

THIRD-PARTY QUALITY MANAGEMENT SYSTEM AUDITS: PERCEPTIONS, LIMITATIONS AND RECOMMENDED IMPROVEMENTS

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Abstract

Third-party quality audits have been a continued practice within the manufacturing community since release of the ISO 9000 standard in 1987. In recent times, many within the manufacturing industry are questioning the value of the audit process. (Sayle, 1995, Sayle 1999, Douglas, 2000, Gordon, 2001, Dalglish 2006) Consequently, a need exists to better understand the impacts and perceptions of the third-party auditing process. This research used a grounded theory approach to explore the following question: How do management representatives perceive the third-party audit process?

Collection of data consisted of 25 in-depth interviews taken from management representatives within the North American automotive industry. Job titles of research participants included Quality Director, Quality Manager, and Quality Engineer.

Results of the research include (a) the third-party audit process is adequate to assess an organization's quality management system against the ISO/TS16949 standard, (b) the third-party audit process fails to add tangible value for the organization, (c) the relationship between the auditor (registrar) and auditee (organization) represents a significant conflict of interest, (d) the continued audit cycle is redundant and offers diminishing value, and (e) mature organizations fail to benefit from the third-party audit process. Results substantiate the views offered by Sayle (1995 & 1999), Douglas (2000), Gordon (2001), Karapetrovic and Willborn (2002), Beckmerhagen, Berg, Karapetrovic, and Willborn (2004), and Dalglish (2006). Furthermore, a final model is offered to depict the fundamental changes recommended to improve the audit process.

The conclusions of the research include: (a) Revise the ISO/TS standard to incorporate requirements that drive continual improvement and offer value to an organization, (b) Develop ISO registration and audit process infrastructure whereby the organization does not have leverage over the auditor and make the audits truly third party, (c) Remove the requirement for continued audit cycles for organizations that have periodically demonstrated compliance to requirements via surveillance audits. Eliminate the requirement for continued audit cycles, and (d) Incorporate assessment of the quality management system level of maturity as a method to determine if an organization is in need of a third-party audit. This study suggests that, by and large, tangible value is not a benefit of the third-party audit process. Consequently, as a value added activity, or a continual improvement tool, the third-party audit process is ineffective, insufficient and in need of significant changes. Suggestions for further research include (a) conducting a quantitative study to demonstrate the financial impact of the third-party audit process; (b) determining if an organization's quality and customer performance improves over time after becoming ISO/TS certified; (c) conducting a quantitative study of management representatives within the automotive community to determine the percentage that support third-party audit process; (d) completing a case study on a successful, profitable non-ISO-certified manufacturing organization;

(e) conducting a Delphi study on the Kluse Utopian Third-Party Audit Model; and (f) investigating alternatives to the audit process as a method to determine QMS compliance and effectiveness. Additionally a future researcher may seek to understand how factors such as human resources practices, organizational climate and knowledge management affect an organizations quality-related performance.

Key words: external audits, quality audits, QMS audits, third party audits, value added audits.

Introduction

Third-party quality audits have been an accepted practice within the North American manufacturing industry for several decades. In the late 1980s and early 1990s, the audit process gained enormous momentum via the introduction of international standards such as ISO 9001, ISO 14000, and industry-specific standards such as QS 9000 (subsequently replaced by TS 16949). Each of these compliance standards requires a third-party audit to evaluate the organization’s management system against the requirements outlined in the standard. In most situations, customers require compliance to these Quality Management System (QMS) standards; however the auditee (i.e., organization subject to the audit) pays for the third-party audit. The original intent of these standards and audit practices was to reduce the number of audits bestowed upon an organization while implementing a common QMS among manufacturing facilities and service providers. Consequently, ISO 9000 standards quickly gained popularity and registration bodies surfaced throughout the globe. Organizations believed that ISO certification offered a competitive advantage over non-certified suppliers while concurrently, customers began mandating ISO 9000 registration as a requirement for sourcing business. As a result, the late 80s and early 90s realized a tremendous increase in third-party audits due to the need for certification. The third-party audit increase influenced the growth of the consulting industry, which in turn helped increase the urgency for organizations to obtain ISO 9000 registration. Oversight boards were implemented to oversee the registration bodies, administer and set guidelines for third-party audits, and develop standards for auditor competency and qualification. After nearly two decades of this self-sustaining (see figure 1), and ever-expanding industry, organizations and individuals are challenging the necessity and relevance of the third party audit and certification process.

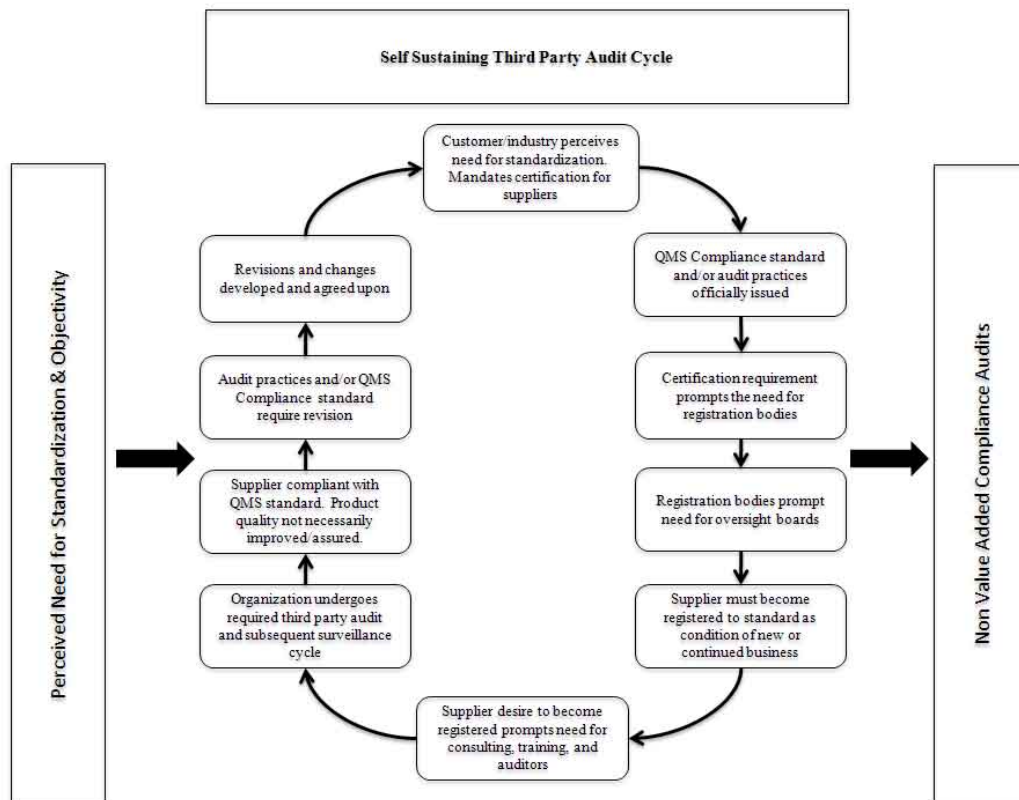


Figure 1: Kluse self-sustaining third-party audit cycle.

