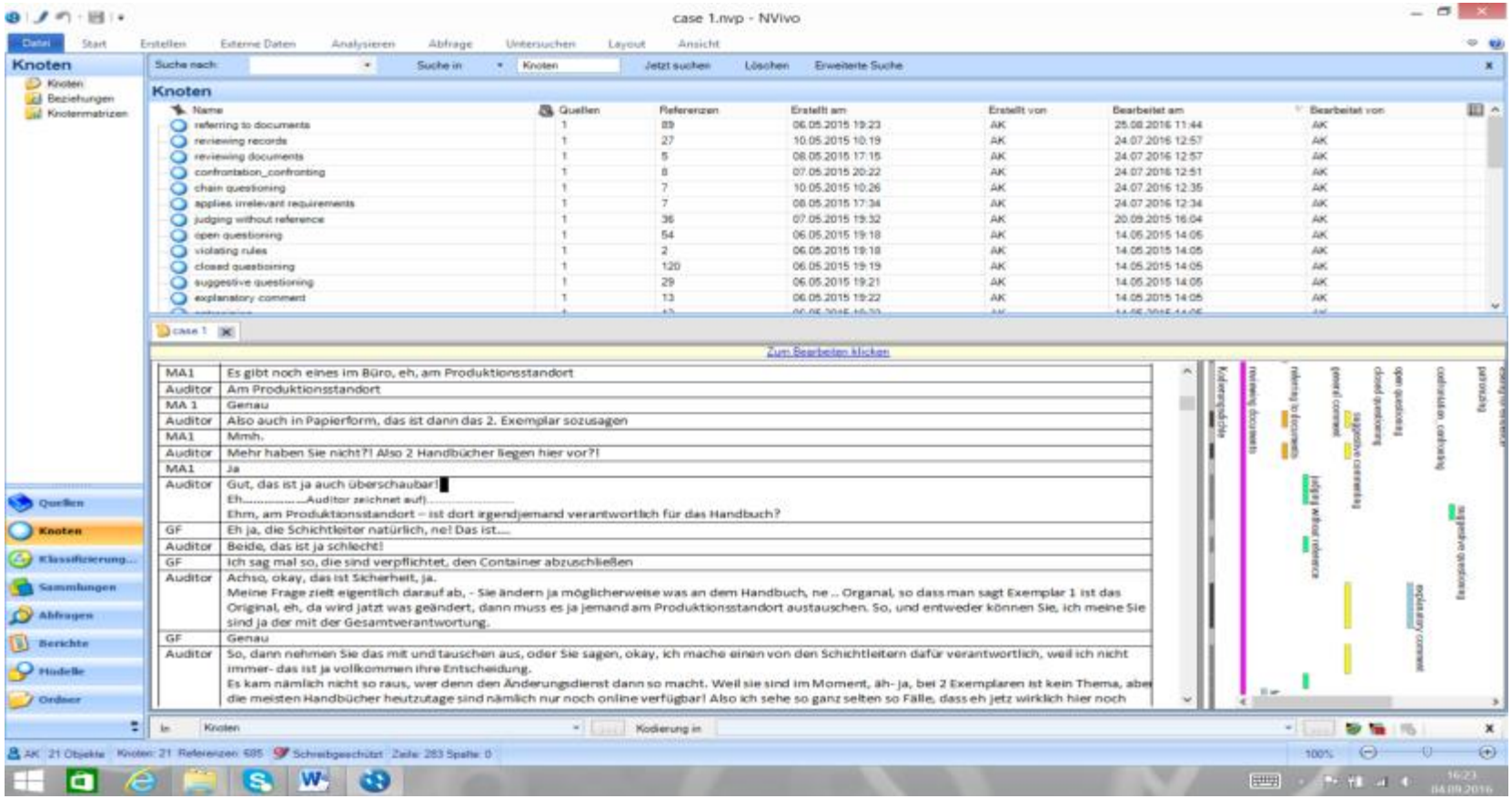
Yin, R. K. (2009). *Case study research: Design and methods (4th ed., Vol. 5).* Thousand Oaks, CA: Sage Inc.

Zajarskas, R., & Ruževičius, J. (2010). Evaluation of the effectiveness of the quality management system of the service enterprise. *Economics and Management, 15, 857-864.*

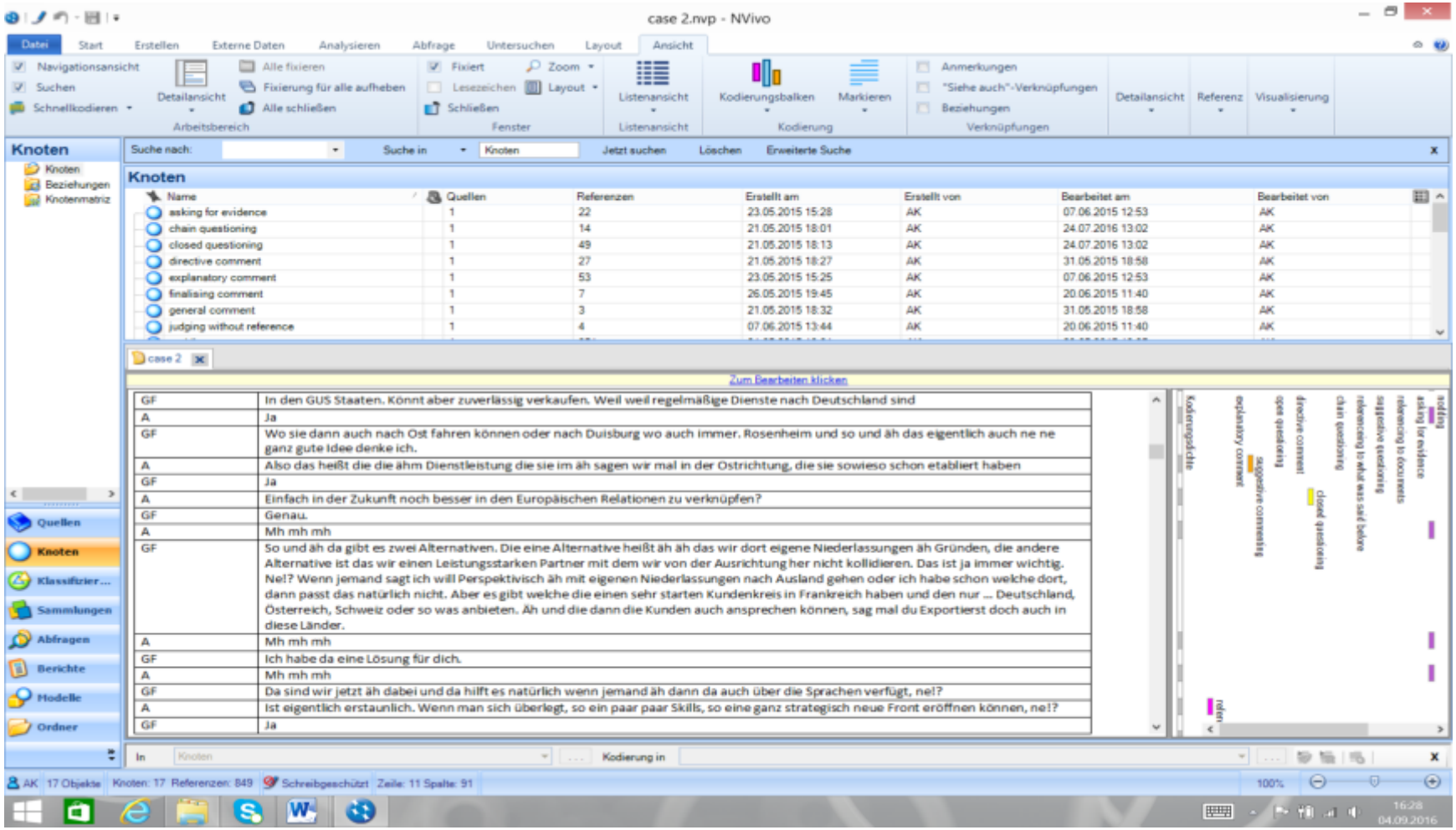
Zeng, S. X., & Tian, P. (2007). Overcoming barriers to sustainable implementation of the ISO 9001 system. *Managerial Auditing Journal, 22*(3), 244-254.

APPENDICES

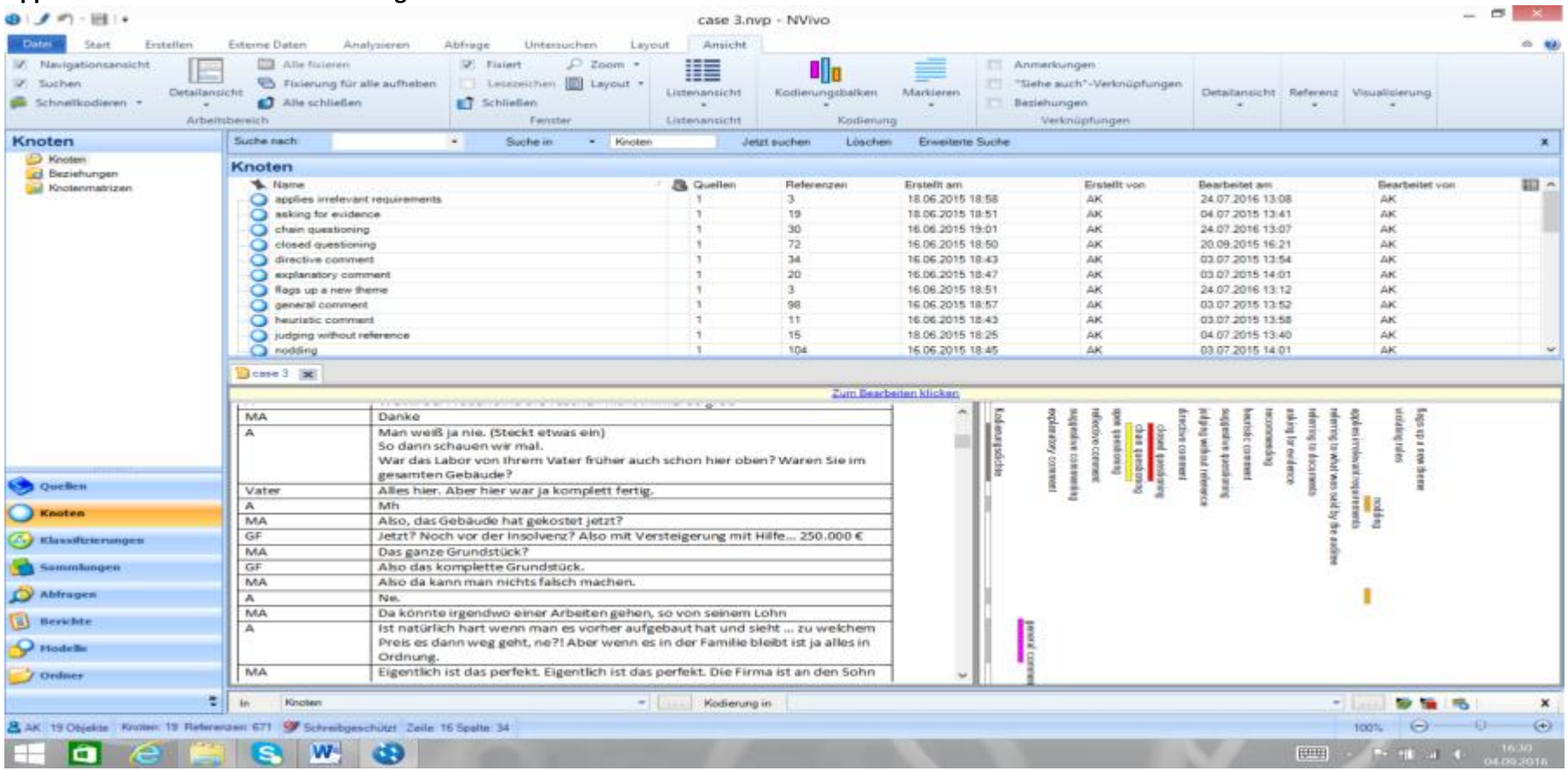
Appendix 1: Screenshot NVIVO coding case 1



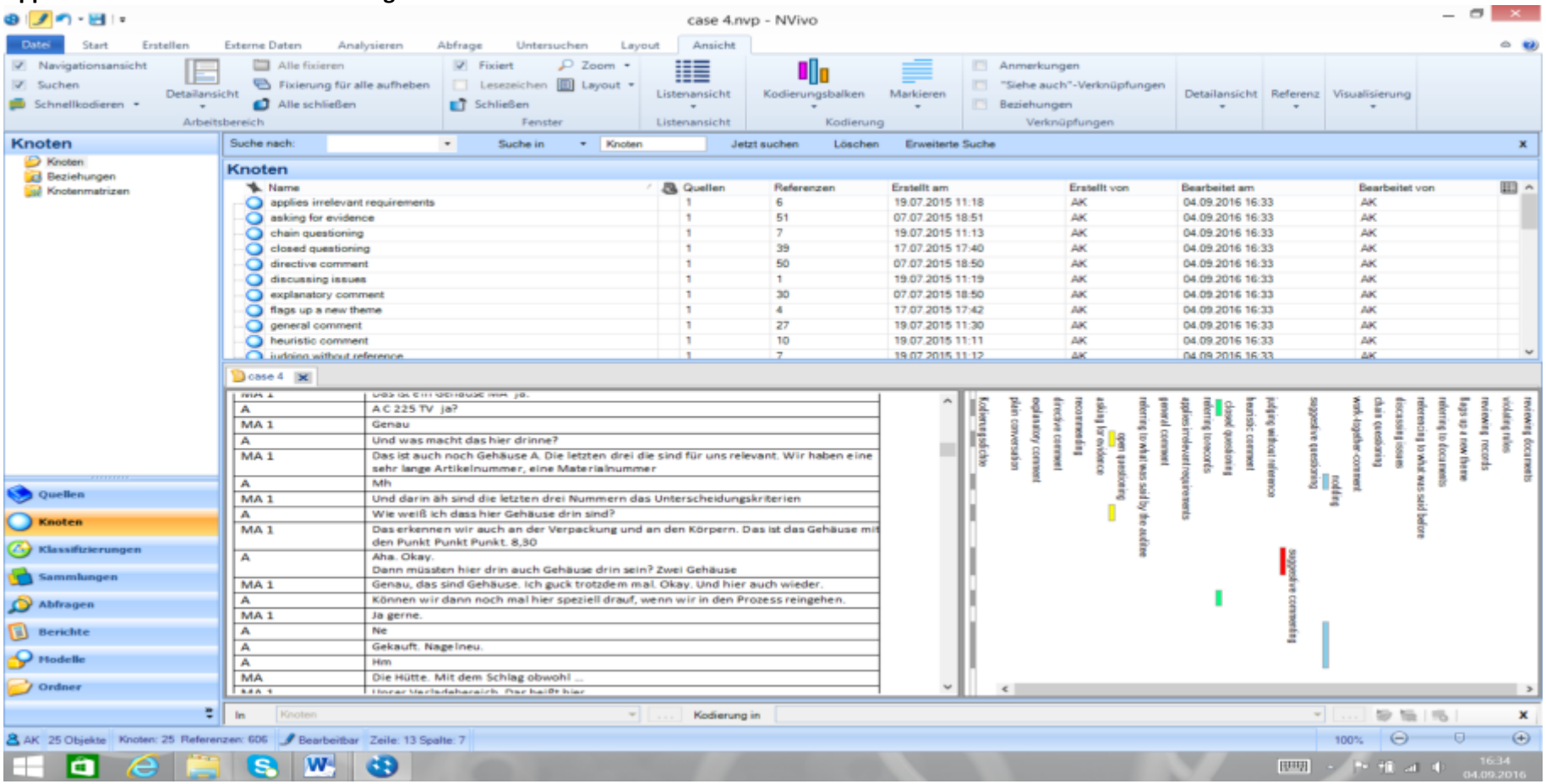
Appendix 2: Screenshot NVIVO coding case 2



