



## Research Article

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# Quality Management, Standardization and Auditing Meet Multiple Organizational Risks, Strengthening Open Market Understanding and Social Responsibility

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### Abstract

*This paper describes how the standardization essentially, rather than referring to goals, outputs and outcomes, addresses duties, roles and actions, while eventually the latter ones affect and empower the former. The quest for quality is still on-going in pursuit of effectiveness and efficiency combined with social responsibility, as long as it is dependent upon societies' willingness to change the world and share a better future. Although organizations have a long way to walk toward synergism and integration, quality management is being transformed from compliance to collaboration driven. The wide range of standards implementing the quality management systems based on ISO 9001 materializes its strategic direction to be functionally adapted to specific sectors and industries. On the other hand, plenty of later standards deal with the additional requirements that are applicable only to specific industries. They surely carry pros and cons. There is, however, a threatening likelihood that the relevant markets would reject some of the standards in case multiple standards overlap each other, creating complex bureaucratic burdens. Health and Safety standards are a success story against such concerns, while a plethora of Control and Risk management standards compete each other, which may be perceived more as a source of creativity rather than confusion.*

**Keywords:** Quality Management, Standardization, Health and Safety, Risk Management, Control Management

## 1. Introduction

ISO 9000 standards drew their powerful reputation and global recognition from an innovative architecture, whose main characteristic is not prioritizing the anyway welcome compliance with objectives or results, but primarily formalizing organizational processes and procedures, documenting in parallel their implementation. The standardization essentially, rather than referring

to goals, outputs and outcomes, addresses duties, roles and actions, while eventually the latter affect and empower the former (G. C. Baltos & Vidakis, 2014). A little philosophically and metaphorically, we could picture it as a highlight on the features of the "journey" instead of the "destination", although these features make the destination reachable.

In a sociological point of view, we could recall and introduce into our quality-related discussion the principles of the so-called western societies and economies that have been founded both upon the Aristotle's' logic as well as the Immanuel Kant's ethics (Gellera, 2017). The first of them defined the contents of public and private concepts, values and interests. The second one highlighted the economic modeling dilemmas in respect of deontological ethical factors (Bowen, 2004). The meta-modern capitalism, enhanced by liberal democracy, turned widely compatible with socialism and humanitarianism. North America and Europe have more or less analyzed and practiced certain but ethically accepted ways of making business and profit in ways that simultaneously serve public interests and social responsibility. The market stakeholders respect rules and duties that flow from categorical imperatives: "do not kill workers", "do not lie to the customers", "do not destroy the nature" etc., as well as practical advices: "respect the customer", "recognize the value", "embrace progress and prosperity, beneficence and self-improvement"... (Schumaker, 2010)

## 2. The Research Fields and Methodology

The quality sector's key research drivers are being hypothesized as cultural milestones over the societies' maturity development. Under this approach even the latest socio-economic crises are strongly related with the governments and institutions' failures to comprehend and practice quality in the modern markets. The quest for quality is still on-going and will keep up being like this for long, in pursuit of effectiveness and efficiency combined with social responsibility, as long as it is dependent upon citizens' willingness to change the world and share a better future (G. C. Baltos & Vidakis, 2014).

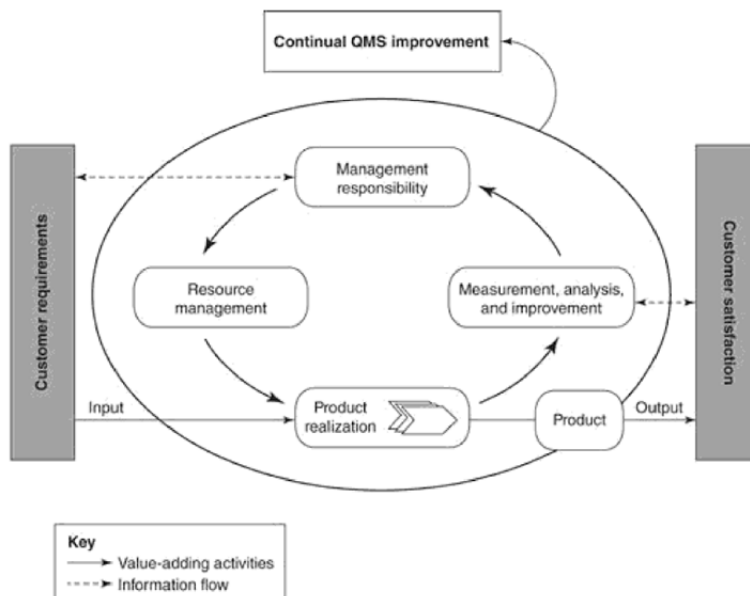
On the side of the public and private organizations to be certified for their quality management efficacy, this study presents their motives and drivers varying according to their business priorities and/or organizational maturity. They may struggle for increased customer satisfaction, larger market shares, on the edge competitiveness and/or reputational recognition that enhances capability to boost productivity. On the other hand, for the quality auditors their key drivers coincide with the principles that for almost three decades until now underlie and fuel the quality management universe, its success and universality.