Research Problem

After more than two decades of using the third-party auditing process, many quality and manufacturing professionals do not see the value in or necessity of continuing with the third-party audit process (Dalglish, 2006; Douglas, 2000; Gordon, 2001; Sayle, 1995). Collectively, these individuals believe registrars do a poor job auditing (Dalglish, 2006), companies are pressured to maintain ISO status for reasons other than process improvement (Douglas, 2000), the certification is a costly piece of meaningless paper (Gordon 2001), and the entire process is flawed (Sayle 1995). Consequently, a need exists to better understand how management representatives perceive the third-party audit process.

Research Focus

This research served to (a) describe the perceived benefits, inefficiencies, and shortcomings of the third-party audit system and certification process; (b) summarize the insights of manufacturing professionals regarding the third-party audit system; (c) offer an alternate approach and changes to the third-party audit process based upon results of the research questions to modify the current third-party audit system; and (d) add to the scarce literature and academic critique of the third-party audit system.

Research Questions

The current research was framed by five research questions:

- Research Question 1. Do management representatives perceive the third-party audit process as beneficial and thus deem the audit process as value added?
- Research Question 2. Do management representatives believe the third-party audit process acts as a change agent or impels continual improvement within the organization?
- Research Question 3. As currently defined, are the current third-party audit practices effective or is there a need for a system overhaul?
- Research Question 4. Do the audit findings lead to cost savings and process improvements that justify the third-party audit tangible and intangible costs?
- Research Question 5. Is a third-party audit scheme and registration to ISO 9001:2008 and/or TS16949:2009 necessary and relevant in 2012?

Background to the Problem

Academic critique and peer-reviewed literature regarding the third-party audit process is sparse; therefore, there is a need to enhance this knowledge base via an academic evaluation of the audit process. While there is a plethora of articles, textbooks, audit organizations, training institutions, and consulting bodies within the third-party audit community, it is rare to find an overall evaluation regarding impacts of the third-party audit system. As noted by Swift T., Humphrey, C., & Gor, V. (2000), "Despite the rising significance of this international audit movement affecting hundreds of thousands of organizations worldwide, there has been limited interest in, or critique of, the practice of quality audit by academic auditing researchers" (p. 31). Gordon (2001) pointed out a fundamental perception associated with the third-party audit system, and presented concerns with the audit process: "The actual results of this auditing system are mixed. Many fine registration companies are now doing business, but some are not delivering what they advertise – unless the objective is a meaningless piece of paper. Certification has become a big deal involving lots of money" (p. 81).

Gordon referred to the certification or registration as a "meaningless piece of paper" while implying that this piece of paper is costly (p. 81). This claim by Gordon may be reflected in the

International Organization for Standardization (2010) report on the total number of certifications that indicated a 12.6% decline in North American ISO 9001 registrations for 2009 when compared to 2008, and a subsequent 12.7% decline for 2010 when compared to 2009 registrations. A similar decrease is evident with the number of ISO/TS 16949 registrations, which have declined 11.6% from 2008 to 2010. The decline in North American ISO registrations could reveal that the ISO certification is losing credibility and is merely becoming a meaningless piece of paper. Organizations are generally obligated by customer requirements to be third-party registered to an international standard (i.e., ISO 9001, ISO 14000, TS 16949, etc.) as a requirement for the award of new business or extension of continued business. As a result, the organization is required to (a) contract and pay for the services of a third-party registrar to conduct quality management system audits; (b) comply and address audit findings as presented by the third-party auditor; and (c) continue this infinite audit cycle regardless of past audit history and/or customer performance. At some point this process becomes redundant and pointless. Ironically, many of these same OEM customers requiring a third-party assessment also conduct second-party audits on suppliers as a method to assure the existence of an effective quality management system.

In the preface of "The Management System Auditor's Handbook," Kausek (2006) asserted, "As a management systems auditor for the last 20 years, I have been both encouraged and frustrated by the changes in management system auditing that have taken place over the last decade. Auditing practices have evolved toward more value-added functions. Companies are streamlining their management programs, with a focus on efficiency and the elimination of waste. At the same time, more attention is now being placed, and rightfully so, on the effectiveness of auditing systems" (p. xv). Kausek (2006) continued the discussion and concluded, "While the management systems standards and practices have rapidly evolved, the competency and capabilities of auditors have failed to keep up. Auditing continues to be seen as a collateral duty performed by part-time and often ill-prepared auditors. Auditors still tend to identify administrative deficiencies over more important weaknesses in system support or effectiveness, and management teams still grumble about audit results" (p. xv).

Congruent to Kausek's view, the case study presented by Beckmerhagen, Berg, Karapetrovic, and Willborn (2004) concluded: "Fair or not, continuous improvement of quality auditing is urgently called for. However, the lack of available literature or standards on the effectiveness of quality audits is appalling. Most quality audit textbooks discuss either the effectiveness of the audited management system (e.g. Mills, 1989; Sayle, 1985; Russell, 2000), or of the audit program management (e.g. Russell Regel, 2000) but not of the audit itself" (p. 14). Furthermore, Beckmerhagen I. A., Berg, H. P., Karapetrovic, S. V., & Willborn, W. O. (2004) asserted, "As a general rule, audits must serve their intended purpose to be effective. But what is the purpose of a QMS audit? Mere inspection of compatibility with management system standards is obviously insufficient when such standards themselves must be adapted to change (e.g. witness the revisions of ISO 9000 and ISO 14000 series standards) and when the business environment demands not the status quo, but continuous improvement" (p. 15). Although Beckmerhagen, I. A., Berg, H. P., Karapetrovic, S. V., & Willborn, W. O. (2004) do not specifically target the third-party audit system, the concepts and principles surrounding any quality management system (QMS) audit are directly applicable to third-party audit practices as the standards and auditing principles are comparable.