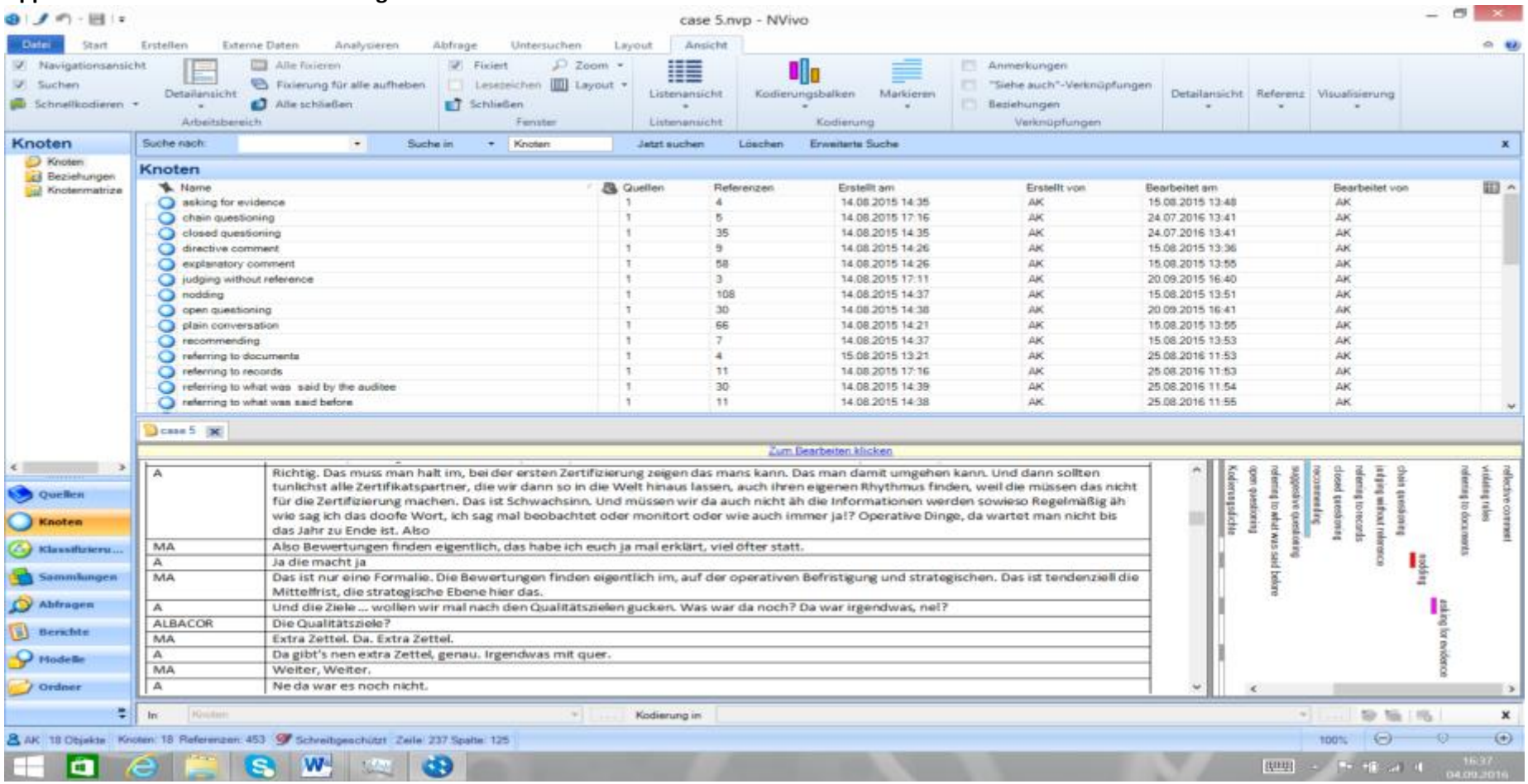
Appendix 3: Screenshot NVIVO coding case 3



Appendix 4: Screenshot NVIVO coding case 4



Appendix 5: Screenshot NVIVO coding case 5



Appendix 6: Saturation of categories

Category	Sub- category	Code	Sub-code	Case 1	Case 2	Case 3	Case 4	Case 5
Auditor's process of data collection	**Interview**	Chain questioning		X	X	X	X	X
		Open interviewing	Open questioning	X	X	X	X	X
		Directive interviewing	Suggestive commenting	X	X	X	X	X
			Suggestive questioning	X	X	X	X	X
			Closed questioning	X	X	X	X	X
			Asking for evidence	X	X	X	X	X
	Content analysis		Reviewing documents	X			X	
			Reviewing records	X			X	
	Observation							
Pre-evaluative action		Feeding back	Nodding		X	X	X	X
			Explanatory comment	X	X	X	X	X
			General comment	X	X	X	X	
			Heuristic comment	X		X	X	
			Referring to documents	X	X	X	X	X
			Referring to records		X		X	X
			applies irrelevant requirements	X		X	X	
			Discussing evidence	X				
			Reflective comment			X		X
			Directive comment	X	X	X	X	X
			Recommending	X	X	X	X	X
		Back-coupling	Referring to what was said by the auditee		X	X	X	X
			Referring to what was said before		X		X	X
Evaluation		Judging without reference	n/a	X	X	X	X	X
Auditor's behaviour		Flags up a new theme	n/a			X	X	
		Violating rules	n/a	X		X	X	X
		Confrontation/confronting	n/a	X				
		Patronizing	n/a	X				
		Withdrawal	n/a	X				
		Work-together-comment	n/a				X	
		Plain conversation	n/a				X	X
		Finalizing comment	n/a		X			

Appendix 7: Code book

Category Interview	
Asking for evidence	The auditor asks for (certain) paper based evidence directly
Chain questions	The auditor strings at least 2 questions
Closed questioning	The auditor formulates questions in a way that the response can just be yes or no, or the release of a certain information
Open questioning	The auditor asks in a way that requires the auditee to develop an answer, this question cannot be answered by yes/no, or by providing evidence asked for.
Suggestive commenting	The auditor comments on things read/heard/observed in a way that the auditee is required to add something. This kind might also be seen as indirect questions.
Suggestive questioning	The auditor offers what might be the answer or the scope at which the answer might be found while questioning.
Category content analysis	
Review of documents	The auditor analyses quality management documents of the auditee which specify process action to be processed by the auditee
Review of records	The auditor analyses records which deliver evidence of outcomes of processes, and thus evidence of transformational activities within processes, but does not relate the evidence to input for or transformation in a process
Category pre-evaluative action	
Main code 'feeding back'	
Nodding	This humming marks a way in which the auditor reacts as a tool for communication
Explanatory comment	The auditor tries to explain his/her position or rules or what he/she things about a certain issue
General comment	These kind of comments rather offer an opinion if the auditor than anything else
Heuristic comment	The auditor hides him or herself away by referring to rules or apparently set rules by third parties, or expect things to see he/she had experienced elsewhere.
Referring to documents	The auditor refers back to the quality manual or further documentation that are dedicated to rule action within the auditees' realm
Referring to records	The auditor comments or refers to records
Applies irrelevant requirements	The auditor applies requirement which do not belong to the ISO 9001
Discussing evidence	The auditor discusses the evidence by relating it to further action within the management

	system
Reflective comment	The auditor comments on evidence seen or heard before;
Recommending	The auditor recommends to improve something or to act differently in the future. Recommending might add some value in the future
Main code 'back-coupling'	
Referring to what was said by the auditee	The auditor conducts an in-depth questioning on what the auditee has said or uses quotes of the auditee for further inquiry
Referring to what was said before	The auditor connects actual audit action back to earlier findings or issues worked on in the course of the whole audit
Category Evaluation	
Judging without reference	The auditor judges particularly by not applying rules to be applied; the judgement appears like an evaluation based on the opinion of the auditor
Category auditor's behaviour	
Flags up a new theme	
Violation rules	Audit action: the auditor ignores rules wittingly
Withdrawal	The auditor abandons a position gracefully or because the auditee takes a different view on a requirement formulated by the auditor
Confrontation	The auditor does not hesitate to conduct an open conflict with the auditee on requirements he expects to be approved by the auditee, but the auditee disagrees. The auditor does not try to explain his/her position by referring to requirements
Work-together comment	The auditor equates himself with the auditee indicating that both parties have the same objective
Directive comment	The auditor informs about next or future audit action
Plain conversation	The auditor chatters with the auditee about issues not belonging to the audit
Finalizing comment	This kind of comment marks an end of an audit action
Patronizing	The behaves in an offensively condescending manner towards the auditee

Appendix 8: Interview schedule

Theme	ISO clause	Interview question	ISO sub clause	Potential sub-questions
System Approach as meta process approach	0.2	In what way do you find out whether the organization has applied their system of processes effectively in terms of the PDCA- circle?	0.2	• How do you find out whether the system of processes in place and their interrelationship functions well and is directed towards the customer requirements? • How do you find out whether the ongoing control over the linkages of processes is provided well by the system in place? • How do you try to judge on the level of effectiveness of the management system by synthesising the data collected during the audit?
Process approach	4	In what way do you find out whether the organization has applied documentation requirements effectively?	4.1	• How do you find out that the organization has determined the processes needed as well as their sequence and interaction within their company? • How do you find out whether the organization has established suitable criteria and methods that both the operation and the control of these processes are effective? • How do you find out whether the MS monitors and analyses the processes and implements action for improvement if necessary? • How do you find out whether the documentation suits to these requirements?
Process approach	5	In what way do you find out whether the organisation has applied the management process	5.1	• In what way do you find out whether the board is committed to the development and implementation of the quality management system and improve its effectiveness continually? • In what way do you analyse whether the quality policy fits to the

		requirements effectively	5.3 5.4	purpose of the organization? • In what way do you try to understand whether the quality objectives established by the board for relevant functions and levels within the organization fit for the purpose of the organization as well as to the standard requirements? • In what way do you find out whether the planning set out to achieve the quality objectives as well as to maintain the management system potentially works? • How do you find out whether the communication structures fit for the purpose of the organisation?
Process approach	6	In what way do find out whether the organisation has applied resource management processes effectively	6.2.1 6.2.1 6.2.2/ 8.4 6.3/8.4	• How do you find out whether the organization has a suitable resource planning system to serve the purpose of the company well? • In what way do you find out that the process of competence determination serves the purpose of the company? • In what way do you find out whether the management system addresses gaps in competence and how it collects data for the gap analysis? • How do you work out whether the management system provides, maintains and replaces the infrastructure needed to accomplish the purpose of the organisation?
Process approach	7	In what way do you find out whether the organization has applied the product realization	7.1	• How do you try to understand whether the organization has implemented product- or services realisation processes effectively in terms of procedures and arrangement of action to be taken.

		requirements effectively		
Process approach	8	In what way do you find out whether the organization has applied the measurement, analysis and improvement processes effectively?	8.1	• How do you work out whether the organization has planned, implemented as well as measured, analysed and improved the processes needed to demonstrate and/or ensure conformity with requirements as well as to improve the effectiveness of the management system continually?