The customer focus is the first pivotal notion testing the validity of the hypothesis mentioned above, that quality standards impact the societies' social responsibility and progress. Customer focus, therefore, is being examined as the spearhead of an institutional evolution driving the attention to the single user/customer/citizen, whose needs turn to be the epicenter of public and private sector services and concerns. There is a "democratization" attribute in this kind of respect to the customers, in analogy with the shift of the education toward student-centric instead of teacher-centric forms or the reform of libraries from limited series of hard-copies to e-books and open knowledge sources (G. Baltos, Doni, & Balodis, 2018).

The emphasis on the leadership quality-related attitudes is another pillar of this analysis. Giving then the tone at the top by fully comprehending the added value of running quality management systems along with the engagement of people in the widest possible extent have been proved to be a major success factor of ISO 9001 accomplishments. ISO 9001:2015 indeed not only emphasized on tailoring quality management systems to the organization's specific needs but included innovation concerns and reasonably ensured that the leaders are fully engaged with the quality affairs in terms of full transparency and accountability. This inclusive approach, driven from the top, involves then employees at every level. Middle-level managerial supervision leads to the setting of explicit goals over running operations, while constructive monitoring fuels continual reviews, and adjustments, safeguarding that Quality Management System (QMS) objectives are in alignment with the organizational strategy (Nonaka, 2008). The last section of the paper examines two case studies, the interoperability of standards, namely the Occupational Health and Safety standardization as well as the overlapping of standards and protocols and its policy implications, since it can be both a source of creativity or chaos.

## 2.1 A qualitative analysis on “quality” management sustainability and advancement

It is crucial for a quality auditor to possess industry knowledge and situational awareness in order to realize how the organization perceives the standards along with its needs, benefits and burdens, grasping the overall strategic direction as well as each one of the operational objectives (Liebowitz et al., 2000). Several knowledge fields compose this multi-faceted panorama of a holistic approach that makes possible to assess the workflows and facilitate continual improvement (see Fig. 1 below). Corporate responsibility and strategy, ethics, excellence projects, human factors, integrated management and interoperability, legislation, managerial techniques, performance indicators, process mapping, quality tools and data processing techniques, risk management, stakeholder relationship, statistical process control, supply management, etc. may possibly integrated apply, therefore, the assignment of the properly prepared auditing team always plays critical role. All this knowledge becomes fruitful as it is applied on the analysis of the internal motivations and attitudes of the organization, interconnected with the attributes of employees and external environment in the context of the requirements of the quality system. Given that ISO 9001 has been attractive for so long should keep the auditors perpetually alerted on its flexibility and versatility that may further ensure its viability and generic applicability.



**Fig. 1:** The analysis of the internal motivations and attitudes of the organization, interconnected with the attributes of employees and external environment in the context of the requirements of the quality system (Dentch, 2016).

Although organizations have a long way to walk towards synergism and integration, there is a common request through dynamic evolution process for the creation of added quality value and shared goals of efficiency and effectiveness. On this direction, quality management has been transformed from compliance to collaboration driven as well as from final products' inspection to the assurance that specifications and standards are respected in advance, in order to prevent later manufacturing deficiencies and services discrepancies. Public and private sectors have encouraged process analysis and evaluation, while management's awareness level for quality needs has been raised by the evolution of business services towards full customer satisfaction.