Additionally, since the third-party audit function is generally mandatory for organizations within a particular industry, it is rare for one to research and publish data that may suggest an entire for-profit industry is not effective and provides minimal value for the required investment. Publications such as Sayle's (1995) "Auditing: Time for a Rethink and Overhaul" explore the main shortcomings of the audit process, but few researchers have undertaken an academic approach to assessing perceptions of the third-party audit process. Authors such as Karapetrovic and Willborn (2000) addressed the methods to assure audit quality assurance and effectiveness, whereas Hunt (1997) evaluated auditing from an alternative perspective and stated, "The primary responsibility of a quality auditor is to verify compliance with agreed-upon standards. The auditor may perform this duty as a bean counter or broaden his or her view by striving to become something of a seed planter, using audit fieldwork observations to plant the seeds of cultural change when the

opportunity presents itself” (p. 27). Hunt’s statement captures the essence of third-party audits. The range of auditor style and technique varies from auditor to auditor, thus the often subjective and occasionally unstructured audit process leads to ambiguity for the auditee.

Although the ISO standards and auditing methodology have been revised since 1987, the overall third-party audit process is considered flawed by some experienced professionals. For instance, Sayle (1999), a recognized authority in the auditing field, suggested the three critical areas within the third-party audit and registration scheme that are flawed (a) current quality standards, (b) the registration process, and (c) the auditor performance. Concerning the registration process, Sayle (1999) asserted, “The performance of the registration industry is little short of scandalous. Recent examples, out of many, illustrate the inadequacy of their service: The vice-president of production for a high profile manufacturer of industrial equipment alleged to me the certificates for its North American factories had been “bought” (Registrar performance heading, para. 1). Furthermore, Sayle (1999) cited an example regarding influence of the corporation on registrar performance: “For its assessment, apparently a major registrar regularly ignores the mandated on-site time and scope requirements. When the registrar is threatened with loss of contract, major deficiencies are downgraded to “observations”: the audit scope, actual departments and personnel to be audited, are selected by the auditee. This shambolic disgrace occurs despite product recalls involving safety systems produced by the auditee” (Registrar performance heading, bullet 2).

Last, Sayle (1999) cited three instances that challenge audit effectiveness and performance. In the first instance, Sayle (1999) speaks of a “major international company” who had auditors wishing to sit for the American Society for Quality (ASQ) certified quality auditor (CQA) exam (Auditor training and qualification schemes heading, bullet 1). During the preparation, according to Sayle (1999), these trained auditors could not develop process flow charts, nor could they depict a process; additionally, these individuals were also unable to analyze a given process. A second example references the big three automotive original equipment manufacturers (OEM). In 1999, the big three referred to General Motors, Ford Motor Company, and Chrysler Corporation. Sayle (1999) maintained that these organizations are increasingly conducting their own supplier assessments due to a lack of confidence in the supplier’s own internal audits and meaningless certificates awarded by the third-party registrar.

Sayle’s (1999) final illustration involved an OEM’s process sign off requirement that is often imposed upon Tier I suppliers manufacturing product for the OEM. As part of the Production Part Approval Process (PPAP), the OEM often requires a member of the OEM quality function to verify, on-site at the supplier location, the manufacturing process used to produce the component supplied to the OEM. Sayle referred to this process in the keynote address of 1999, and this practice continues in 2012. Sayle contended this process exists because “they know such a certificate does not mean the registrant has a reliable system” (Auditor training and qualification schemes heading, bullet 3). From this statement, it is apparent that Sayle believes that OEMs within automotive manufacturing do not give credibility to the third-party audit and registration process since they are still willing to commit resources to auditing their supply base. Although Sayle’s (1999) statements were delivered over 10 years ago, each account is decidedly relevant and applicable to today’s quality standards, third-party audit practices, and registration schemes. In today’s automotive industry, General Motors conducts Quality System Basic audits (QSB), Chrysler verifies suppliers conformance to Chrysler Quality Standards via the Process Planning and Audit process (PPA) and Ford requires an annual Manufacturing System Assessment (MSA) to assure an effective Quality Management System.

Douglas (2000) outlined a typical scenario that suggests ISO 9000 audits (i.e., third-party audits) are problematic and non-value added: “In two days time, company XYZ, Ltd will receive a visit from its external auditor who will conduct one of their twice-yearly audits that will determine whether XYZ, Ltd will maintain its ISO 9000 status. The fire fighting exercise that is designed to ensure that the company keeps its certification is already in full swing. Paperwork is being checked and double checked for errors, missing signatures or miss filing; the stockroom is being tidied; labels are being attached to anything and everything; quality documentation is being updated; training records are being updated; calibration stickers and records are being updated and internal audit reports and minutes of meetings that never took place are being written and filed for

reference. For the next two days, normal business activities at XYZ are being suspended. Does all this sound familiar? The above scenario is repeated in organisations throughout the world on an almost daily basis. Why?” (p. 172). As Douglas inquired, why would an organization undergo this “fire fighting” exercise? The answer is simple: Organizations are under pressure to maintain ISO status for reasons other than process improvement (Douglas, 2000).

Dalgleish (2006), a self-described critic of ISO 9000, commented on value-added audits by stating, “Because registrars do such a bad job auditing, though, companies can focus on passing their audits quickly and easily without ever coming close to the intent of the standard” (p. 18). This statement was the result of a discussion regarding ISO standards and how the intent of the standard, in Dalgleish’s opinion, is well intended; however, he believed that quality professionals and their respective organizations often do not focus on the intent of the standard but on meeting requirements only to satisfy the audit requirements. Dalgleish (2006) stated that this intent-minded approach distinguishes effective quality professionals from those who are less effective. As this relates to third-party audits, in Dalgleish’s words, “They mistakenly think that meeting the requirements in the standard the fastest and easiest way makes their business more efficient. They ask questions such as, “Specifically what will the auditor be checking and how can we quickly address that area so it passes?” (p. 18).

This approach to achievement of QMS compliance is all too common: prepare each manufacturing area, process, and documentation to merely satisfy the auditor’s historical preference and interpretation of the standard. Most importantly, the argument presented by Dalgleish (2006) is a definitive need for a new approach to audits thereby adding value to the current process that promotes minimal effort from the organization. Furthermore, third-party audits encourage pursuit of misguided goals by preparing systems, employees, and documents to pass the audit. Dalgleish (2006), like others, suggested a focus on improvement opportunities that consequently promote organizational compliance to the standard, while adding value with a positive association.