Appendix 9: Interview case 1

I	**Wie findest Du eigentlich heraus, dass die Organisation ihr System von Prozessen effektiv im Sinne des PDCA Zyklus anwendet?**
	In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?
A	**Das kann ich nicht beantworten, ich hab darüber noch nicht nachgedacht**
	I cannot answer this question. Honestly, I've never thought about this!"
I	**Du weißt, PDCA bedeutet Plan do Check Act und beschreibt einen Prozess. Was bedeutet der Begriff ‚Prozess Methode'?**
	You know, PDCA means plan-do-check-act and it describes a process. What does the term process approach mean?
A	**Ich weiß nicht. Ach ja, ich verstehe: Wenn ich nach einigen Grundlagen gefragt habe und dann durch den betrieb gehe…das heißt Prozessorientierung! Es passt mir, wenn der Auditierte Prozessbeschreibungen hat, die mir hilft, mich durch die Organisation zu bewegen um Beweise zu sammeln.**
	I don't know. Ah, okay, I see: This means, when I have asked for some basics, and then go through the company - this means process oriented. It suits me when the auditee has process descriptions which give guidance through the entire entity for collecting examples.
I	Ich würde ganz gern mal wissen von Dir, wie du zunächst mal nachsiehst, oder grundsätzlich nachguckst, ob das Managementsystem effektiv eingeführt wurde!? Also, was ist für Dich das Signal, dass ein Managementsystem da ist und auch funktioniert?
A	Der erste Punkt ist, wie überhaupt das Management des Unternehmens dazu steht, das heißt, man kriegt ja bei Interview schon erst mal mit, ob hauptsächlich der QMB spricht oder ob der Geschäftsführer ne eigene Auffassung zu diesem ganzen System hat…. Ja, und dann in der praktischen Umsetzung, eh und welchen Nutzen sieht er eigentlich in diesem System- nicht unbedingt jetzt das es kostenmäßig nachgewiesen werden kann, aber eh bringt er äh…oder bei vielen kleinen Unternehmen die ich hauptsächlich betreue ist es so dass man mit diesem Managementsystem überhaupt erst mal eine Grundstruktur reinbringt. Und wenn der Geschäftsführer bereit ist überhaupt erst mal so eine Grundstruktur in seinem Unternehmen einzuführen, ist es für mich schon mal ein Punkt, dass er sich mit Managementsystem an sich schon einmal auseinandersetzt.
I	Wenn ich das also richtig verstehe, ist dieses commitment zum Managementsystem vom Geschäftsführer ein entscheidender Punkt für Dich zunächst?
A	Ja.
I	Und die zweite Sache die du gerade erwähnt hast ist ja irgendwie ‚Ordnungssystem': Welchen Stellenwert hat denn das Managementsystem grundsätzlich als Ordnungssystem für Dich? In Deiner Beurteilung dann nachher?
A	Hab ich jetzt nicht so richtig verstanden!
I	Naja, Du hattest ja gesagt- einmal hat er das commitment: Du machst es so fest ob der GF oder der QMB dort redet und ob eine Bereitschaft da ist, dass Managementsystem auszuführen. Das habe ich verstanden. Dann hast Du gesagt, dass das Managementsystem- ich sag es mal mit anderen Worten: ja auch als Ordnungssystem wirkt…zum Beispiel um auch effektiv zu sein. Und jetzt ist die Frage für mich, ist das für dich ganz essentiell: geht es dabei um Ordnung?
A	Nein, nicht nur. Das ganze kommt eigentlich daher…es kommt immer die Frage: Was bringt mir ein Managementsystem? Viele sagen, wir haben da entsprechende Kosten..

	die wir haben… und wenn wir das Managementsystem einführen…dann habe wir am Schluss so und so viel Kostenersparnis. Eh, das ist in den meisten Fällen schwer nachzuweisen. So. Da ist es für mich, eh, oder ein Argument mit, dass dieses Managementsystem dazu hilft erst mal Ordnung im Unternehmen reinzukriegen, die Prozesse zu beschreiben. Weil, oftmals viel über Prozessabläufe gesprochen wird, über ein kontinuierlichen Verbesserungsprozess: Wenn man dann fragt, ja was verbessert Ihr dann überhaupt? Auf welchem Status seid ihr überhaupt? Wie messt ihr denn überhaupt den Fortschritt? Das ist ja dann das was für mich dann den Ausschlag gibt…ich habe entsprechende Dokumentationen, egal wie, in welcher Form auch immer, ABER ICH HABE einen bestimmten Stand, ich leite bestimmte Maßnahmen ein, ich messe dann das Ergebnis, und als- ja…ich sag mal…der GF ist dann derjenige, der das Ganze dann so mit treibt und die Vorteile sieht.
I	Also, da hast Du ja auf den PDCA Zyklus hingewiesen, auf den würde ich vielleicht noch mal später zurückkommen. Du sagst also, es wird erst mal geordnet das Unternehmen, dann wird viel beschrieben: **Wie findest Du heraus, dass die Dokumentenanforderungen durch die Organisation effektiv erfüllt sind?**
	In what way do you find out whether the organisation has applied the documentation requirements effectively?
A	**Na, dass hängt davon ab, was ich erreichen will**: ERm, ich bin da immer ein bisschen Zwiegespalten: **Ich erwarte natürlich, dass bestimmte Mindestanforderungen an die Dokumentation erfüllt werden und erst mal vorhanden sind. Aus meiner Sicht muss es so gemacht werden, dass es einen Nutzen für die Firma bringt. Welches Bild will ich für die Außenwelt und intern produzieren?! Das definiert die Anforderungen nach Dokumenten. Es ist wichtig, dass da irgendein Papier ist, das darüber informiert, was ich erreichen will und wo ich aktuell stehe! Das muss beschrieben sein!**
	It depends on what I want to achieve! I expect that certain basic requirements are addressed. From my point of view it has to be done in a way that produces a benefit for the company. What image of the company do I want to create for the public and internally - that defines the documentation requirements! It is important that there is any report of any kind that contains what I am apt to achieve and what status quo I have. That needs to be described!"
I	Also, es geht um eine Innenwirkung und um eine Außendarstellung?
A	JA. Für eine Außendarstellung- wenn ich sie noch dazu durch eine dritte Person zertifizieren lassen will muss ich natürlich bestimmte Mindeststandards erfüllen.
I	Welche sind denn das?
A	Na, in dem ich, eh, - na genau die Forderungen die wir in der Norm haben…das heißt, ich muss bestimmte dokumentierte, erm, verfahren haben- ob man die jetzt Verfahrensanweisungen nennt oder wie auch immer…das ist vollkommen dahingestellt- jedenfalls es muss beschreiben werden. Ob nun die Dokumentation im Rechner erfolgt, wie der Umfang der Dokumentation ist, ist auch ziemlich unerheblich. Also, erm, Kein Mensch verlangt heutzutage mehr eine Dokumentation, erm, im, erm, in in Papierform vorzuhalten. Mit einer Ausnahme: wenn ich an bestimmten Stellen wirklich juristisch sicher sein will, dann komme ich im Moment an einer Papierdokumentation nicht vorbei. Es sei denn wieder, ich hab die entsprechenden technischen Möglichkeiten. Aber nichtsdestotrotz- um nochmal auf die Frage zurückzukommen- Für mich ist ganz wichtig, dass in irgendeiner Form

	festgehalten wird: Was haben wir vor und welchen Stand haben wir erreicht! Wenn ich das nirgendwo beschreibe…
I	**Woran machst Du denn eigentlich fest, dass die Managementsystemanforderungen effektiv erfüllt wurden?**
	In what way do you find out whether the organisation has applied the management process requirements effectively?
A	**Das hängt natürlich von vielen Faktoren ab: Das heißt- wo will das Unternehmen hin, welche Kunden hat es zu bedienen, in welcher Branche bewegt es sich, erm, was sind bestimmte Anforderungen, die aus dem Umfeld, an die Branche gestellt werden, an das Unternehmen….und wenn ich in der Lage bin, diese Anforderungen nachzuweisen, dass ich die erfülle, eh, dann gehe ich erst mal davon aus, dass die Maßnahmen, die getroffen wurden, die Prozesse, die dafür festgelegt wurden, eh, zu Erfolgt führen. Wir haben ja an vielen Stellen Unternehmen, die sind schon lange am Markt, ohne über ein QMS zu reden, aber alleine an vielen Stellen Existenz mit geschäftlichem Erfolg…kommt ja nicht aus dem luftleerem Raum… Das erste Thema ist- wie steht die Chefetage dazu- im Audit kann ich herausfinden, wer hauptsächlich antwortet- der QMB oder sagt der GF seine eigene Auffassung für das ganze System… Gut, bei der praktischen Einführung- was ist der Nutzen, den der GF sieht in dem System…oder…in manchen Kleinunternehmen die ich normalerweise auditiere- aus meiner Sicht- das System führt initial eine Ordnung in die Firma ein! Am wichtigsten ist für mich, ob der GF bereit ist eine solche Grundstruktur einzuführen und ob der sich Gedanken darüber macht.**
	It depends on factors [such as]: what the organization wants to be achieved, what customers have to be served, in what scope does the organisation act, requirements of the company's requirements…When I am able to fulfil these factors, then I think that the measurements taken and the processes introduced will lead to success…. The first issues are, how the top management is committed [to the requirements of the ISO 9001], when interviewing one can find out whether the quality management representative (QMR) mainly responds, or whether the chief executive officer(CEO) has his own notions for the whole system [ISO 9001]. Well, when implementing [the system] practically - what benefit he [the CEO] sees with the system…or, in many small enterprises which I [the auditor] usually audit - from my point of view the system introduces a basic structure in a company. The main point for me is, whether the CEO is willing to introduce such a basic structure, that he cares for the subject.
I	Ich gehe nochmal zurück zu meiner Frage: **Woran machst Du denn eigentlich fest, dass die Managementsystemanforderungen effektiv erfüllt wurden?**
	Back to my question: In what way do you find out whether the organisation has applied the management process requirements effectively?
A	**Naja, ich denke, dass da ein Bedarf für Beschreibungen für Prozesse da ist, um Erfolge zu erreichen…ich starte bei einem status quo, beginne mit Prozessen, um Verbesserungen zu erreichen und messe dann das Ergebnis!**
	I think, firstly there is a need [for the auditee] to describe the processes to achieve improvements….I [the auditee- verbally the auditor puts himself into the position of the auditee] have a certain status quo, I [the auditee] launch processes to achieve improvements and measure the result."
I	Welches globale Ziel muss den nach der 9001 vom Unternehmen verfolgt werden?
A	Rein formal nach der Norm…die Anforderungen des Kunden, der interesseierten Parteien erfüllen: das muss ich also definieren: was sind meine Kunden, was sind die Parteien, die sich für mich interessieren, muss ich entsprechend eh mir die Zielstellung so vorgeben.

I	Wie analysierst Du denn, dass es eigentlich passt?
	How do you analyse whether it fits
A	**In dem ich mich erst mal in der Regel auf das Unternehmern vorbereite, das heißt, ich schaue mir banaler Weise den Internetauftritt an, schaue, was das Unternehmen überhaupt da formuliert…versuche bestimmte Fragen dazu zu stellen, bestimmte Nachweise zu finden**, die belegen können- jawoll, wir beschäftigen uns genau mit diesen Themen
	I prepare myself in advance: internet - the wording on the company's web page, try to ask questions and to find records
I	**Auditieren ist Evaluation: Was sind die Referenzpunkte nach denen Du kuckst? Wann ist etwas richtig oder nicht, oder angemessen?**
	Since auditing is evaluation. What are the points of reference that you look for and form your foundation for judgement?
A	**… subjektive eigene Betrachtungsweisen**, **meine Referenzpunkte sind dann die Erfahrungen, die ich selber gemacht habe** und wenn der GF Verbesserung beweist
	[There are] subjective approaches, I do have my own yardstick [in the sense of the standard], which I have acquired elsewhere. I compare with what I've seen before in any other company. And, when the CEO proves improvement!
I	**Wie findest Du denn nun heraus, dass Form und Menge der Dokumentation anforderungsgerecht ist?**
	How do you find out that the style and the amount of the documentation fits to the requirements?
A	**Das ist banal: Ich zähle die von der Norm geforderten Prozeduren- ist da irgendeine Beschreibung welche Prozesse wichtig sind, ist da ein Handbuch, dass das die Wechselbeziehungen beschreibt…Die Dokumentenmenge ist zu groß, wenn da irgendwas aufgeschrieben ist, dass ich nirgendwo finden kann in der Firma- Wunschdenken!- Und dann muss man noch mal schauen, welche anderen Dokumente in der Organisation zu finden sind. Und die müssen auch gelenkt sein!**
	This is banal: I count the six documented procedures [required by the standard], [and I look whether] there is any description of what processes are important, and is there a manual which describes the interrelations of the processes described. The document amount is too huge when there is something written that I cannot find [in a record] within the company: wishful thinking! And then one needs to look [at] what other documents one can find within the organisation. Those have to be controlled too!
I	Wo gehört denn eigentlich die Q- Politik hin?
A	Äh, im Handbuch zugeordnet! Erst mal rein formal, dann habe ich sie natürlich veröffentlicht.
I	Wann ist denn dann wieder die Entscheidung- ist das angemessen- nicht die Dokumentation- die Prozesse sind angemessen platziert, sind effektiv, erfüllen ihre Zwecke…Woran machst Du das fest?
A	Als, eh, es gibt ja Prozesse, die ich ja nicht unbedingt als Prozessbeschreibung dokumentiere, sondern- ich habe eine grundsätzliche Beschreibung…Es gibt Prozesse, die kann ich per Workflow, oder mittels selbst erklärender Formulare steuern, beherrschbar machen ohne dass ich jetzt nochmal zusätzlich irgendwelche Verantwortlichkeiten, Abläufe oder so was beschreibe.
	Okay da bist du beim Dokumentationsteil, meine Frage war aber, woran machst du denn fest, dass der Wirksam ist.
A	Wenn der funktioniert und am Schluss das geprüfte Produkt rauskommt oder der