## 2.2 *The personality of an auditor matters ...*

Traditionally, internal audit, and not only in the fields of quality, had focused primarily on identifying policy violations and encouraging compliance with regulations. However, internal audit activities have recently turned their focus on an integrated approach to risk management, not only as a result of the changing nature of the market and industry regulations but also in an effort to release the auditors' creativity and usefulness, upgrading their status into a trusted advisor's level (Humphrey & Moizer, 1990). The relevant regulatory frameworks and auditors' job descriptions are being transformed so they can offer auditors and their clients sufficient leeway to establish trust. Despite the numerous differences in viewpoints and objectives, a definite shift has occurred in the overall scope of internal audit towards a more interactive and comprehensive involvement in the evaluation of the operational activities.

The professional range of the internal auditor's engagements is constantly being expanded. The transition from the past to the present audit terminology depicts the new orientation lines; from correction to prevention, from accounting focus to organizational added value, collaborative attitude, holistic approach, comprehensive support and insightful advisory (G. Baltos et al., 2018). In general, a critical source of the auditing changes in discussion was that the international standards on auditors' responsibilities have lately placed the primary responsibility for corporate accountability on management, along with the need for adequate internal control systems and the interpretation of compliance as a prevention system. Internal audit engagement and support is being consequently expressed by supporting management in defining internal control procedures, improving communication channels between internal auditors and management.

Last but not least, the evolution of organizational behavior and administration has massively turned to technology systems and computational analytics that measure the performance and predict risk levels driving to respective decision making (Kling & Allen, 1996). The regulators have welcomed the move to technology, but there are always present and usually ignored perils, accountability challenges posed by the technologies of control, therefore both managers and auditors should be alerted recommending reform measures and risk-based governance.

## 3. **The Needs of Both Institutions & People in Convergence and Interconnection**

The governing bodies are bodies of persons, including owners, board members, partners, directors, senior executives, etc. having, in the context of administration, ultimate organizational authority, responsibility and control. For instance, in regard with the corporate world the Board of Directors is their most common title. They may refer to the governing body of multiple, multi-size and multi-level public institutions, organizations, and companies or in general entities. Such bodies have the authority to exercise governance, making binding decisions in a given operational system and/or environment. They also formulate policies, directing the management, therefore, also called top management for controlling the organization at the highest level. In terms of quality, they establish along with the management quality policies, objectives and processes as well as quality planning towards organization-wide quality control and improvement (Baysinger & Butler, 1985).

The regulators on the other side are the interested parties who establish the quality requirements, statutory or regulatory, either as legislative bodies or as authorities mandated by legislative bodies respectively. A regulatory body may be a public authority or government agency responsible for exercising autonomous authority over some area of human activity in a regulatory or supervisory capacity. An independent regulatory body may also be independent from other branches of the government. They deal with rulemaking, codification and supervision. For instance, in the context of education, regulators are external organizations that have been legally empowered to monitor and control educational processes. Regulators may function as professional bodies without keeping any dependence on the business world, given that their primary rationale is the protection of public interests (Arruñada, 2000).

#### 4. Standardization versus Specialization

The wide range of standards referring to quality management systems based on ISO 9001 materializes the strategic direction of the latter to be functionally adapted to specific sectors and industries (see Fig. 2 below). From the already mature standards in such areas as automotive, telecommunications and aerospace industries, later to petrochemical and natural gas industries, medical devices, software engineering and even electoral and governmental organizations, they all deal with the additional requirements that are applicable only to the respective industry. They surely carry pros and cons. They facilitate their attachment to an on-going ISO 9001-registered Quality Management System. There is, however, a threatening likelihood that the relevant markets would reject some of the standards in case multiple standards overlap each other, creating complex bureaucratic burdens (Van den Heuvel, Koning, Bogers, Berg, & van Dijen, 2005).

| Standard     | Number certificates 2016 | of in | Number certificates 2015 | of in | Change | Change in % |
|--------------|--------------------------|-------|--------------------------|-------|--------|-------------|
| ISO 9001**   | 1106356                  |       | 1034180                  |       | 72176  | +7%         |
| ISO 14001*** | 346189                   |       | 319496                   |       | 26693  | +8%         |
| ISO 50001    | 20216                    |       | 11985                    |       | 8231   | +69%        |
| ISO 27001    | 33290                    |       | 27536                    |       | 5754   | +21%        |
| ISO 22000    | 32139                    |       | 32061                    |       | 78     | 0           |
| ISO/TS 16949 | 67358                    |       | 62944                    |       | 4414   | +7%         |
| ISO 13485    | 29585                    |       | 26255                    |       | 3330   | +13%        |
| ISO 22301    | 3853                     |       | 3133                     |       | 720    | +23%        |
| ISO 20000-1  | 4537                     |       | 2778                     |       | 1759   | +63%        |
| ISO 28000    | 356                      |       |                          |       |        |             |
| ISO 39001    | 478                      |       |                          |       |        |             |
| <b>TOTAL</b> | <b>1,644,357</b>         |       | <b>1,520,368</b>         |       |        | <b>+8%</b>  |