Karapetrovic and Willborn (2002) acknowledged the importance of the audit process, yet recognized the necessity for improvement and emphasized, “Based on the fundamental principles of independence, objectivity and professionalism, the audit is an irreplaceable tool when confirmation of compliance with standards is sought” (p. 24). Although these authors supported the process, they found areas for improvement and asserted, “However, it commonly fails in enabling continuous improvement and spanning the differing aspects of business performance beyond conventional ‘quality assurance’” (p. 24). The core of this article highlights and challenges a critical, yet debatable, aspect of the third-party audit: auditor objectivity and autonomy. Concluding remarks by Karapetrovic and Willborn (2002) are exceedingly supportive of this current research: “In recent years, it has become apparent that organizations competing in any kind of market cannot rely solely on ISO 9000 standards to meet the increasing demands for continuous improvement and business excellence. Consequently, the traditional quality auditing methodology designed to test quality assurance systems against the standards falls well short of enabling performance improvement. While there is little doubt that a system audit is an excellent tool for independent, objective and systematic evaluation against the standard’s minimum requirements, based on professional and statistically sound judgments, there is even less doubt that some changes are required” (p. 11).

Researchers Role: Reflexivity and Credibility

Motivation for conducting this research surfaced from advice by a professor in this researcher’s early doctoral studies. Dr. Denise Pilato stated that a key element to being successful in research and doctoral studies is to “find your passion.” This statement has always been in this researcher’s mind. As a result, 15 years of experience with the third-party audit process within the automotive industry was the principal inspiration for this study. During these 15 years, major automotive components suppliers subject to third-party audits have employed this researcher. At each employer, this researcher’s primary role was quality assurance while serving as the management representative for such audits. While each and every audit was unique, at the conclusion of each audit, this researcher continually questioned the value and necessity

of the process. Although this researcher's view was not unique, many others within the quality community (within and outside automotive) held different perspectives and spent significant time preparing and promoting these audits as a necessary quality assurance activity.

After contemplating research into this topic and conducting a literature review, the researcher discovered that very few individuals have investigated the perceptions of the quality professional regarding the third-party audit process. Additionally, it was apparent that a void existed between the perceived value of the third-party audit and the perceptions of individuals experience with these audits. The majority of the literature surrounding audits focus on improvement of effectiveness, methods of conducting audits, development of audit programs, or the benefits of audits. It was very difficult to locate any study that offers a critique of the process or demonstrates tangible benefits of the third-party audit process.

An exception is the work of Sayle (1995), a noted critic of the audit process. Through several keynote addresses, Sayle has strongly criticized the third-party audit process, yet often, at the conclusion of the address, received a sincere round of applause and even a standing ovation. It was interesting that the same community who promoted these audits also agreed in principal with Sayle's (1995) harsh criticism. This is quite the paradox. Hence, this researcher's desire to investigate and document the beliefs of professionals affected by this process became the crux for this current research. It seemed peculiar that such a study did not exist; however, this researcher contemplated the question of why would auditors, consultants, and quality managers who realize a professional livelihood from this process look to find fault? Conversely, why would those who support and prosper from these audits not want to document and prove the value? Driven by vast experiences with the process and the differing views among the professional community, this research commenced. Through the review of literature and speaking with peers, it was determined that the third-party audit process has become a topic of debate. Questioning audit value and necessity has increased. This study provides the foundation and direction for further research into this topic.

Limitations

The researcher used personal interviews to gather qualitative data. The interviews followed a semi-structured format. This allowed the researcher to ask exploratory questions based on the interviewee response to clarify statements and generate in-depth information. Consequently, this technique, while effective, can introduce researcher bias. Therefore, the researcher used a semi-structured interview format to minimize bias while questioning the research participants. Furthermore, this researcher is not a trained interviewer. Since the researcher has experience with this subject, the interviews were based on an interview protocol which lessened the need for an experienced interviewer. The researcher recorded interviews by use of a digital recorder and/or manual transcription. Manual transcription could introduce bias; however to minimize bias, most interviews were digitally recorded and manual transcription was considered in the validation strategy.

Delimitations

The research participants' organizations consist of those within the U.S. involved in automotive component manufacturing that are third-party registered to either ISO 9001:2008 and/or TS 16949:2009. The research participants interviewed either serve currently as a management representative or previously served as a management representative within an automotive component manufacturing organization. The individual must have minimally experienced one full audit cycle consisting of an initial registration audit and periodic surveillance audits (annual or bi-annual). This represents a 3-year cycle.

Theoretical Perspective

Many have offered critiques and presented the shortcomings of the audit process. This research served to validate the views of individuals such as Sayle (1995, 1999), Douglas (2000),

Gordon (2000), and Dalglish (2006). Additionally, researchers such as Karapetrovic and Willborn (2000, 2002) and Beckmerhagen, I. A., Berg, H. P., Karapetrovic, S. V., & Willborn, W. O. (2004) have all questioned audit effectiveness and have offered alternate methods to conduct effective, value added audits. This research served to explore perceptions of quality professionals experienced with the third-party audit process and thereby substantiated claims made by these individuals. The following section used the emerging themes and conclusions to describe a model for an improved third-party audit process.

Methodology of Research

General Background of Research

A grounded theory approach was used to formulate a theory regarding the present state of, and future changes required for, third-party audits. The researcher conducted interviews with knowledgeable and experienced individuals to assess their beliefs on the current state of auditing.

The researcher selected grounded theory because the interviewees have all experienced the third-party audit process and thus the theory is based on participants' experiences and not on assumptions, subjective critique, or opinions. Although each question has a particular focus, the five questions all serve to increase understanding of one fundamental concept, which is whether the third-party audit process, from a macro perspective, is effective and value added. Each of the five questions, along with the supporting questions (spontaneously posed by the researcher), formed the multiple iterations that ultimately led to development of the final model. Use of this iterative approach allowed for the structured coding of data that is characteristic of a grounded theory study.

Selection of Research Participants

Participants for this research came from U.S. manufacturing and organizations within the automotive component manufacturing community that are currently registered to ISO 9001:2008 or TS16949:2009. Additionally, each individual chosen was currently serving as the management representative or has previously served as a management representative for a quality management system. These participants have direct experience with third-party audits. In 2010, according to the International Organization for Standardization, the number of ISO9001:2008 registered organizations in the U.S. is 25,101, and the number of ISO/TS16949:2009 registered organizations in the U.S. is 3,721 (ISO, 2010). Since one management representative is required for each organization, the total possible number is 28,822. The geographic regions for the research participants are primarily Michigan and Ohio, with some representation in the South Central U.S. The researcher interviewed 25 participants. Creswell (2007) suggested a sample size of 20–60 for grounded theory.

The researcher recruited participants through professional, social media networking websites: Elsmar Cove (www.elsmar.com) and LinkedIn (www.linkedin.com). The researcher recruited additional participants through customary professional networking.