	bewertete Lieferant rauskommt, eh entsprechende Daten geliefert werden, die dann auch wieder jemand auswerten kann, dann ist der Prozess für mich wirksam, eh, wenn die Kennziffern, die das Unternehmen sich vorgegeben hat aussagefähig ermittelt werden können, dann ist der Prozess für mich wirksam. Ob, gut, eh, sagen wir mal- ich habe ja nicht zu bewerten, ob die Kennziffer, die erreicht wurde, eine….ehm…von der Wertigkeit gut oder schlecht ist- könnte ich machen, wenn ich ausreichend Erfahrung it anderen Unternehmen habe, und also sage, die Ausschussquote in Feinmechanik/Optik liegt bei 2,5, beim normalen Kleinserienfertiger, währenddessen die Automobilindustrie wieder ganz andere Quoten hat, liegt ihr mit eurer Quote gut oder schlecht. Ansonsten obliegt e mir nur zu bewerten: gibt es ein Verfahren, um diesen Prozess in irgendeiner Art und Weise eh, zu messen, zu bewerten- Und, wie tief macht man das Ganze! Man kann auch ein Unternehmen mit Prozesskennziffern völlig überfrachten.
I	Wann ist es für Dich überfrachtet?
A	Wenn die Mitarbeiter nur noch damit beschäftigt sind, die Daten in Systeme einzugeben, damit nur noch irgendjemand auf den Knopf drücken kann und irgendwelche Informationen zu bekommen, die dann nicht zu positiven oder negativen Entscheidungen, eh, führen.
I	Normanforderungen Kapitel 6- da wird ja über die Bereitstellung von Ressourcen gesprochen: Wie schaust du dir eigentlich an, ob die Ressourcen angemessen da sind? Egal, was es jetzt ist- Personal oder ne Maschine oder so. woran machst Du fest, dass das angemessen ist.
A	Ja bleiben wir mal bei der, eh, das Thema Infrastruktur, eh, Maschinen, eh…….ja, woran mach ich das fest?.....Ist jetzt eigentlich schwierig zu bewerten (lacht verschämt)….Die Frage ist jetzt wieder: Die Angemessenheit, eh, in Bezug auf das was das Unternehmen vorhat. Da muss ich ganz offen sagen, da kann ich nicht bewerten, ob der CNC Automat, der jetzt hier angeschafft wurde in seiner entsprechenden Kostenstruktur dann sich auch wieder in absehbarer Zeit wieder amortisiert.
I	Das ist ja nicht die Frage…
A	Also, diese Bewertung mache ich nicht
I	Das ist ja nicht so die Frage, es ist eher die Frage, ob hinreichend Ressourcen vorhanden sind, um leisten zu können….und auch die Richtigen
A	Okay, das hängt jetzt wieder davon ab…was habe ich, was bin ich für ein Unternehmen, was habe ich für ein Produkt…Das heißt, bin ich in der Feinmechanik-Optik tätig- mein Partner ist ein , eh, Elektronikhersteller und ich liefere Equipment für Reinräume. Das setzt natürlich voraus dass ich in meinem eigenen Bereich mir überlege- kann ich die Anforderungen des Kunden erfüllen…
I	Ja gut, jetzt aber noch mal- ich frage, wie machst Du als Auditor fest, dass das was Du siehst, angemessen ist.
A	Indem ich zum Beispiel nachfrage, was gibt es für Forderungen der Kunden an Euro Produkte. Wenn dort drin steht, eh, wir haben elektronisch empfindliche Bauelemente, dann erwarte ich natürlich, dass das Unternehmen darauf einstellt und zum Beispiel ESD Arbeitsplätze einrichtet. Oder Flowboxen hat, wo eine bestimmte Sauberkeit erreicht wird. Wenn solche Kundenanforderungen da sind oder wenn gar das Produkt selbst von vornherein schon eine solche Forderung hat. Also, wenn ich für eine Optik herstelle, dann erwarte ich schon, dass die im Anschluss entsprechend gesäubert wird. Das es auch eine Vorschrift gibt, eine Reinigungsvorschrift oder eine entsprechende Reinigungsanlage vorhanden ist, diese Dinge zu erfüllen Dann haben wir dort auch immer das >problem- Reinigungsanlage fällt mir grad ein- dort stelle ich natürlich auch solche Ansprüche, wie Validierung der Prozesse- die also auch

	nachweisbar sind- mit eingestellten Reinigungsprogrammen das entsprechende Ergebnis erzielt werden kann.
I	Es gibt nicht das Thema Produkt, das hast Du ja schon ungefragt beantwortet. Trotzdem ist da noch das Thema, woran machst du eigentlich fest, das eine- oder auf welche Weise, dass eine vorhanden Produktionssituation angemessen ist, also das Zusammenwirken von Prozessen angemessen ist und normativ vollständig?
A	Was verstehst du jetzt unter normativ vollständig?
I	Na wir haben ja Normanforderungen, die müssen erfüllt werden..
A	Na gut, eh, eh, das ist schwierig. Das QMS bezieht sich nicht auf das Produkt, sondern…
I	Es sind schon die Prozesse gemeint. Die müssen ja gesteuert, koordiniert werden. Meine Frage geht in die Richtung, woran Du fest machst, dass diese Steuerung- Kapitel 7.1 der Norm- dass die funktioniert, richtig ist. Angemessen ist und zum ziel ührt.
A	Das hängt auch wieder davon ab, ehm, …ich mach's vielleicht mal am Beispiel Service. Das heißt- oder auch wieder ‚Rückmeldung vom Kunden': Es gibt entsprechende möglicherweise Reklamationen, die beziehen sich auf mitgelieferte Beistellungen, die beziehen sich auf bestimmte Leiterplatten , die beziehen sich auf Motoren- so- und das Unternehmen hat- obwohl der Kunde das ja nicht fordert- keine Rückverfolgbarkeit sichergestellt- das heißt, bei Auslieferung wird nicht eh erfasst, was weiß ich- welcher Rechner gehörte jetzt eigentlich dazu- welche Leiterplatten sind verbaut, eh, die wichtigsten Grundbaugruppen, um überhaupt in der Lage zu sein mal zu analysieren- wo liegen hier die Fehlerschwerpunkte, bei welchen Chargen – oder was selbst häufig passiert- der Kunden- wo ich mehrere Produkte hin liefere ist so gemein und reklamiert alte Rechner, die ich schon vor zwei Jahren geliefert habe, die schon aus der Gewährleistung raus sind-behauptet die hätten beim neuen Produkt….Das wäre dann ein fall, wo ich sage- dann sind die Prozesse nicht angemessen um hier dem ganzen Thema ‚Fehlermanagement' ‚Reklamationsmanagement nachzukommen. Das wäre jetzt so ein Beispiel.
I	Koordination von auch verschiedenen Aufträgen Wie ermittelst Du, dass die verschiedenen Aufträge, die da sind per Vertrag auch realisiert werden können, dass Leistungsverabredungen entsprechend eingehalten werden können
A	Indem ich meistens in der Arbeitsvorbereitung oder demjenigen, der für die Planung der Prozesse verantwortlich ist frage, wie er diese Übersicht behält und er mir darstellt- entweder am Rechner, dass es entsprechende Kapazitätsplanungen gibt, oder es können einfache Papiere sein, wo ich nur über Terminketten das führe- das hängt ja immer davon ab- wie groß ist das Unternehmen- wie kompliziert ist diese Struktur.
I	Mir ist jetzt mal wichtig das ganze Normkapitel MAV: Wie ermittelst Du- vielleicht auch auf der Basis der vorher gewonnenen Erkenntnisse, dass diese Anwendungen, die verschiedenen Normanforderungen- mal abgesehen vom internen Audit passen zu dem unternehmen und auch ein gewisses Ziel erreichen und wirksam sind?
A	Na erst mal muss sich das Unternehmen selber vorgeben, welche Kennziffern, welche es regelmäßig messen möchte. Dann hängt es, ehm, …ja, ich bin immer Zwiegespalten… auf der einen Seite kann das Unternehmen schon von vornherein natürlich über bestimmt QM Planung festlegen- also- wir möchten an der Stelle Wareneingangsprüfung machen, wir möchten hier eine entsprechende Stichprobenkontrolle während der Fertigung haben, wir führen eine Selbstprüfung ein, wir machen eine Endprüfung. Das Unternehmen kann aber auch aus meiner Sicht sagen, okay, wir starten jetzt erst mal den Prozess und schauen, was kommt im

	Ergebnis raus. Das heißt also- haben wir eh, doch ein erhöhtes Reklamationsaufkommen, dann analysieren wir und machen hinterher entsprechende Korrekturmaßnahmen.
I	Okay, und wie kuckst du dir jetzt- jetzt haben wir hier die verschiedenen Sachen zusammen- wie kuckst Du dir den eigentlich an, ob die in diesem PDCA Zyklus zusammenwirken- und wirksam zusammenwirken?
A	Dann, wenn wir es jetzt wieder aufs Audit beziehen, eh, versuche ich mir, eh, ein entsprechendes Beispiel einer festgestellten Nichtkonformität herauszusuchen. Die möchte natürlich der Einfachheit halber dokumentiert sein, eh, und dann versuche ich anhand dieser Dokumentation- das muss kein 8D Report sein, sondern- es ist ein Fehler festgestellt worden, dieser Fehler muss ja irgendwo registriert sein, es muss eine Untersuchung stattgefunden haben, die kann auch belegt werden, indem mir- was weiß ich- der email Verkehr gezeigt werden, die sich die verschiedenen Parteien dazu ausgetauscht haben, dann begibt es ein Ergebnis mit Maßnahmen, die festzulegen sind, dann schaue ich nach, ob diese Maßnahmen umgesetzt werden. Dann Frage ich in der Regel noch- es gibt ja nicht nur die eine Maßnahme, sondern aus verschiedensten Bereichen des Unternehmens kommen Forderungen, maßnahmen- wer ist derjenige, der das ganze Zusammenfügt und im Auge behält und eben auch immer wieder nachfragt- diese Maßnahme hatten wir uns gestellt, ist die umgesetzt, muss die noch aufrechterhalten werden, muss sie korrigiert werden- dieses ständige Zusammenspiel.
!	Gut, danke. Da habe ich jetzt einen guten Einblick in die Denkprozesse, die ja nicht sichtbar sind, die so bei dir vonstatten gehen- und das ist das, was ich wissen wollte. Vielen Dank dafür.

Appendix 10: Interview Case 2

I	Ich habe mir ja angesehen, wie Du im Audit vorgehst, den Prozess des Auditierens, welche Werkzeuge Du verwendest. Es liegt mir daran herauszufinden, wie Entscheidungsprozesse bei dir laufen. **Wie stellst Du fest, ob die Dokumentationsanforderungen angemessen adressiert sind?**
	In what way do you find out whether the organisation has applied documentation requirements effectively?
A	**Zunächst prüfe ich die Dokumentation formell- nach Minimumanforderungen. Das wird abgehakt. Dann ist einzuschätzen, ob die vorhandene Dokumentation die für die jeweilige Organisation bestehenden Anforderungen erfüllt. Das heißt auch, wenn da formelle rechtliche Anforderungen oder interne Anforderungen, wie z.B. ein Service Heft… In einem Ingenieurbüro bracht man eher keine Dokumentation, weil die Mitarbeiter sowohl studiert als auch Erfahrung haben- solche brauchen keine Vorschriften. Aber, wie gesagt, wenn man das gewünschte Leistungsniveau nicht erreichen kann ohne Vorgabedokumente…daraus ergibt sich der Bedarf nach Vorgabedokumenten.** **…** **Effektiv- wenn verständlich und begründet: Das heißt: die Dokumentation funktioniert. Die Managementsystemdokumentation ist ein Werkzeug für die Kommunikation zwischen Geschäftsführung und den Mitarbeitern, die in den Prozessen arbeiten, die die Prozesse steuern. Und das ist, was die Dokumentation leisten muss: Kommunikation muss stattfinden. Also- die Dokumentation ist kein theoretisches Werkzeug, dass nur für eine Prüfung geschrieben wurde oder für den Auditor, oder für irgendeine Institution- aber für diejenigen, die für die Steuerung von Prozessen verantwortlich sind.**
	Initially, it consists of a formal documentation inspection, which [whether] the minimum standard [is addressed properly]. Then, a tick has to be made. And then there will be an assessment based on existing requirements to be fulfilled by the respective organisation, which means, there are also formal juristic reasons [e.g., product safety regulations, trade law a.s.o.], or existing [internal] regulations like a service manual…In an engineering office one [rather] don't need documentation due to the fact that the employees hold always [in Germany] a university degree and are experienced - those do not need regulations! But, as one says, if one cannot achieve a certain performance level without a documented rule [to be followed]…than there is a need for a document! ***…*** ***Effective, when understandable and reasonable: This means: the communication works. The management system documentation is a means for communication between the top management and the folk employees], which act within the processes, and who manage work processes! And this is what the documentation has to provide: that the communication takes place. Thus, this [the documentation] is not a theoretical means, that had been written for the sake of any examination or auditor, or for any institution, but for those responsible to cover processes.***
I	**Gut, wie findest Du nun konkret heraus, ob die Bedingungen , die du formuliert hast, in der konkreten Dokumentation adressiert sind und für die konkrete Organisation richtig sind?**
	Okay, how do you find out whether the requirements you formulated are addressed by the specific documentation and whether it fits for the organisation?
	Gut, nach meiner Erfahrung, gut. Du weißt, im Voraus…welche Anforderungen

	bestehen, welche Mitarbeiter sind angestellt, und man kann sagen auf der basisi von vergleichen aus der Audit- Erfahrung: Das ist eine Dokumentation, die gut akzeptiert- das ist eine Sache die man einschätzen kann! Und dann, während der Interviews kann man herausfinden, wie die Beiziehung zur Dokumentation ist- ob der Berater die Dokumentation geschrieben hat oder ob der Geschäftsführer die bestellt und selber produziert hat- wie die Beziehung zu den Dokumenten ist…entweder auf der Basis von Zitaten oder Erinnerung oder durch Anwendung der Dokumentation.
	Well, by my past audit experience, well, you know .. in advance what [requirements the organisation is confronted with, what folk … is employed, and that one can say by comparing with the past audit experience: this is a documentation which is well accepted [by the employees] - this is an element which one can evaluate! And then, when interviewing auditees you can find out how the [process and employee] relationship to the documentation is - whether the supporting advisor wrote the documents or whether the CEO has ordered or produced them by himself - how the … references to the documentation is. on the basis of either citations or through remembrance - or by application of the documentation.
I	Da besteht auch die Frage nach Prozesskriterien. Wie ermittelst Du, dass die festgelegten Kriterien zu den Unternehmen passen, für die Prozesse geeignet sind?
A	Mmmmh,. Kriterien, das ist ein schwieriger Begriff: ein Kriterium ist ja wie eine Art Messlatte, die an einem Prozessergebnis angelegt wird. Es soll ja ein Mitarbeiter, der in einem Prozess tätig ist eher feststellen können anhand eines Kriteriums, ob er gut oder schlecht ist. Es ist eine Leitplanke. Das ist das Thema, erm, ob ein Kriterium erfüllt ist. D.h. ein Prozesskriterium, beispielsweise eine Arbeitszeitvorgabe: wo der MA weiß, ich muss mich beeilen oder ich hab noch zeit.
I	Danke, ich würde jedoch gern wissen, wie Du ermittelst, dass die Kriterien die richtigen sind, also passen. Es geht mir um den Prozess der Evaluation.
A	Aha, ich verstehe: In der Praxis ist das so feststellbar, ob die angelegten Kriterien erm überhaupt in dem Bereich, den man auditiert, funktionieren können. Also plastisch gibt es diese- was man in jeder Vorlesung hört- diese Ziele, Vorgaben müssen smart formuliert sein. Das sagt eigentlich alles: Wenn man also die Formulierung des Begriffes smart übersetzt und überlegt, ist es überhaupt aplikabel, ist es anwendbar, ist es zeitgebunden, ist es eine realistische Orientierung für den Betroffenen, und das ist ein Kriterium. Und das ist ein Kriterium, was erfüllt sein muss, ne.
I	Okay, Schaust Du also nach (außerhalb der Wertung) schaust du also nach- ja oder nein- ob es kein Kriterium vorhanden ist oder ob es funktioniert.
A	Ja oder nein- geschlossene Frage beantwortet mit Ja- gibt es eine klare vorgabe- ja oder nein- sonst ergibt sich ja kein Deming'scher Kreis ohne diese Vorgabe- ansonsten kann ja dieser Regelkreis nicht funktionieren, und erm b) ist dann die Vorgabe überhaupt geeignet. Weil man dann die Vorgabe dann vergleichen kann mit den Messkriterien, passt das zusammen oder nicht. So eine Vorgabe ohne Kriterium sind auch Kennzahlen gar nicht griffig.
I	Dann müssen wir mal kucken-. Wir sind ja noch bei dem theoretischen Teil Managementsystem- Wie kriegst du denn raus, ob die Messprozesse angemessen sind, analysiert und ggf. Aktivitäten zur Verbesserung abgeleitet aus den Daten abgeleitet werden. Wie ermittelst Du das?
A	Ja, das kriegt man raus, indem man eben erst mal grundsätzlich erm, die Klarheit in der Richtung abgefragt wird. Ob es das überhaupt gibt. D.h. ob die Unternehmensleitung eigentlich einen strategischen Prozess hat- so abgeleitet von der Vision, von der Politik, bzw. auf den Gegenstand er Betrachtung: also haben die