\* Accredited certification bodies are those that have been independently evaluated by accreditation body members of the IAF, the world association of conformity assessment accreditation bodies

\*\*ISO 9001:2008 (= 1025761 ) + ISO 9001:2015 (=80596)

\*\*\*ISO 14001:2004 (=323023) + ISO 14001:2015 (=23167)

**Fig. 2:** The ISO global Survey of Management System Standard Certifications 2016<sup>1</sup>

The auditing teams then should be composed by selected members to suit specific industries and, thus, support better the certification. The segregated roles may include from business relationship and certification requirements analysis, to back office processes, resources management and product/service delivery relationship, reinforced by sector-specific updates and developments (G. Baltos & Mitsopoulou, 2007). The additional and/or refined requirements afore-mentioned should not of course conflict ISO 9001. Any interpretation or sector-specific (in field, application area or market sector) specification cannot invalidate it.

#### 5. The Interoperability of Standards. A Paradigm; the OH&S Case Study

BS OHSAS 18001 (Occupational Health and Safety Management (OH&S), British Standards Institution) may be remarkably considered a successful sector specific standard. It established minimum requirements and determined best practices for occupational health and safety management. It is beyond doubt that the promotion of health and safety into a working environment results in maximum satisfaction of both employees and customers; operations then

<sup>1</sup>The subject survey results are available: [https://isotc.iso.org/livelink/livelink/fetch/-8853493/8853511/8853520/18808772/00\\_Executive\\_summary\\_2016\\_Survey.pdf?nodeid=19208898&vernum=-2](https://isotc.iso.org/livelink/livelink/fetch/-8853493/8853511/8853520/18808772/00_Executive_summary_2016_Survey.pdf?nodeid=19208898&vernum=-2) (Access on 28 June, 2018).

also receive a positive influence. The respective framework supports organizations to establish the policies and practices applicable to several working conditions all over the world, enjoying global acceptance. The benefits to the organization may range from the avoidance of legal troubles and financial losses to improved reputation, demonstration of social responsibility, enthusiastically motivated staff, uninterrupted business continuity and high-risk mitigation capabilities (Fernández-Muñiz, Montes-Peón, & Vázquez-Ordás, 2012).



**Fig.3:** The universal synergies of ISO standards (Pilot, 2014)

The growing demand for OH&S standards drove ISO, after BSI's contribution for almost twenty years, to be also engaged in the same field with the newcomer ISO 45001. It is interesting that the latter will further ensure compatibility with all ISO's management systems standards, using old and new methods combined from the simple Plan-Do-Check-Act (PDCA) model to the risk-based approach toward the minimization of the risks of harms, health issues, accidents and absence from work (see Fig. 3 above). The supporting and promotional campaign is robustly based on commitments on a systematic and structured management. All interested parties are covered under this "umbrella" of an occupational health and safety management system.

The OHSAS specification offers organizations the opportunity to eliminate or reduce risks for the employees as well as other interested parties, to self-assess the hazardous critical points of the operations and streamline an organizational culture of mutual respect and appreciation. Toward this end, BS OHSAS 18001 helps the organization to avoid breaking the relevant laws by recommending the measures to be taken along with the techniques identifying weaknesses and safety gaps. The clarity of the processes involved along with the responsibility and accountability assignments is a main pre-requisite.

## 6. OHSAS Success is Based Upon the ISO 9001 Universal Principles

Critical drivers for OHSAS effectiveness are the leadership's commitment, the continual review of systems, policies, processes and procedures, the re-assurance of all interested parties along with training initiatives and consideration of feedback information. Many researchers have discussed the "safety climate" in a working environment, in other words, the perception of the level of safety applying. Internal auditors should also be aware of this virtual assessment, because as long as it relies on best practices functions as leverage for further commitment and effectiveness, but it should be always examined and verified, ideally via the respective certification. Increase in bureaucracy remains another main auditing concern which may undermine the engagement's success, unless it is being properly handled.