In this study, interviews were used to acquire qualitative data. Knowledgeable individuals who have direct experience with the third-party audit process were asked a series of questions related to the third-party audit process. A criterion, purposive sampling strategy, was the method used to select interviewees for the research. In this study, all participants (a) worked within the automotive component manufacture industry; (b) were employed by an organization that is either ISO 9001:2008- or TS 16949:2009-registered for a minimum of one full audit cycle; and (c) were either a current management representative or had previously served as a management representative for third-party audits. The management representative is the individual within the organization who is responsible for the quality system and normally works directly with the third-party auditor during each and every audit conducted.

Instrument and Procedures

Interviews are a typical method to gather data during grounded theory research. In order to conduct an in-depth interview, this researcher used a semi-structured interview protocol. Consequently, an interview schedule with a semi-structured format was established to allow the researcher to ask spontaneous questions based upon participant response, yet focus on the same central theme for all interviewees. The semi-structured format consisted of basic open-ended questions centered on the research questions. The interview schedule outlined the initial questions presented to the interviewee. Follow-up questions for each main question were led by the researcher.

In order to gain in-depth information, the researcher used an iterative interview process consisting of (a) preliminary review and feedback by the participant regarding each research question; (b) verbal interview to explore the preliminary response to each research questions proved by the participant and (c) further questioning of the s participant by the researcher to gain thorough answers from each participant. Since the third-party audit process is currently stable and not undergoing changes, data saturation occurred within the 25 research participants interviewed.

Data Analysis

Qualitative data analysis included use of a modified version of the widely accepted technique of coding offered by Strauss and Corbin (1998) and used by several authors including Binder and Edwards (2009).

Examination and segregation of data into central categories took place in the initial stage of data (transcripts from the interview process) analysis. Identification of two central themes emerged: statements that supported the third-party audit and statements that challenged the third-party audit. After populating the categories with the participant's statements, the researcher identified specific attributes within the main categories and further refined and narrowed the statements. At the completion of stage 1, two central themes relating to each research question were established.

During the second stage of data analysis, each research question was broken down into two categories (a) positive audit perspective relative to the specific research question, and (b) negative audit perspective relative to the specific research question. These subcategories supported the central theme. Figure 1 depicts this technique. It is necessary to mention that the open coding and axial coding process were not necessarily hierarchal; it was an iterative process, and each stage was revisited at several times during the analysis. According to Leedy and Ormrod (2005), "The researcher moves back and forth among data collection, open coding, and axial coding, continually refining the categories and their interconnections as additional data are collected" (p. 141).

In stage 3, selective coding, the researcher formed logical categories derived from stage 2, coding for the development of a final model. In this stage, the data were transformed into an explanation of the audit process perceptions. The central theme was drawn from the data outlined in axial and open coding. The theme was constructed from the data (participants' statements) since a clear logical link had been established during coding. In effect, these themes became the script that described the third-party audit process relative to the research questions.

In stage 4, the researcher summarized the results from selective coding and formed a cohesive, overall conclusion and response to each research question. Using the five summaries from each research question, the researcher offered an overall theory or conclusion. The conclusion is solely a result of the data. Figure 2 outlines an example of the data analysis strategy.

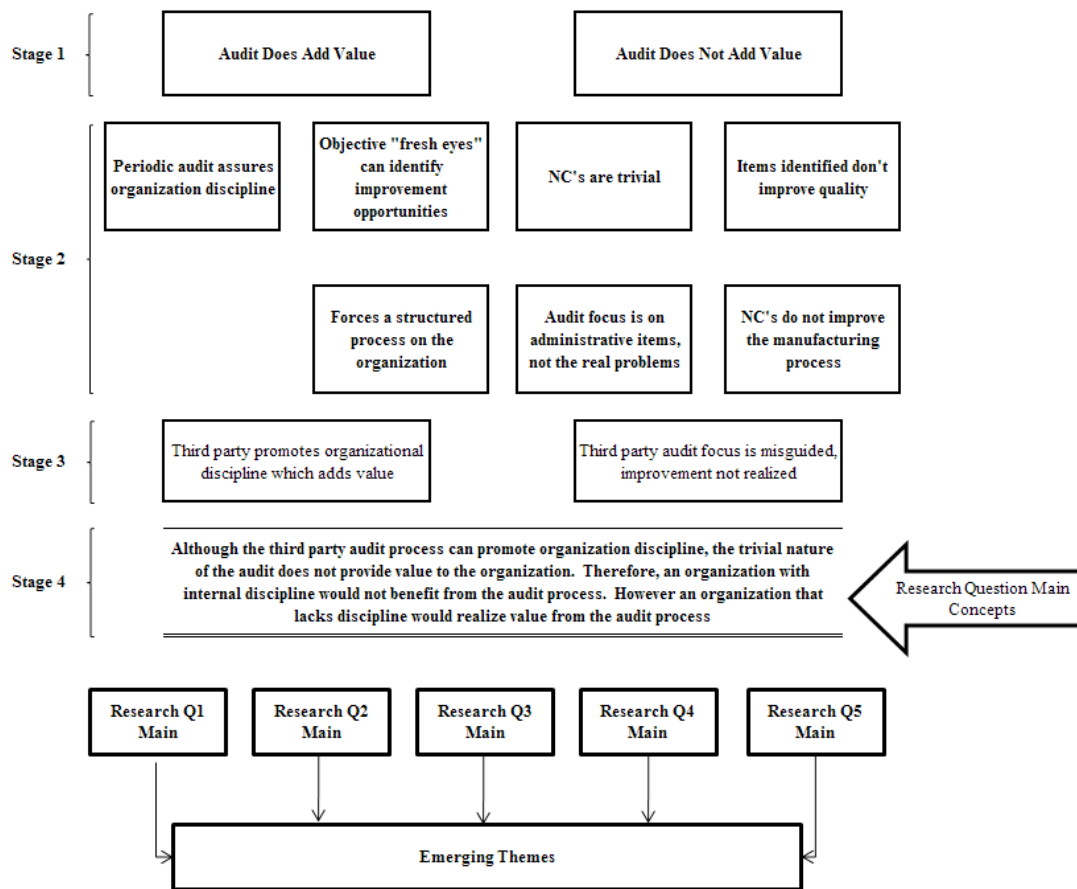


Figure 2: Data analysis - process.

As part of the data collection and analysis strategy, participants were asked to offer suggestions regarding improvement of the third-party audit process. Research participants’ statements regarding third-party audit improvement ideas have been coded and documented in the same fashion as the participants’ responses to the questions. It is from these suggestions and the researcher’s experience that a final model, *The Kluse Utopian Third-Party Audit Model*, was developed.