	sich mit ihren Prozessen beschäftigt, haben die sich überhaupt überlegt, wo konkret was geändert werden soll.
I	Nochmal, wie findest Du raus, dass die Dinge, die Du aufzählst, tatsächlich da sind?
A	Gibt es dafür überhaupt ein Model, wissen die überhaupt, haben die sich einen Überblick verschafft, wo sich was konkret verändern soll, ist das bekannt. Das ist eine Bewußtseinsfrage, damit auditiert man den Bewusstseinszustand in diesem Zusammenhang der Unternehmensleitung. Wenn es dort schon Irritationen gibt, oder Unklarheiten gibt, ist es ein Indiz dafür, dass der gesamte Regelkreis mehr oder weniger eine Grauzone darstellen kann. Zunächst keine harten Fakten- ich gehe zunächst von oben nach unten- ich überlege, ob es überhaupt eine Zielstellung besteht, ob die Zielstellung sich auf etwas bezieht- d.h. auf bestimmte Prozesse- und dann kann man den Schritt weitergehen- sind die Zielgrößen, die in dem Prozess gemessen werden, geben die eine sind- sind die zielführend, wenn ja, was macht man damit. Das ist das Interessante- was wir mit der Kennzahl gemacht- gibt es nur eine Kennzahlenerhebung- eine Kennzahlenerhebung an sich ist ja noch keine Messung- im Managementsystem- sondern auch die Frage, erm, wie wird mit den Kennzahlen operiert, überhaupt analysiert- Soll/ist- vergleich- sind die Analysen überhaupt aussagekräftig- werden daraus die richtigen Schlussfolgerungen gezogen. Das komplizierteste, das in der Praxis zu überprüfen ist, ist dann die Konsequenz- dass sich dann einmal erkannte Änderungen sich dann auf Ursachen beziehen und dass dann sich diese Veränderungen durchgehalten wird.
I	**Wie findest Du heraus, ob die Managementprozesse durch die Organisation angemessen adressiert sind, die Anforderungen dieses Standards erfüllt werden?**
	In what way do you find out whether the organisation has applied the management process requirements effectively?
	Gut, die Anforderungen sind erfüllt, wenn ich grundsätzlich die richtigen Antworten bekommen. Dokumente sind eher nicht gefordert, aber Handlungen…die grundsätzliche Frage im Qualitätsmanagement ist ob Qualität garantiert ist- und das wird mit Prozessen gemacht, teilweise- wenn erforderlich- mit Aufzeichnungen aber nicht notwendigerweise unterstützt durch Vorgabedokumente- die können auch durch Erklärung und Erläuterung.
	Well, the requirements of the standard are met, when I principally get the right answers. Paper [documents] are rather not required, but the proceeding…the fundamental question in quality management is whether the quality is ensured- and this will be done by processes [approaches], partially- if required- by records- but not necessarily [supported] by a documented rule- they can also be proved [audited] by explanation and declaration.
I	Ich würde das gern reduzieren auf den Standard- wie ermittelst du denn nun, ob die Anforderungen an die Managementprozesse erfüllt sind?
A	Naja, der Standard ist erfüllt, wenn ich im Prinzip die richtigen Antworten bekomme. Papier ist ja da konkret von der Norm verbindlich gefordert- sondern eine Vorgehensweise- was ich sehen möchte, ist eine Regelung in der Frage- Qualitätsmanagement ist ja nur die Absicherung der Qualität. Die wird ja durch Vorgänge abgesichert. Teilweise werden dokumentierte Nachweise eingesehen- gefordert ist aber keine schriftliche Regelung- die (Auditee) könne auch immer durch erklären, erläutern beweisen, letztendlich nachgewiesen werden. Wenn erforderlich, ist es nach Kapitel 7.1 auszugestalten
I	Wie findest Du eigentlich heraus, dass die Q- Ziele für die Organisation passen und ein eine angemessene Planung umgesetzt werden.

	…and how do you find out whether the organisation has set suitable objectives and scheduled them suitably?
A	Die Q Ziele sind in Unternehmen immer ein schwieriges Thema, weil sie eben genau mit ökonomischen zielen verwechselt werden- das ist eine Bewußtseinsfrage: **Hier kann man wunderbar auditieren, was unter Qualität verstanden wird.** Das heißt, es ist oft bei Unternehmen nicht erkennbar das ein Q- Ziel immer ganz primär auf die Erfüllung von Kundenanforderungen ausgerichtet ist: **Ein Q- Ziel kann durchaus auch ein Anspruch sein, ehm, ein Anspruchsniveau sein- z.B. einer Abteilung das erreicht werden soll- das indirekt dazu führt , dass das Unternehmen erfolgreich ist. Bspw. mit einer höheren Mitarbeiterzufriedenheit ist das Unternehmen erfolgreicher, und das kann in formulierten Qualitätszielen erkennbar sein. Deshalb stelle ich immer die Frage, was ist bei Euch Qualität?** Ja, dass man also dadurch herausbekommt, ist überhaupt ein Qualitätsbewusstsein vorhanden, ein Qualitätsverständnis, ein gewisser Awareness-level bei denen vorhanden und ist das auch konkretisiert. Also: ist klar, WAS IST Qualität, und was ist die Richtung, in die sich dieser Wunsch hin entwickeln soll. Weiß der MA, was er zu tun hat. Ist das irgendwo fixiert.
	Here you can wonderfully audit what the organisation thinks what quality is. A quality objective might be a demand, an aspiration level that has to be achieved by, for example, a department. Therefore, I always ask what the auditee thinks that quality is.
I	Wie müssen denn Ziele dokumentiert sein oder können Sie auch mdl. vorgelegt werden?
A	Es muss ein Agreement geben zwischen denen, die Ziele erfüllen müssen und den entsprechenden FK. Es ist im Prinzip egal, aber aufgrund meiner Erfahrung aus dem Coaching ist es besser wenn man ein schriftliches Agreement mach. Das ist verbindlicher. Wie ein Vertrag.
I	**Auf welche Weise stellst Du fest, ob die Organisation die Management Prozesse bezüglich der Ressourcen effektiv eingeführt hat?**
	In what way do you find out whether the organisation has applied the resource management processes effectively?
A	**Das frage ich im Wesentlichen ab mit einer – wie weit sind überhaupt die Voraussetzung an die Planung erfüllt sind- Das heißt, gibt es überhaupt eine Orientierung innerhalb der Firma, was an Ressourcen benötigt wird.**
	This is what I query: to what extent are the qualifications fulfilled for a planning of resources. This means: Is there any orientation within the company towards what resources are required?
I	Wo kommt dieses ‚Benötigen' her?
A	Das heißt, ist der Bedarf an Ressourcen überhaupt bekannt! Wird in diese Richtung überhaupt gedacht!, ähnlich wie beim Einkauf: Was brauche ich den am Wochenende? KLAR oder überhaupt eine Überlegung, wie viele Mitarbeiter brauche ich in z.B. 2015?! Hab ich überhaupt den Prozess der Beschaffung von Ressourcen überhaupt gedanklich fixiert, ist das irgendwie nachvollziehbar. Hat das Unternehmen ungefähr einen Überblick, was für eine Mitarbeiterstruktur sie in Zukunft benötigt, was für eine Arbeitsplatzstruktur in Zukunft benötigt wird, was für Prozesse etc. in der Zukunft überhaupt benötigt werden. Und vor allen Dingen, was interessant ist: was für Sicherheitsreserven eventuell vorzusehen sind aufgrund einer Risikobetrachtung. Das man sagt, was für zukünftige Unwägbarkeiten kommen auf das Unternehmen zu, wo ich eventuell Reserven vorzuhalten habe. Das geht einher mit der Liquiditätsplanung, meinetwegen. Das geht einher mit der Einrichtung von

	Pufferlagern, das geht einher mit der Ausbildung von Mitarbeitern für bestimmte Aufgabenstellungen, die noch gar nicht akut erforderlich sind, aber in der Zukunft kommen können. Aufrechterhaltung: okay- das ist eine Betrachtung, die Abzuklopfen ist- wenn man etwas hat- das das Unternehmen ein Bewusstsein hat, das Ressourcen verschleißen. Das sind alles Effekte…im Wesentlichen, sagen wir mal, dass eine kontinuierliche Planung vorzuhalten ist und das ist wieder eine Führungsaufgabe, entsprechend hier Vorkehrungen zu treffen. Das heißt, dass hier vorausschauend geplant wird, dass sagen wir mal bestimmte Ersatzinvestitionen fällig werden, dass bestimmter Verschleiß zu berücksichtigen ist. Wie ist es mit vorbeugender Planung. Jaja, und das eben auch geschaut werden muss- bei den Mitarbeitern, dass die Anforderungen sich verändern im Laufe der Zeit auch regelmäßig erhalten werden müssen.
I	Welchen Einfluss hat denn dann nach Deiner Meinung dann die gezeigte Leistung der Prozesse der Vergangenheit bis zu dem Tag der Betrachtung?
A	Nochmal???
I	Naja, welche Rolle spielt die Leistung der Vergangenheit am Tag der Betrachtung für künftige Entscheidungen?
A	Das ist für mich so einfach- ich sag mal so- das ist so für mich die Leichenschau, das heißt, das ist der Nachweis der erfolgreichen Planung der Vergangenheit, die stichprobenartig im Audit nachzuweisen ist.
I	Beispielsweise gibt es eine Fehlerquote: der Mitarbeiter hat schlecht geleistet… Was bedeutet das für die Bereitstellung und Aufrechterhaltung der Infrastruktur, der Ressourcen?
A	Genau. Das ist ja dann gleichzeitig eine Vernetzung mit anderen Prozessen, wie zum Beispiel dann die ganze Frag der Überwachung, was im Kapitel 8 eine Rolle spielt- das man einfach schaut, wie messe ich jetzt praktisch den Zustand und wie reagiere ich jetzt kurzfristig darauf, um jetzt praktisch den gewünschten Zustand zu erreichen.
I	**Wie stellst du dann fest- oder wie findest Du heraus, dass die Produktrealisierungs- oder Dienstleistungsrealisierungsprozesse, die Du vorfindest eigentlich effektiv sind und den Zielstellungen entsprechen?**
	In what way do you find out whether the organisation has applied the product realisation process requirements effectively?
A	**Das kann man im Stichprobenverfahren herausfinden- dass man diskutiert: welche relevanten Prozesse müssen auditiert werden. Durch Stichproben kann man das herausfinden, und durch Beweise! Gut, durch Beobachtung, durch Interview und auch durch Vergleich- ob der Prozess den Regeln folgt. Diese können aufgeschrieben sein, aber da können auch verkehrsübliche Praktiken sein- was auch immer---was sind die eigentlichen Kriterien, was ist der übliche Standard…Interviews. Beobachtungen, vergleiche und Aufzeichnungen…**
	This you can find out by sampling - that one [the auditor] discusses with the auditee: which relevant processes have to be examined. By sampling one can find out, by evidence. Well, through observation, through interview, as well as through comparison - whether the actual process follows the rules. They [the rules] might be provided in a written way, but there can be general regulations based on company practices…whatever…what are the actual criteria [to be fulfilled], what is the common standard… Interview, observations, comparisons, documents, and records....
I	Ist das also ein Vergleichen mit den Vorgaben sozusagen?
A	Genau- mit bestehen Regeln- die können schriftlich der Fall sein, es können

	allgemeingültige Abmachungen sein- das heißt, was ist das eigentliche Kriterium, was ist der übliche Standard, der erwartet wird, und wie gestaltet sich das in der Praxis. Ja also. Interviews, Beobachtungen, Vergleich. Dokumente, die man vergleicht. Z. B. aktuelle Auftragsunterlagen mit eh bestehenden Regelungen, die mir vorher genannt oder gezeigt wurden- um daran nachzuweisen, in welcher Art und Weise halten sich Mitarbeiter an diese Vorgaben. Wie vollständig ist meinetwegen die Erfassung von Prozessdaten, erm, wie effektiv ist die Erfassung von Prozessdaten?, haben die Prozessdaten, die aufgeschrieben sind eine Relevanz für- wie wir es eben gerade gesagt haben- für bestehende vertragliche Anforderungen. Ob diese Anforderungen dann ausreichend erfüllt werden, ob Regelungen, die die Leitung vorgegeben hat- werden die erfüllt- ja oder nein! Und- beziehen die Kennzahlen sich tatsächlich auf die gewünschte Performance – also für interne Qualitätsziele und auch für externe Qualitätsziele. So, das ist im Prinzip der Ansatz…
I	Danke. Wie findest Du nun heraus, dass die Organisation die MAV- Prozesse effektiv eingeführt hat?
	In what way do you find out whether the organisation has applied the measurement, analysis, and improvement processes effectively?
A	**Ja. Genau. Das ist ja genau der Zusammenhang Qualitätsziele zu dem, was ich eigentlich messen will. Das heißt: was ist ursprünglich vorgegeben worden, und was wird letztendlich erreicht- ansonsten ergibt es keinen Sinn. Das sit der Soll/Ist-Vergleich: Der betrachte Mess- Prozess muss in Beziehung zu den vom Management festgelegten Zielen stehen, nur das macht Sinn! Konsequenterweise, es können nur Soll- Größen mit Ergebnissen verglichen werden. Nochmal, das muss durch Interview und Aufzeichnungs- Analyse auditiert werden!**
	That is the association 'quality objectives'- what was the target and what has been achieved - otherwise it would not make sense! That is the target-actual comparison: The seen measurement processes need to be related to the objectives set by the top management, just this makes sense! Consequently, one can just compare targets with achievements. This again has to be audited by interview and content analysis of records!
I	Meine Frage war ja indirekt, ich habe erhoben, skaliert und werte- ich kann doch dann noch lange nicht sagen, ob Anforderungen erfüllt sind oder nicht, weil ich keine Vergleich mit einem festgelegten Niveau machen kann.
A	Genau, das ist genauso wie z.B. mit einem Umsatzdiagramm. Wo ich sage, was machen die damit, gegen was bewerte ich das und welche Schlussfolgerungen ziehe ich daraus…Das ist das Entscheidende. Die festgestellte Ist- Größe an sich, oder überhaupt Zahlen an sich sind im Prinzip langweilig und sind überhaupt nicht effektiv, wenn ich daraus überhaupt keine Schlussfolgerungen ableite.
I	Die folgende Frage ist ja eigentlich schon beantwortet, aber ich stelle sie dennoch konkret: Wie also stellst Du fest, dass der PDCA Zyklus effektiv im Unternehmen angewendet wird?
	*"*In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?
A	**Die Frage habe ich ja tatsächlich schon beantwortet: Für mich ist das eine leichenschau- im Prinzip: Hier finde ich den Nachwies für erfolgreiche Planung, das schaue ich mir im Audit an. Das ist das Verbinden der Prozesse, z.B. der Überwachungsaktivitäten, die ja in Kapitel 8 eine große Rolle spielt: das jemand nachguckt, wie ich irgendeinen Status feststelle und wie ich reagiere um einen bestimmten Status zu erreichen!**