Auditors need also to keep in mind that the ability of an organization to control its OH&S risk is interconnected with its performance. The health and safety policy facilitates the organization's excellence, therefore, health and safety commitments are reinforced through planning functions ensuring that OHSAS framework and organizational objectives are aligned, while resources management also follows up supporting efficiently the objectives achievement.

ISO 45001 is currently replacing OHSAS 18001, while the International Accreditation Forum (IAF) proceeds with the migration requirements. Health and Safety are traditionally of the most highly regulated field of human activities. The working environment development recalls decades of individual, collective and organizational campaigns for commitment and improvement. Apart from the regulators at the statutory and regulatory level or the governing bodies in the organizational administration field, the Occupational Health and Safety standardization makes the difference bridging theory and practice via functional frameworks that track down and evaluate every "step" of employers, customers, employees and interested parties away from a pitfall or a short-come increasing the likelihood and/or the impact of an accident or a disaster.

The underlying philosophy comprises identification, assessment and treatment of hazards and risks at the workplace. The OHSAS management system methodology combines planning for hazard identification, risk evaluation and control. Despite the progressive framework, it basically incorporates the ISO management systemic elements. An Occupational Health and Safety Management System (OHSMS) has been proved extremely careful as a system supporting organizations to address updates in terms of demanding legal requirements as well as dynamic changes due to high technologies in the working environments.

### 7. "Overlapping" Standards and Protocols; Case Study and Policy Implications

Some scholars, experts and advisors put the emphasis on Risk management, others on the Control management. The evaluation of both areas was thankfully included in the internal auditing context, even further framed by governance concepts and best practices. Therefore, the benchmarking between ISO 31000 for Risk Management and COSO Internal Control Framework is a source of organizational creativity rather than a catalyst for confusion. Controls exist to meet risks. The management of the first requires the identification and assessment of the others, and vice versa, apart from the terminological differences or the width and depth of the tool-boxes recommended and applied.

Both standards aim to create added value through an efficient control & risk management. Indeed, both frameworks share the same approach while the differences concern mainly and exclusively the way they structure the management process and the terminology employed.

The following Fig. 4 (IIA, 2-78) is indicative of the implied similarities and complementary roles at the same moment it summarizes the differences in the components of both frameworks (Auditors, 2013):

| <b>COSO ERM Components</b>                | <b>ISO 31000 Components</b>   |
|---|---|
| Internal Environment<br>Objective setting | Mandate and commitment<br>Design of framework for managing risk<br>Implementing risk management<br>Communication and consultation<br>Establishing the context |
| Event identification                      | Risk identification   |
| Risk assessment                           | Risk assessment<br>Risk evaluation<br>Risk analysis   |
| Risk response                             | Risk treatment  |
| Control activities                        | Monitoring and review of the framework  |
| Information and communication             | Communication and consultation  |
| Monitoring                                | Monitoring and review<br>Continual improvement of the framework (Influence by ISO Quality management expertise)   |
| Emphasis on Control management            | Emphasis on Risk management   |

Fig. 4: COSO ERM and ISO 31000 differences (Auditors, 2013)



## 8. Conclusions and Policy Implications

The standardization itself, no matter its philosophical and political roots, remains a technocratic process and decision-making equipment itself; that means the systemic approach guarantees that the organizational processes and procedures are readable, analyzed and evaluated. This way risks are also identified, assessed and mitigated, while the preventive and corrective actions recover systems sustainability and establish continual improvement feasibility. In the same line, the quality auditors' knowledge must be adequate enough to meet the definition of system requirements for the design, development and delivery of the within the sector products and services. It should also be capable of providing performance measurement and procedural traceability resulting in overall improvements.

The catalyst towards this new page of world's civilization is the introduction of scientific fields and disciplines like the Quality Management and the Systems Standardization. The transition from the under-developed to the developing and developed economies is a crystal-clear application of quality standards that strengthen the open market understanding and its long-term sustainability. For example, a gas-station owner in an undeveloped economy feels free to get corrupted by selling the improper "dirty" fuel mix in order to gain as much and as soon as possible, while the gas-station owner in an anti-symmetrically developed economy follows the standards for "clean" fuels, gives up the early gains but receives the long-term customer satisfaction and loyalty.

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