Validation Strategy

As a method to validate the research findings, the researcher incorporated into this research methodology the technique offered by Creswell (2009). Creswell outlined eight primary methods often used to validate qualitative research: "A procedural perspective that I recommend for research proposal is to identify and discuss one or more strategies available to check the accuracy of the findings. The researcher actively incorporates validly strategies into their proposal. I recommend the use of multiple strategies, and these should enhance the researcher’s ability to assess the accuracy of findings as well as convince readers of that accuracy" (p. 191).

The validation strategy was to use four of the eight validation strategies as outlined by Creswell (2009). These strategies are triangulation, clarification of researcher bias, presentation of negative or discrepant information, and member checking. Triangulation is investigating data from various sources, while clarification of researcher bias involves composing a personal narrative illustrating the researcher’s bias. Furthermore, presentation of negative information is offering opposing arguments or perceptions that go against the main theme or theory, and member checking involves taking back the final themes (from interviews) to the research participants in an attempt to determine if the themes, as described by the current researcher, are congruent with the participants’ beliefs or viewpoints (Creswell, 2009).

Triangulation

The researcher incorporated triangulation by selecting participants from organizations that vary in size, structure and process. Additionally, each participants experience with third party QMS audits varied. Each individual offered a unique perspective; it is from these various sources the theory has emerged. Creswell (2009) stated, "If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding validity to the study" (p. 191).

Clarification of Researcher Bias

Research findings in qualitative studies can be guided by the researcher's background; thus, a brief narrative offering a reflective look at the researcher's bias is considered as a key constituent of qualitative research (Creswell 2009). The following is a brief narrative clarifying the researcher's bias.

This researcher has been directly involved with third-party audits for approximately 15 years. At this time, the researcher has participated in third-party quality audits to assess compliance with ISO 9001:1994, ISO 9002:1994, QS 9000, ISO 9001:2000, ISO 9001:2008, ISO/TS 16949, ISO 14000:1996, and ISO 14000:2004. For all of these audits, the researcher served as the management representative and was responsible for the organization's quality management system. After experiencing the initial third-party audit in 1997, this researcher believed the system was beneficial and necessary. However, as this current researcher's audit experience expanded, each and every audit seemed to be an exercise that only identified trivial findings while exhausting an abundance of organizational resources.

In 2008 and 2009, this researcher, like many others, experienced and observed the effect of the economic collapse on the U.S. automotive industry. Fortunately, this researcher retained employment, but it was at this time that the real value of the third-party audit was questioned. During this period, the general manager of the organization challenged every senior manager to identify each and every cost savings opportunity within the facility. Consequently, the cost and value of audits became a topic of debate. It was decided that the third-party audit process was costly and not necessary; therefore, canceling or delaying the audit until further notice was the directive from senior management.

As a quality manager and management representative, this researcher's first consideration was to demonstrate the benefits and justify the cost of the audit, and thus substantiate the need for the audit. This researcher was unable to justify the cost. Additionally, it was not possible to show that even the basic audit fees (approximately \$3,000 USD) are justified by the audit process. Audits were successfully delayed (with agreement from the registrar and the International Automotive Oversight Board) until the economy began to recover. This exercise and the revelation that audits have no payback prompted immense curiosity from this researcher. Since reinstatement of the third-party audits at the researcher's facility in October 2009, six audits have been completed; one audit included a full systems registration audit. During these audits, the researcher transcribed meticulous notes. In each and every audit, rarely was the audit process value added nor did the audit process and findings justify the cost of the audit.

After casual conversation with peers, the researcher uncovered similar views, yet others supported the process, but with certain disclaimers or clarifications. This disparity provided the inspiration for this research. Although some may think this constitutes bias, it simply does not. The participants chosen possessed varying levels of experience and varying perspectives regarding the process. Furthermore, the researcher sought to understand perceptions of the process; regardless of the final model, the OEM community will still require the process. Therefore, any bias in the study would benefit neither the researcher nor the participants. Moreover, the research could inspire further research while adding to the academic literature. Adding to the literature base and answering the research questions has served as a positive initiative to improve a process required by all U.S. OEM automotive manufacturers.

Presentation of Negative or Discrepant Information

An additional technique for addressing bias within this study is the presentation of negative or discrepant information. In this study, emerging themes are offered; however, the theme is not absolute nor without opposing viewpoints. Therefore, the researcher developed conclusions regarding the third-party audit process by considering and offering these opposing viewpoints in the final model. The final model was neither an absolute criticism of the process nor was the final model in full support of the process.

Member Checking

During the data collection process, data were documented using interview notes and recordings. After the interview commenced, the researcher reviewed the interview notes and/or the interview recordings and summarized the highlights of the interview. The summary of the interview was presented to select participants for review. In all cases, the participants agreed that the summary presented by the researcher accurately portrayed the participant's thoughts regarding the third-party audit process. The researcher chose a sample of five participants to conduct member checking. If any of the participants did not agree with the researcher's summary, modifications to the data would have been made based on the participants' post-interview feedback. However, this did not occur with any of the five participants selected for member checking.

Ethical Considerations

The researcher assured all participants that responses and research data will remain completely confidential. The researcher is the only individual to transcribe the interviews. All interview transcripts are protected and secure. The researcher's local hard drive is not in the public domain and is password protected. The drive can only be accessed by the researcher.

Future professional publications authored by the researcher may use data obtained from this research. In all instances of publication (dissertation or professional publication) confidentiality will be maintained. Interviewee's names and interviewee employer's names will never appear in any publication. Additionally, interviewee's answers and information will not be shared with interviewee's employer nor will the interviewee's employer be provided knowledge that the interviewee participated in this study. All data will be summarized, categorized and be presented in aggregate, qualitative format. Specific answers will never be associated with an interviewee name or interviewee company. Confidentiality of the raw data (interview transcripts) will be maintained by the researcher.

Results of Research

Table 1 outlines the interviewee characteristics.

Table 1. Interviewee characteristics.

Subject	Subject Title	Number of Audit Cycles Completed	Years Experience in Quality				Employees at Facility			
			1 - 3	3 - 5	5 - 10	15+	0-100	101 - 250	251 - 750	750+
1	Quality Manager	3				x			x	
2	Business Owner	3				x	x			
3	Quality Manager	3				x			x	
4	Quality Manager	3				x			x	
5	Quality Director	3				x			x	
6	Quality Engineer	2			x		x			
7	Supplier Quality Manager	3			x			x		
8	Quality Manager	2				x		x		
9	Quality Manager	3			x		x			
10	Operations Manager	1		x			x			
11	Quality & CI Improvement Manager	3				x			x	
12	Quality Manager	3			x			x		
13	Quality Manager	3			x		x			
14	Quality Assurance Manager	3		x					x	
15	Quality Manager	3			x		x			
16	Quality Manager	2		x				x		
17	Quality Manager	3				x			x	
18	Owner/Partner	3				x	x			
19	Quality Manager	1	x					x		
20	Quality Manager	3			x			x		
21	Quality Systems Manager	3				x	x			
22	Quality Manager	3			x			x		
23	Quality Manager	2			x			x		
24	Quality Director	3				x			x	
25	Quality Manager	3			x			x		

Research Question 1

“Do management representatives perceive the third-party audit process as beneficial and thus deem the audit process as value added?”