	For me - that is the post-mortem-examination - principally, this is the evidence of successful planning, which will then be examined at the audit by sampling. That is the cross-linking of processes, for example the monitoring activity, which plays a role in clause 8 [of the standard], that one looks, how do I measure any status, how do I react to achieve the desired result.
I	Vielen Dank, meine Fragen sind beantwortet.

Appendix 11: Interview Case 3

I	…….. Und ich würde ganz gern mal wissen wollen, woran Sie oder **wie finden Sie heraus, ob die Organisation die Dokumentationsanforderungen effektiv erfüllt?** Wie machen Sie das?
	In what way do you find out whether the organisation has applied documentation requirements effectively?
A	**Ich schaue, ob die Dokumente, die als Pflichtprogramm da sind, die sechs dokumentierten Verfahren da sind, und die Wechselwirkung, also alles was im Handbuch sein muss und dann ist eigentlich Schluss, was notwendig ist. Alles andere ist ja individuell Vorgabe von der Firma und das kläre ich ab, wie die Firma es umsetzt, welche Dokumente sie braucht, ob jetzt am Rechner gestützt oder auch individuell als Papiervorgabe. Das ist ja dem Unternehmen überlassen.**
	I check whether the basic mandatory documents exist, which means whether the six SOP's are there, and the [document displaying] interaction [of processes]…everything that has to be in the manual! And then I am done with that - with what is mandatory. Everything else are individual encores of the company… and I check how the company applies the documents, what documents they need…whether [they are] computer-aided or individual… but as a hardcopy!
I	Gut, dann frage ich mal vielleicht ein bisschen anders. **Wie finden Sie nun heraus, ob die Prozesslandschaft zu dem auditierten Unternehmen, den Anforderungen des Standards und den Anforderungen des Unternehmens passt?**
	In what way do you find out whether the process landscape suits to the kind of business audited, the requirements of the standard, as well as the company's requirements?
A	**Ja, eigentlich im Laufe des Interviews, um festzustellen, ob die Verfahren, die dort dokumentiert sind, angewandt werden, ja…um herauszubekommen, ob die Vorgabedokumente angewendet werden…die grundsätzlichen Anforderungen sind gut erfüllt, wenn das Vorgabedokument vorhanden ist…und andererseits: wenn der Prozess, beginnend mit der Analyse der Kundenanforderungen bis zur Auslieferung des Produktes oder Projektes zum Kunden, ehm, lückenlos durch das Unternehmen läuft…ohne Verlust von Informationen an den Prozessschnittstellen!**
	Actually, in the course of the interview… to find out whether the SOPs documented are applied… The minimal requirements are addressed well, when the paper [documents required] is there… and otherwise: when the processes - beginning with the analysis of customer requirements until the delivery of the product or project to the customer, erm, go through the company gapless… without any loss of information at the interfaces of owners of the processes!
I	Das ist eine andere Antwort als die Erste. Das ist eine andere Antwort. Okay.
A	Ja gut, das eine ist ja, habe ich die Dokumentationsanforderungen, aber ich kann ja nicht festmachen, ich muss ja nicht jeden Prozess, der abläuft im Unternehmen, muss ich nicht schriftlich fixiert haben. Ich muss ihn erkennen und ich muss die Schnittstelle sauber haben.
I	Okay, gut, nochmal anders gefragt, **woran erkennen Sie ein Dokumentationserfordernis?**
	How do you recognise a requirement to the documentation?
A	**Ehm, sobald ein Fehler im Prozess auftaucht bzw. unterschiedliche Herangehensweisen und unterschiedliche Darlegungen… Sobald irgendwo ein Fehler auftaucht, habe ich das Problem… dass dann…ehm…**
	Erm, as soon as one non-conformity appears… or different approaches or different

	statements [appear]. As soon as non-conformity appears anywhere… I have the problem… that, erm…
I	Meine Frage ist beantwortet.
A	Okay.
I	Sie unterschieden ja zwischen Stützprozessen und Managementprozessen und wertschöpfende Prozesse. Jetzt gehen wir mal zu den Managementprozessen. **Wie finden Sie eigentlich heraus, ob die Organisation die Anforderungen an Managementprozesse effektiv erfüllt hat?**
	In what way do you find out whether the organisation has applied the management process requirements effectively?
A	Für die Managementprozesse nur?
I	Mhhh.
A	Ja ja, mir ist schon klar, aber ob es erfüllt ist, ist einfach eine Frage ob die ……..**die Frage ist, gab es irgendwelche Reklamationen, gab es Abweichungen, gab es Fehler im Unternehmen**.
	That is the question: were there customer complaints, where there deviations, were there non-conformities in the company!
I	**Verantwortung der Leitung: Wie stellen Sie denn eigentlich fest, dass die oberste Leitung seine Verantwortung wahrnimmt?**
	Management responsibility: How do you find out whether the top management is committed?
A	**Ja, gut, obligatorisch ist eigentlich immer erstmal, ist jemand von der Leitung da, der aus Sicht vom Auditor, ist jemand von der Leitung da, der sich an dem Tag, an dem das Audit stattfindet, Zeit nimmt oder ob das delegiert ist auf den QMB nach dem Motto – Ihr könnt mich mal fragen, wenn was anfällt – Nicht an der reinen Anwesenheit… aber an den Aussagen der Geschäftsführung zu dem Grund, warum haben Sie sich für QM entschieden, warum führen Sie das durch, was möchten Sie damit! Auch zu den Aussagen in der Managementbewertung … eigentlich auch zumindest in der Bereitschaft der Anwesenheit beim Eröffnungsgespräch ….und für die Unterlagen, also die Managementbewertung, dass das nicht irgendwo nur vorgetragen wird vom QMB, sondern dass der Geschäftsführer da wirklich auch dahinter steht. Und nicht vorliest und sagt ja, hier ist es…** **Gut, da gibt's ja natürlich auch die Normanforderungen, was Mindestinhalt sein soll von der Qualitätspolitik. Ich würde das davon abhängig machen, erst mal von der Größe des Unternehmens und die Aussagen…was möchte ich mit meiner Qualitätspolitik… muss ja irgendwo widerspiegeln: warum mache ich eine Qualitätsmanagementsystem-wie wichtig ist mir die Umsetzung im Unternehmen- wie wichtig ist mir der Kunde als Ziel meiner Bestrebungen ordentliche Qualität zu liefern.**
	Obligatory is always… someone of the top management is there [participates in the audit]…from the point of view of the auditor - is anyone [top management] there who scheduled the day when the audit takes place… or, was it [the audit process] delegated to the quality management representative: according to this - you can ask me… But not just participation counts… also the statements of the top management… why they implemented the management system... why do they process it, what do they want [to achieve] with it! Also the statements of the management review… but at least the readiness for the participation in the opening meeting… and the records - that it will not just be presented by the quality management representative, but from the CEO… that he is really committed [the CEO].. not just reads - there you are!" ***There are mandatory requirements for the content of the quality policy! Depending on***

	the size of the company and the statements [of the top management] - what do I want to achieve - it [the policy] has to mirror anywhere: why do I run a quality management system - how important is its application within the company - how important is the customer for me as the objective of my activities to supply a proper quality!
	Danke dafür. **Wie finden Sie nun eigentlich heraus, ob die von der Geschäftsführung festgelegten Qualitätsziele zur Organisation passen?**
	In what way do you find out whether the quality objectives set by the top management are appropriate?
A	**Geeignet? Ich denke- sind die prozessorientiert sind. Sind welche für die Wertschöpfungsprozesse festgelegt und passend, um die Prozesse zu steuern! Ehm, das könnte der jährliche Umsatz pro Kunde sein…das ist, ehm…das kann flexibel festgelegt werden, es muss…es macht keinen Sinn, wenn Qualitätsziele…sagen wir mal: Krankenstatistik- das muss ich sowieso aufzeichnen!**
	Appropriate? I think - are they process oriented? Are they set for the value adding processes and suitable to control processes: regulating factors for processes! Erm, it might be the annual turnover… turnover per customer… that is, erm, it can be designed flexibly, it needs to… it makes no sense when quality objective… let's say: illness statistics - that is what I have to record anyway!
I	**Okay. Gut, dann lassen wir das. So und jetzt haben wir noch, also ich könnte das als geschlossene Frage machen, ich würde eher sagen, ich mach das mal anders. Wir müssen ja irgendwie eine Qualitätsplanung haben, da ist wieder die Frage. Wie finden Sie eigentlich heraus, dass die Qualitätsplanung, die vorhanden ist, geeignet ist?**
	In what way do you find out whether the quality planning audited fits?
A	**Sie haben wirklich gut Fragen. Qualitätsplanung ist ja auch, es muss sichergestellt werden, dass das Managementsystem noch funktioniert, während das Unternehmen arbeitet! Qualitätsplanung,…dass die ausreichend ist, erm, heißt erst mal: dass ich die Prozesse identifiziert habe… und dass ich mir Gedanken mache, wie die Prozesse weiter entwickelt werden können… Kein Zufallstreffer …sondern kontinuierliche Verbesserung!...** **Nee, ich weiß jetzt nicht, worauf sie hinaus wollen! Die Planung… sicherlich, die Qualitätsziele, die die Firmen sich aufstellen sind ja immer drauf ausgerichtet: möglichst wenig Fehler und ein Maximum an Zielerreichung von vorn herein. Das ist aber für mich nicht unbedingt, für mich die maximale Zielerreichung…es muss auf eine 100% Zielerreichung herauslaufen!**
	You have good questions [laughing]: It needs to be made sure that the management system still functions while the company works! Quality planning… that it is adequate, erm, means: that I identified the processes… that I think about how the processes might be developed… no chance hit… but continuous improvement! ***…*** ***I actually don't know what you are heading for… the planning… certainly the quality objectives which are set by the companies are always dedicated to: if possible less non-conformities and a maximum of target attainment… it needs not to be 100% of attainment!***
I	Vielen Dank soweit. **Auf welche Weise finden Sie eigentlich heraus, ob die Organisation die Anforderungen an das Ressourcenmanagement effektiv erfüllt?**
A	**Ich schaue immer nach, ob Reklamationen da sind, und Produktfehler. Sind da keine- dann ist dieser Prozess gut!**
	I always look for the existence of customer complaints and non-conformities. If there are none to be found the processes work well!

I	Oh, verstehe. **Lassen Sie uns nochmal auf eine andere Frage kommen: Auf welche Weise finden Sie denn heraus, ob das Unternehmen die MAV- Prozesse effektiv anwendet?**
	In what way do you find out whether the organisation has applied the measurement, analysis, and improvement processes effectively?
A	**Mess- und Analyse- Prozesse…Da habe ich keine Idee, ich weiß nicht!**
	Measurement and analysis processes! I actually have no idea, I don't know!
I	Okay. Jetzt kommt die generelle Frage. Wir haben den Kern, an unserer Norm ist der PDCA Zyklus –Plan Do Check Act und der ist gefordert anzuwenden. **Wie finden Sie nun heraus, ob die Organisation ihr System von prozessen effektiv in Hinblick auf den PDCA- kreis anwendet?**
	In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?
A	**Man kann fragen, ob die mit ihren Ergebnissen zufrieden sind. Sicher, die können eine spezifische Planung haben- für das was die tun wollen…Eigentlich weiß ich nicht, worauf Ihre Frage abzielt!**
	You can ask, whether they [the auditee] are satisfied with their results. Sure, they [the auditee] can have a specified planning - what they want to do. But this is… I actually don't know where your question is heading for this!"
I	Also nicht anstrengen, ist wirklich eine harmlose Frage vom Prinzip.
A	Ja, im Endeffekt können sie fragen, ob sie zufrieden sind mit ihrem Ergebnis, was sie erreichen. Na klar werden sie eine Planvorgabe haben, was sie machen möchten. Aber das ist, ich weiß nicht ob ihre Frage jetzt darauf hinaus lief.
I	Also ist gut, okay, ich will sie da nicht so strapazieren, ja, ich bedanke mich ganz herzlich dafür, also das passt so ins Bild ein bisschen und das war nicht das schlechteste, also herzlichen Dank dafür, ist also überhaupt gar kein Thema, und ich würde das jetzt vielleicht mal auflösen