The majority of participants did not believe that the audit process added tangible value. On the other hand, most participants considered the audit as adequate to assess compliance to the requirements defined in ISO/TS 16949.

Research Question 2

“Do management representatives believe the third-party audits process acts as a change agent or impels continual improvement within the organization?”

Most participants did not think that the audit process resulted in continual improvement opportunities.

Research Question 3

“As currently defined, are the current third-party audit practices effective or is there a need for a system overhaul?”

Most participants identify the need to revise the audit process. Participants cited specific shortcomings with the audit process and believed that changes are necessary. A significant concern is the conflict of interest that exists between the auditor and the auditee. Furthermore, most participants deem the requirement for continued audit cycles as not necessary especially for organization with a mature QMS.

Research Question 4

“Do the audit findings lead to cost savings and process improvements that justify the third-party audit tangible and intangible costs?”

Participants did not report cost savings resulting from the audit process.

Research Question 5

“Is a third-party audit scheme and registration to ISO 9001:2008 and/or TS16949:2009 necessary and relevant in 2012?”

Participants believed the process is relevant and necessary. Assessing compliance to the ISO/TS standard is necessary to assure that a minimum QMS exists within an organization.

Discussion

Suggestion for Improvements Based on Participant Interviews

The following outline improvement suggestions for the third party audit process as derived from emerging themes brought forth by research participants:

- Revise the ISO/TS standard to incorporate requirements that drive continual improvement and offer value to an organization.
- Develop ISO registration and audit process infrastructure whereby the organization does not have leverage over the auditor. Make the audits truly third party.
- Remove the requirement for continued audit cycles for organizations that have periodically demonstrated compliance to requirements via surveillance audits. Eliminate the requirement for continued audit cycles based on historical performance, customer performance and QMS maturity rating.
- Incorporate assessment of quality management system level of maturity as a method to determine if an organization is in need of a third-party audit.

Many subjects identified the internal audit (within a single facility or among operating units within a corporation) as an effective auditing method that offers value and determines opportunities for improvement. The appropriate task force should revise the ISO/TS standard to incorporate detailed requirements for an internal audit program. Accordingly, the third-party audit process would only focus on a detailed audit and review of the organization's customer performance and internal audit program. Organizations that have a robust internal audit program coupled with acceptable customer performance would have a reduced third-party audit schedule and requirements.

Proposed Model - Kluse Utopian Audit Model

An improved process would eliminate the current auditor (registrar) to auditee (organizations) relationship. Under the current scheme, the organization is the customer and pays for the audit process.

This is not, by definition, a third-party audit. Create an oversight agency with authority to regulate the quality management systems of all approved automotive suppliers. OEM's that support the ISO/TS standard should help fund the audit process. Similar to the EPA assessing compliance with mandated pollution controls, the oversight agency would have authority over a supplier's quality management system. In lieu of creating a new agency, the existing International Automotive Oversight Bureau (IAOB) could be re-structured to support this approach, or an organization such as the American Society for Quality (ASQ) could fulfill the role. Certainly pros and cons of such an agency exist; however, if the OEMs fund the process and value is not realized, it could be quickly revamped with necessary changes. This approach would eliminate the current relationship deemed undesirable. The conflict of interest is removed and the audit would be a true third-party audit. By allowing the OEM's and the oversight board the authority to administer, fund, and regulate the audit process, ad hoc changes could be made to address the needs of the ever-changing automotive industry.

A second element of the desired model is development of an automotive specific quality management standard not governed by the International Organization for Standardization (ISO). Incorporate improvement and performance evaluation into the standard similar to assessment models such as Malcolm Baldrige Criteria for Excellence or the European Foundation for Quality Management (EFQM) Model for Excellence. ISO 9001 is 25 years old. It had a minor revision in 1994 and underwent its first major overhaul in 2000. A minor revision followed in 2008. ISO reviews a standard every 3 years for adequacy and in March 2012, the ISO responsible subcommittee voted to revise the current standard. The predicted publish date is approximately 2015. Revision of this critical standard twice in 28 years is inadequate. This cannot keep up with the dynamic requirements of the automotive industry. The current process lead by ISO will not allow the standard to support the automotive industry needs; consequently, the standard and audit process will always be antiquated. The automotive community should own, develop, and implement new quality management standards and auditing practices that will keep up with the industry requirements.

A third aspect is to formally assess an organization's QMS maturity level prior to mandating any subsequent third-party audit cycle. All applicable organizations would have to initially endure an audit cycle, but the audit process would cease if the organizational performance is satisfactory and maturity level is acceptable. ISO 9004:2009 outlines a self-assessment process that culminates in an organizational maturity rating ranging from a one (no formal approach) to a five (best in class performance). An organization with acceptable customer performance and a self-rating above a three should have the next audit cycle waived. Furthermore, allow these organizations to conduct self-assessments similar to the audit process described by Karapetrovic and Willborn (2002) for one full audit cycle in lieu of a third-party assessment. The oversight board could mandate that self-assessment reports be periodically filed by each organization. An organization with a rating of two or less would be required to have a full audit cycle. A rating of three would allow for a reduced audit scheme. A member of the International Automotive Oversight Bureau (IAOB) would independently verify the organization's self-assessment.

Last, the IAOB should develop and agree upon audit effectiveness goals as part of third-party audit requirements. The IAOB should consider using a similar concept as presented by Beckmerhagen, I. A., Berg, H. P., Karapetrovic, S. V., & Willborn, W. O. (2004). The auditor and auditee should jointly develop the effectiveness goals prior to the audit. Furthermore, the lead auditor should review progress made towards effectiveness goals at various stages during the audit and make goal assessment and achievement mandatory criteria for the audit closure. Currently, a periodic debrief takes place during the audit to inform the auditee of any formal findings. This practice would be replaced by a concurrent review of effectiveness goals. Failure to meet effectiveness goals should result in compensation to the organization or discontinuation of the audit. The illustration below depicts the model described in the above discussion. Under this model, value is added, compliance is maintained, and the system is now flexible to react to the current automotive industry needs. If the quality management standard or audit process is in need of change, the IAOB could assemble a committee to revise and implement an improved standard. Currently with ISO, this process takes years to accomplish.