Appendix 12: Interview Case 4

I	**Ich wollte mich mal ein bisschen um Kapitel 4 bewegen. Wie findest Du heraus, dass die das Unternehmen die Anforderungen an Dokumentation effektiv anwendet?**
	In what way do you find out whether the organisation has applied the documentation requirements effectively?
A	**Die erste Frage ist erst mal, dass ich mich mal mit der Struktur beschäftige. Nachdem ich gesehen habe, wie die strukturiert sind, ehm, das bestimmt, was ich erwarte in Bezug auf Vorgabedokumente: Dann versuche ich das mit den Kapiteln der Norm zu vergleichen: Ist Entwicklung ausgeschlossen- dann brauche ich das Kapitel nicht zu betrachten; Wenn Validierung nicht ausgeschlossen sit- dann muss ich das ansehen. Ich muss sehen, auf welche Weise es beschrieben wurde, ehm, das kommt immer auf die Unternehmensstruktur an, wie das Unternehmen aufgebaut ist.**
	Firstly, I deal [analyse] the organisational structure [organisational chart]. After I have learned how they are structured, erm, this defines what I expect in terms of descriptions: This I try to compare with the requirements of the clauses of the standard: Is design excluded - I don't need to assess this clause; when validation is not excluded - then I have to assess validation. I need to see in what way it [the process] had been described [documented], erm, it always depends on the company's structure; how the company is designed.
I	Okay, verstanden. Ich will das noch einmal präzisieren: **Wie findest Du nun heraus, dass das Unternehmen die Wechselbeziehungen der Prozesse effektiv festgelegt hat?**
	In what way do you find out whether the organisation has defined the interrelationship of processes effectively?
A	**Ehm, es muss eine gewisse Dokumentenstruktur vorhanden sein, die Dokumentenstruktur, ehm… Es geht nicht darum, wie ausführlich die Struktur ist….es müssen bestimmte Grundsätze erfüllt sein. Es muss das System beschreiben sein, und es muss dazu Verfahrensbeschreibungen oder Proessbeschreibungen geben, die das Beschriebene Vertiefen. Dabei ist es nicht unbedingt wichtig, dass in Sätzen zu formulieren, sondern sympathisch finde ich Prozessablaufpläne, wo ich einfach den Prozess sauber darstellen kann…und die Querverbindungen zu mitgeltenden Dokumenten herstellen kann-immer!**
	Erm, there needs to be a certain document structure - the document structure, erm… It is not about the detailedness of descriptions…there is a need for addressing certain principles! The system has to be described [documented], there is a need for SOP's which detail the descriptions. On the other hand, there is no need to apply words or sentences, but…I like process flow charts - in which I can display the process neatly. And in which I can find the link to records, to applicable documents – always!
I	Das beantwortet meine Frage noch nicht ganz. Jetzt hast Du beschreiben, dass eine Struktur da sein muss. **Aber wie stellst Du denn eigentlich fest, dass die Dokumentation zum Unternehmen passt?**
	How do you find out whether the documentation fits to the organisation?
A	**Ich muss den Geltungsbereich und die Landschaft der Organisation finden.**
	I need to find the scope and the process landscape applied in the organisation!"
	Gut, nun hast Du die Dokumentation gesehen und gelesen: wie eigentlich findest Du nun heraus, ob die Dokumentation und das Unternehmen zusammenpassen?

	Well, you have seen and read the company's documentation: How do you actually find out whether the documentation and the organisation fit to one another?
A	**Na, ich muss die Prozesse vorfinden, die in der Dokumentation beschrieben sind durch Prüfung in den einzelnen Abteilungen. Wenn ich zum Beispiel Entwicklung ansehe- da ist eine Anforderung für Rückverfolgbarkeit der einzelnen Entwicklungsaktivitäten in Dokumenten und Aufzeichnungen-.**
	I need to find the processes which I found in the documentation in the company by scrutinising this in departments. For example, if I look at design - then there is a need for the traceability of design activities by documents and records. And this is what I need to evaluate by comparing the findings with the descriptions.
I	**Und wie stellst du fest, dass das auch den Normanforderungen entspricht.**
	And how do you find out that the findings that are seen fit to the requirements of the standard?
A	**Ich vergleiche das im Kopf…also die Norm ist bei mir intus und vergleiche das…ja…(Lacht)… aber ich vergleiche natürlich von meinen Erfahrungen, die ich seit 1994 gesammelt hab mit der Norm. Also, ich bin auf dem Gebiet schon 20 Jahre tätig…und hab da natürlich auch Erfahrungen gesammelt mit meinen eigenen Tätigkeiten, die ich mal früher ausgeführt habe…und mit den Tätigkeiten auch als Berater habe…das hat mir sehr geholfen, den Standard besser zu verstehen..**
	I compare with the standard, the standard is engraved in my brain – I compare [laughs as if he was caught]…I compare this with my experience I've had since 1994…I've been working in this area for about 20 years…and have gained experience…of course, by the jobs I did before and as a consultant. That helped me to understand the standard better.
I	Okay. Danke. Und jetzt würde ich gern erfahren, **wie du herausfindest, dass die Firma die Anforderungen an Management Prozesse effektiv anwendet**?
	In what way do you find out whether the organisation has applied the management process requirements effectively?
A	**Es müssen die Mitarbeiter im Organigramm zu finden sein, die ihre Arbeit kennen. Die Arbeiten müssen in Stellenbeschreibungen beschrieben sein, die die Verantwortlichkeiten enthalten. Also, ich schaue nach Dokumenten. Aber ich schaue auch nach einer Kompetenzmatrix. Gut, das sind die Dokumente, die das beweisen können.**
	Employees have to be deployed in the organisational structure [names in the organisational chart], which know their job. The jobs have to be described in job descriptions containing the authority (power) needed. Thus, I look for documents [that can prove this]. But [I look] also for a competence matrix. Well, there are documents that prove this!
I	Lass mich mal hier hereingrätschen…ich würde gern die Frage präzisieren: **Wie findest Du denn nun heraus, dass die Unternehmensstruktur zur Qualitätspolitik passt und somit die Zielstellung der Organisation unterstützt?**
	How do you find out whether the company's structure fits to the quality policy, and therefore supports the objectives of the company?
A	**Diese Einschätzung mache ich anhand meiner Erfahrung. Da ist ein Bedarf an gewissen Struktureinheiten. Ich vergleiche das immer mit dem, was ich in anderen Unternehmen gesehen habe.**
	This is based on my experience. There is a need for certain structural units. I compare this with what I have seen in different companies!
I	Mmh, danke. **Welche Bedeutung hat hier die Qualitätspolitik der Unternehmung?**

	What is the role of the company's quality policy?
A	**Qualitätspolitik! Na, nach meiner Meinung- das ist ein zweischneidiges Schwert. Meistens ist die durch den Berater vordefiniert und einfach vom Unternehmen übernommen. Und das ohne zu verstehen, was damit gemeint ist. Die wird einfach so akzeptiert.** **Gut, ich versuche immer..ehm..durch das Auditieren versuche ich systematisch die Firma zu Konformität zu führen. Ich hab die Absicht, ehm, dass ich sage- der Standard ist ist ein berg, die Spitze ist weit weg- und wir wollen den Gipfel zusammen erreichen. Und wenn ich einen Berg erklimmen will während des ersten Audits- dann kann das sein, das die Firma das nicht schafft wie erwünscht. Ich verstehe den Zertifizierungsprozess als eine Unterstützung zur künftigen Weiterentwicklung des Unternehmens. Ich bezeichne mich da selber als ein Partner…**
	Quality policy! According to my opinion - this is a double-edged sword. Mostly, it is pre-defined by the consultant [that supports the company by implementing the QMS] and simply adopted by the company. And this without understanding what is meant by that. I just accept the quality policy as it is. ***Well, I always try, erm, by auditing I always try to lead the company systematically [to conformity]. I have the intention, erm, that I say - the standard [requirements of the ISO 9001] is a mountain, the peak is far away - and we want to reach the peak together. And when I [the company- then auditor puts himself as if he was the auditee] want to climb the peak [to achieve conformity] in the first audit - it can be that the company does not achieve [the certificate] what it is intended to. I understand the certification process as an action to assist the company's further development. I identify myself as a partner…***
	Danke bis hierhin, lass uns mal das Thema wechseln: **wie findest Du heraus, dass die festgelegten Qualitätsziele für das Unternehmen passen?**
	How do you find out whether the quality objectives set by the company are appropriate?
A	**Zunächst, Qualitätsziele müssen messbar sein! Sie sollten nicht nur für die Hauptfunktionen festgelegt sein, die müssen eher weit verteilt für alle Unternehmensfunktionen festgelegt sein. Das ist wichtig für mich! Dann sollten da Ziele vorhanden sein, die noch nicht erfüllt sind. Ziele sollten ein Kampf sein. Aber eigentlich kann ich die nicht einschätzen in Bezug auf zu erfüllende Anforderungen. Trotz der Tatsache, dass ich das schon seit 20 Jahren mache! Ich bin immer froh, wenn da überhaupt Ziele sind.**
	Firstly, quality objectives need to be measurable! They should not be focussed on the top management function; rather they should be widely diversified throughout the company's functions [or units]. This is important for me! Then there should be objectives, which are not fulfilled from the outset. [Heading for] Objectives should also be a struggle! But, I actually cannot evaluate [them] in terms of the conformity required. Despite having done that already for 20 years. I am always happy when there are any objectives!
I	Danke, wir verlassen mal das Thema. Gehen wir mal über zur ‚Verantwortung der Leitung'. Die generelle Frage ist: **Auf welche Weise findest Du heraus, ob die Firma die Anforderung an die Prozesse zum Management der Ressourcen wirksam anwendet?**
	In what way do you find out whether the organisation has applied the resource management process requirements effectively?
A	**Erst mal müssen da Stellenbeschreibungen sein und dann, das die Firma mit den**

	Qualifikationen der Mitarbeiter und der Struktur umgeht. Das führt zu einer Kompetenzmatrix!
	At first there needs to be job descriptions, then that the company deals with the structure of the qualification of its employees. This ends up in a competence matrix!
I	Naja, jetzt ist die Frage: **Wie findest denn Du nun raus, ob der von der Organisation durchgeführte Prozess effektiv ist?**
	How do you find out whether the process led by the company is effective?
A	**Ich schaue nach, ob da ein Dokument ‚Kompetenzmatrix' vorhanden ist. Das sie Maßnahmen für Schulungen organisieren! Ich schaue nach dem Schulungsplan…und kontrolliere, ob die Maßnahmen einbezogen und vom GF freigegeben sind. Das gibt es in vielen Unternehmen…ehm…so was wie eine Kostenplanung!**
	I check whether there is a document called competence matrix! That they provide the means for trainings! I look for the training schedule - and check whether those means are included and approved by the top management. That exists in many companies, erm, such as a cost schedule!
I	Mal abgesehen von Personal, **was ist mit Infrastruktur und Arbeitsumgebung?**
	And what about infrastructure and work environment?
A	**Ich frag nach, wie die ihre Technik warten und wie die Einweisung der Mitarbeiter in die Bedienung der Technik erfolgt!**
	I ask about how they maintain their machinery and how the employees will be trained for being able to manage the machinery!
I	**Wie findest Du denn das nun heraus- zum Beispiel- dass genug Maschinenkapazität vorhanden ist…und auch genug Personal? Die richtige Menge?**
	How do you find out then that - for example - enough machine capacity is provided…even enough staff capacity…? Purely quantitative?
A	**Das ist Aufgabe der Produktionsplanung! Ist da eine Rückstandsplanung- wie gehen die damit um- sind da Beratungen, ehm, Vertrieb, Produktion, Prozessplanung, Entwicklung- weil da ist eine Abhängigkeit: wenn die Entwicklung nicht leistet- die Produktionsabteilung kann nicht produzieren!**
	That is the task of production planning! Is there a residue planning - how do they deal with the issue - are there meetings, erm, sales, production, process engineering, design - because there is an interdependency: when the design does not perform - the production department cannot produce!
I	Gut, vielen Dank. Dann lass uns mal diesen bereich verlassen. Ich komme mal zu einer anderen frage: **Auf welche Weise findest Du heraus, ob die Organisation die Anforderungen an die Produktrealisierung effektiv angewendet?**
	In what way do you find out whether the organisation has applied the product realisation requirements effectively?
A	**Ich frage nach Rückständen. Was hat die verursacht? Und haben die eine Beratung durchgeführt…und ist da keine Beratung nachweisbar…Ich muss zugeben, dass ich mit dem Thema immer wieder anders umgehe in verschiedenen Betrieben…!**
	I ask for residues. What caused them? And have they held a meeting…and if there is no meeting [meeting minutes] available…I must confess that I deal with that differently at every company…!
I	Aha, gut, danke. Ich sehe, dass die Zeit davonrennt. Lass uns mal zu meiner letzten Frage kommen: **Auf welche Weise findest Du raus, ob die Organisation die Anforderungen MAV- Prozesse effektiv anwendet?**
	Gut, Ich muss sagen, dass das immer eine Gratwanderung für mich ist: ich bin selber…mit den Ergebnissen…oder wie ich das forme…ich bin unzufrieden mit mir

	selber. Mit mir selber, aber auch mit dem Auditierten! Ehm, lass mich das mal so sagen: Wenn ich nach den Anforderungen sehe, dann merke ich oft, dass das düftig ist!...Gut, das ist eigentlich das, was ich nicht gut verstehe!
A	***Well, I need to say that this is a tightrope walk for me: I myself am …with the results… or how I do shape it [the audit process]…I am much discontented with myself. With myself, but also with the auditee! Erm, let me say that this way: when I look for the requirements, then I often see that it is scanty! ... Well, this is what I actually don't understand well!***
I	Gut, danke. Die Zeit ist um. Vielen Dank für Deine Unterstützung und auch Deine Ehrlichkeit!