This model differs significantly from the current process and is a specific application to the automotive registration scheme. Noteworthy differences include:

- The governing standard (currently ISO/TS 16949) is owned by the IAOB. This will allow the standard to maintain pace with the automotive industry. Under the current system, the standard has only seen one major revision since 1987.
- The maturity of an organization’s QMS is considered prior to requiring a third-party audit. The current system ignores this aspect of the process. Many fine organizations undergo multiple audit cycles that are simply not necessary. Why repeat an audit cycle against the same standard?
- Establishment of effectiveness goals as part of the third-party audit process is mandatory. While the audit is being conducted, the lead auditor should review progress towards these goals. The current process does not consider audit effectiveness. Although an appeals process is defined, trivial audit findings often go unchallenged.
- Acceptance and use of self-audits as described by Beckmerhagen, Berg, Karapetrovic, & Willborn (2004) as an essential part of the registration scheme. The current system requires the use of internal audits; however, these audits differ from self-audits.
- Establishment of a true authoritative board. The oversight board and not the organization (auditee) should fund the third-party audits. Under the current scheme, the third-party audits, by definition, and by virtue of the registrar-organization relationship, are not true third-party audits. Additionally, if the oversight board is financial responsible and the process is deemed non-value added, the process could be modified or eliminated. The system does not currently have this critical check and balance. This researcher could not imagine a single OEM that would finance a non-value added process.

The Kluse Utopian Third-Party Audit Model (figure 3 below) represents a fundamental change to a process considered by many to be non-value added. Criticism offered by Sayle (1995) in 1995 has been largely ignored. This model and the associated research validates the perspective of Sayle’s (1995), Douglas (2000), Gordon (2001), Karapetrovic and Willborn (2002), Beckmerhagen, Berg, Karapetrovic, & Willborn (2004), and Dalgleish (2006) and offers an alternative to the current process.

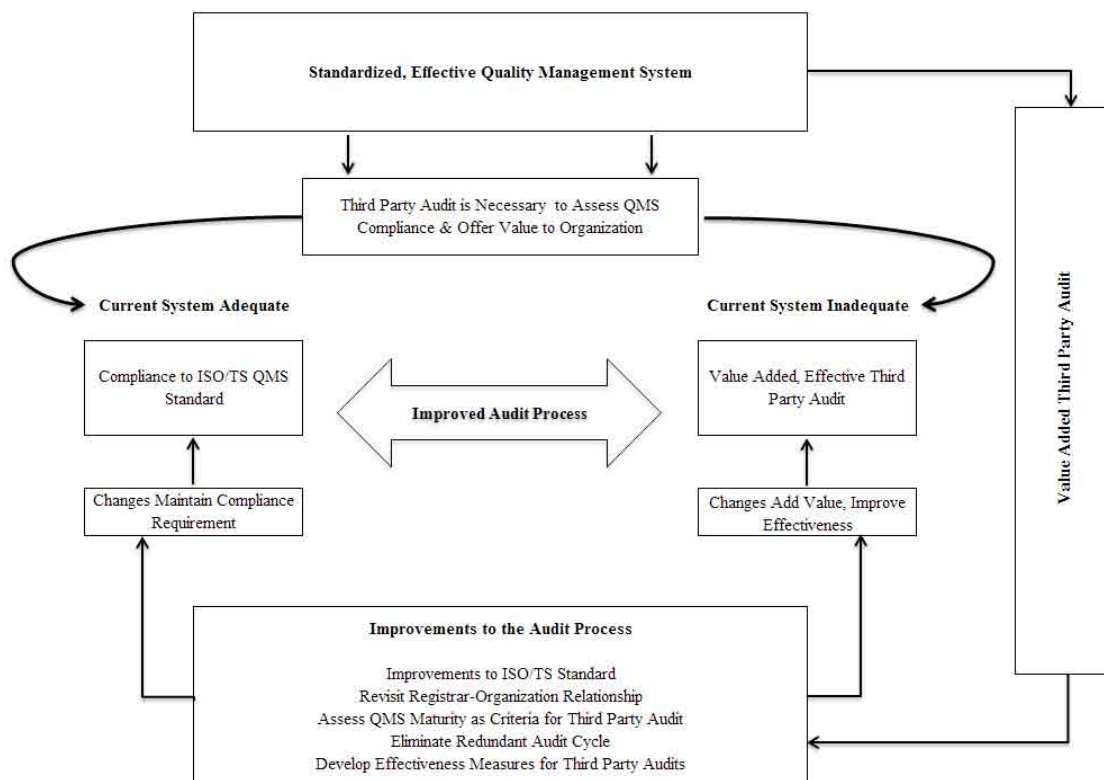


Figure 3: Kluse Utopian audit model.

Conclusions

The following are the significant themes emerging from the research.

- The third-party audit process is satisfactory to determine an organization's compliance to ISO/TS16949. From a compliance to the standard perspective, this is fulfilling the intended requirement. Most research participants believed continual improvement opportunities are not realized from the process.
- Tangible value is not realized from the third-party audit process. Administrative audit costs and intangible audit costs (use of resources) are not supported by the audit findings, results, or associated corrective actions.
- Smaller organizations with fewer resources and immature QMS are more likely to reap value from an initial third-party audit cycle. The value diminishes with subsequent audits.
- The conflict of interest between the auditor and the auditee hinders the third-party audit process. Leverage over the auditors by the organization reduces objectivity of the process. An organization is free to select an auditor that suits the organization's needs. Requiring the auditee (the organization) to select and fund the audit process conflicts with the definition of a third-party audit.
- The requirement for continued three-year audit cycles is redundant and not necessary. Organizations that complete a full audit cycle and possess a robust quality management systems gain nothing by repeating the cycle multiple times.
- Mature organizations with proven, robust quality management systems do not benefit from the third-party audit process. Often product quality and quality assurance are strategic company goals; the audit process is not needed to drive these activities.

This study suggests that, by and large, tangible value is not a benefit of the third-party audit process. When viewed from a compliance perspective, third-party QMS audits are adequate, but in need of improvements and systemic changes. Why should an organization spend money and exhaust resources merely to be declared *compliant* with a standard? Revising the audit process to simultaneously add value and assess compliance is not a simple task yet must be explored. As a compliance assessment tool (to the ISO/TS standard), the third-party audit has merit. However, if compliance does not equate to added value, why should the process continue? As a value added activity, or a continual improvement tool, the third-party audit process is ineffective, insufficient and in need of significant changes.

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