Appendix 13: Interview Case 5

I	Wie bereiten Sie sich auf ein Audit vor, unabhängig von den formellen Dingen?
A	Formell, das ist ja klar festgelegt. Da gibt es ja Vorgaben, welche Papiere ich zu verwenden habe, um nachzuweisen, dass ich hier ein Audit durchgeführt habe. Wenn es um einen neuen Zertifikatspartner geht, dann informiere ich mich über den im Internet, ja!? Die Thematiken schaue ich mir dann schon an, aber ich lass mich auch gerne überraschen. Ich hab jetzt demnächst einen, der macht Holzräume, da weiß ich noch gar nicht, was auf mich zukommt. Da werde ich mich ganz einfach überraschen lassen. Da freue ich mich schon drauf! Es gibt also die, wo man sich vorbereiten kann, und sagt- okay, in diese Richtung geht das…z.B. Metallografie- da ist das und das…alles andere lässt Du dir vor Ort erklären- ich bin nicht der Papst- ich will mir gern was erklären lassen.
I	Sie nehmen also eine Position ein mit einer hohen Erwartungshaltung und haben auch nicht die H
A	Nein nein, keinesfalls. Das Unternehmen hat ja diese Technologie dazu gebracht, um am Markt zu agieren. Da kann ich dann nur sagen: zeigt mir, wie Ihr das macht.
I	Da gibt es ja so die Forderung, dass so in einem Unternehmen die Wechselbeziehung von Prozessen- also seine Prozesse erkennen muss und die Wechselbeziehung der Prozesse festlegen muss. Wir haben eine übliche Praxis, was Dokumentation betrifft. Meine Frage zielt eher darauf, wie sie eigentlich feststellen, ob diese Prozesse insgesamt ordentlich arrangiert sind und zielgerichtet funktionieren. **Wie stellen Sie nun fest, ob die Organisation ihr System von Prozessen effektiv in Hinblick auf den PDCA – Kreis anwendet?**
	In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?
A	**Es steht ja nicht in der ISO 9001- und es kann ja nicht die Normforderung sein, dass Wechselwirkungen festgelegt sein müssen! Es kommt ja drauf an, wie der Anwender der ISO Vorgaben – sich mit diesem Thema befasst- der sein Schlüsselprozess…man kann ja einfach nur fragen, was ist denn jetzt der Einfluss von Qualifikation auf Ihren Schlüsselprozess. Wenn ich das ordentlich dargelegt bekomme, dann weiß ich ja auch, dass der verstanden hat, dass ich einen vernünftigen Unterbau brauche, um meine Schlüsselprozess überhaupt zu steuern. Das ist die sogenannte Wechselwirkung- und die muss ein jeder erkennen. Wenn ich nicht genug Geld für Schulungen ausgebe, weil mein Mitarbeiter vielleicht in verschiedenen Bereichen nicht ordentlich ausgebildet ist- das ist die Wechselwirkung.**
	There is no requirement in the ISO 9001 - and it can't be a requirement of the standard that interrelationships between processes have to be defined! It depends on how the applicant of the standard deals with the subject - his key process [production or service process]. One can simply ask what the impact of the qualification on their key process is! And when I get a good answer - then I know that he has understood well that he needs a proper sub-structure to steer its key process well. That is the so called interrelationship, and I need actually to understand: When I don't spend enough money for training: my employees are potentially not well-educated!
I	**Okay, Sie kucken also tatsächlich schon in die Richtung ,Verfügbarkeit von Mitteln (Ressourcen)…**
	Well then, you look for the availability of resources?
A	**Na klar. es kann ja nicht sein, dass ich mich hier schlecht präsentiere aufgrund fehlender Mittel, das würde insofern keiner machen. Aber viele schrauben ja an**

	dieser Qualifikationsschraube.
	Sure, it cannot be that I present myself poorly because of a lack of resources! I mean, nobody would do that. But many 'turn this qualification screw'!
I	**Inwieweit steht denn das sozusagen in Beziehung zur Qualitätspolitik**
	To what extent is this linked to the quality policy?
A	**Also, wer seine eigenen Prozesse nicht versteht- die Wechselwirkung, der unterschiedlichen Einflüsse - auch die verschiedenen Prozessarten über Einkauf, Prüfmittel, über eine Art von Sicherung , über eine Art von Werkerselbstprüfung , die ich ja nur machen kann, wenn ich entsprechend ausgebildet bin – alles das leitet ja ab- die Ziele ab, die ich verfolge – und dann mal eben dicht an der Qualitätspolitik zwar festmauere, aber – oder mich zumindest äußere- aber die messbar sein müssen. So, an diesen messbaren Qualitätszielen sehe ich ja, wie meine Qualitätspolitik letztendlich wirkt.**
	Well, those who don't understand their processes - the interrelationships of the impacts - also the different kinds of processes…procurement, measurement tools, the kind of insurance like operator self-tests, which I can just do on my own [means an auditee] when I am trained well: All this determines the objectives, which I can head for by running my enterprise - which I can fix in my quality policy - or at least notice [anyhow] - but they need to be measurable. Well! With the quality objectives I can see how my quality policy works finally!"
I	**Gut, danke…. Lassen Sie uns zu einem anderen Thema kommen: Wie finden Sie nun heraus, ob die Organisation die Dokumentationsanforderungen effektiv anwendet?**
	In what way do you find out whether the organisation has applied the documentation requirements effectively?
A	**Ich kann es von vornherein wissen, wenn ich einen neuen Partner kennenlerne. Das kann ich erst im Audit machen. Je nachdem, wie tief man bei der Probe in den verschiedenen Prozessen vorangeht. Ich ziehe das dann lieber an Hand des Audits durch und prüfe dann: hat der das dann auch so beschrieben. So, und dann lasse ich mir dann auch von den Prozesseignern zeigen, wo die sich dargestellt finden im Qualitätsmanagementsystem.**
	I can't know it in advance before meeting the partner for the first time. But I can do that in the audit. Depending on the size of the sampling in processes…! I do it on-site and check: Has he [the auditee] described what he does! And then the process owners have to show me where they are to be recognised within the quality management system!
I	**Müssen die denn alles beschreiben?**
	To what extend do they have to describe their action?
A	**Die müssen nur das beschreiben, dass sichergestellt ist, dass die Anforderungen des Kunden erfüllt werden. Da gibt es ja Verfahren im Unternehmen, wo gesagt wird- ich mache das und da muss ich mich dann schon ein bisschen dran halten. Ich muss keinem Ungelernten sagen, wie der sich die Nase zu putzen hat, aber die Dokumentationsanforderungen werden durch die Produktionsanforderungen definiert. Also, ich kann das nicht im Vornherein definieren das das und das schriftlich definiert sein muss- Ich muss erst drauf schauen!**
	They just need to describe that it is ensured that the requirements of the customer are fulfilled. There are processes in the enterprise, which define - there I need an intermediate test [product test] - which I have to follow!... ***I don't need to tell an unskilled worker how to blow his nose, but it [the documentation] needs to be established through operational necessities. Thus, I***

	can't define in advance that this and that have to be described - I need to have a look at it!
I	**Vielen Dank bis hierhin. Wie stellen Sie eigentlich fest, dass der Betrieb die Anforderungen an das Management von Ressourcen effektiv erfüllt?**
	In what way do you find out whether the organisation has applied the resource management processes effectively?
A	**Nur durch Beobachtung kann ich- entsprechend meiner- die Arbeitssicherheit, Qualität beeinflusst- wie Beleuchtung, Werkzeuge- was ist bereitgestellt, auch an Personal und Maschinen- ist klar!**
	I can just determine by observation what - according to my opinion - has influence on work safety, quality - like lighting, tools - what has been supplied - also staff and machinery - of course!
I	**Aber was ist mit Personal? Wie findest Du heraus, ob das richtige Personal da ist, quantitative und qualitativ?**
I	***But what about the staff? How do you find out whether the right staff is there, qualitatively and quantitatively?***
A	**Das liegt daran, wieder Prozesseigner, der für eigene bestimmte Prozessschritte zuständig ist, seine Ressourcen plant. Ich denke, er kann von mir aus mit vielen Ungebildeten etwas um Ziel bringen oder er kann mit drei Spezialisten genauso gut sein- das Ergebnis am Ende ist wichtig- Also- mein Produkt!**
	It depends on how the process owner - who is responsible for a certain process - plans his resources: As far as I am concerned, he can achieve his objective with a large number of unskilled workers. Otherwise, three specialists can perform the same way! At the end, the result is of importance! Well, my product!
I	Danke, **woran machen sie fest, dass MAV Prozesse in der Organisation effektiv angewendet werden?**
	In what way do you find out that the organisation has applied the measurement, analysis, and improvement processes effectively?
A	**Es kommt natürlich auf die Art der Prozesse an, die im Unternehmen laufen. Und es kommt auf die Wahrnehmung natürlich, auch darauf, was hab ich in meinem Prozess vielleicht nicht richtig gemacht- irgendwo sind Prozesseinflüsse, das kucke ich mir erst mal an, und dann weiß ich aufgrund von meinem technischen Verständnis her oder vom fachkompetenten Verständnis her: wen in einer Zeichnung steht- du musst das oder das oder das prüfen, dann muss ich auch geeignete Messmittel dafür haben.**
	Of course, it depends on the kind of processes the enterprise runs! And it depends on the perception…what have I done wrong in my process?! Where are the process influences - that's what I look for first! From my technical understanding I know, or from my expertise I know: when a drawing needs me to measure a feature - then I need a suitable measuring device!
I	**Entschuldigung, aber ich bin mit meiner Frage beim Kapitel 8 eigentlich.**
	Sorry, but we will deal with clause 8 for the moment!
A	**Ach so! Gut, am Ende kann ich nicht hinterher nachsehen, ob die Leistung erfolgreich war. Ich muss das bei jeder Leistung machen. Muss ich jede Leistung messen, ist da irgendeine Situation, die das benötigt!**
	I see! Okay, in the end I cannot wait to see afterwards whether the services have been successful. I need to establish this at every service. Do I need to test every service, is there any situation, which requires a measure!
I	Erm, wir haben also Daten gesammelt, die in irgendeiner Weise einer Datenanalyse

	zugeführt werden und dann eben zur K oder V Maßnahmen zugeführt werden…ich wollte mal erfahren, wie Sie dieses Paket ansehen und entscheiden, ob diese Paket zum Unternehmen passt und zu den Prozessen passt und geeignet ist, Informationen zu sammeln, die Auskunft über die Proessstabilität geben und helfen, diese Stabilität zu sichern. Das ist eigentlich der Kern meiner Frage. **Anders gesagt, während Sie auditieren finden Sie MAV Prozesse. Wie finden Sie heraus, dass die effektiv sind?**
	While you conduct an audit, you will find measurement, analysis, and improvement processes. How do you find out whether they are effective?
A	**Ich weiß ja, was das Unternehmen macht, welches Ziel es dem Kunden gegenüber vereinbart hat und ich schau mir, ist das, was letztendlich da an Korrektur- und /oder Vorbeugemaßnahmen eingeführt ist auch zu dem passt, was die Kundenforderung betrifft. Das muss ja gewährleistet sein.**
	I know what the enterprise does what is contracted with the customer - and I look for whether what is there – corrective and/or preventive action fits for the customer requirements. That needs to be ensured!
I	Danke. **Wie stellen sie eigentlich fest, ob die Organisation sein System von Prozessen in Bezug auf den PDCA- Kreislauf effektiv anwendet?**
	In what way do you find out whether the organisation has applied their system of processes effectively in terms of the PDCA circle?
A	**Das, das was man feststellt, in dem PDCA Plan: ‚Plan do check act' auch an geeigneten Stellen umgesetzt wird – eine Korrektur oder Vorbeugungsmaßnahmen durchgeführt werden und eben dafür genug Ressourcen bereitgestellt sind. Und Planen- das ist knowledge management**
I	***This is that what you can recognise in the PDCA plan: 'plan do check act' has been applied at suitable occasions: corrective and/or preventive action! And that the enterprise supplies suitable resources for this! And plan - this is knowledge management!"***
I	Okay, gut- vielen Dank für Ihre Unterstützung.

Appendix 14: Audit time measured

	Designated audit time	Applied (measured) audit time
Case 1	**2,25 man days = 18 hours**	**5 hours 15 minutes**
Case 2	**2,0 man days= 16 hours**	**4 hours 58 minutes**
Case 3	**1,25 man days= 10 hours**	**5 hours 11 minutes**
Case 4	**1,25 man days= 10 hours**	**4 hours 50 minutes**
Case 5	**1,25 man days = 10 hours**	**5 hours 20 minutes**

Appendix 15: Consent letter

Titel: Kritische Untersuchung der Praxis: Audits von Qualitätsmanagementsystemen.

Doktorand: Andreas Kuceja

1. Ziel der Studie: Ziel der Studie ist die Ermittlung von angewendeten Audit- Methoden, die Grundlage von Auditentscheidungen sowie die Feststellung der Effektivität der Auditdurchführung.

2. Untersuchungs- Methode: Beobachtung sowie Audio- Mitschnitt, Interview mit Audio-Mitschnitt

3. Risiken: Es bestehen keine Risiken für die beteiligten Auditoren und deren Arbeitgeber und Auditees.

4. Benefits: Mit der Studie soll analysiert werden, ob die Ergebnisse der Auditdurchführung einerseits die Auditziele erreichen und somit die resultierenden Audit- Urteile vertrauenswürdig sind.

5. Duration: 5 Zertifizierungs- oder Re-Zertifizierungsaudit nach jeweiliger Auditplanung (Fallstudie).

6. Geheimhaltungserklärung: Die Teilnahme an dieser Studie ist für jeden Teilnehmer vertraulich. Erfasste Daten werden datenschutzgerecht gesichert und Dritten nicht zur Verfügung gestellt. Aus dieser Studie resultierende Publikationen, sowie die Thesis werden keine persönlichen oder Institutionelle Daten bzw. Daten enthalten, die Rückschluss auf Personen oder Institutionen zulassen. Gleichermaßen werden keine Informationen über beteiligte Auditoren oder Mitarbeiter an deren Arbeitgeber weitergegeben.

7. Fragestellungen: Bitte kontaktieren Sie 0170/9334500 bei Rückfragen, Beschwerden oder Sorgen in Bezug auf diese Studie. Ebenso können Sie über diese Rufnummer Rückfragen zu Auswerte- Prozeduren stellen.

8. Kosten: Die dem Doktoranden entstehenden Kosten werden durch diesen selbst aufgebracht, für Beteiligte entstehen keine Kosten.

9. Freiwillige Teilnahme: Ihre Entscheidung, die Studie zuzulassen und/oder teilzunehmen ist freiwillig. Die Zulassung bzw. Teilnahme kann jederzeit unterbrochen werden. Dies gilt sowohl für den Arbeitgeber des Auditors, den Auditor selbst als auch für die Auditees.

10. Grundsatz: Die Studie folgt den ethischen Grundsätzen, die durch Vertrag mit dem Researcher in seiner Funktion als Auditor mit der Zertifizierungsgesellschaft besteht.

_____ _____

Auditor/ Auditee Datum

_____ _____

Andreas Kuceja Datum