

IMPROVING AND ENHANCING JORGENSEN MODEL BASED ON NEW TRENDS IN QUALITY MANAGEMENT

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Abstract: *The paper draws a new approach for carrying out an integrated quality management system (Quality, Safety, Social Responsibility, Human Resources and Environment) based on five aspects: process-based approach, risk management, global monitoring system, participative management and performance management used as integrating factors to satisfy five important levels of integration such as correspondence, coordination, integration, participation and motivation. The methodology of the proposed approach covers the whole PDCA (Plan, Do, Check, Act) cycle.*

Key words: *quality, integrated systems, PDCA, ISO*

1. INTRODUCTION

The evolution of the current economic situation and the growth of competition pressure led the enterprises to develop new concepts of management. This development is initiated with a focus on control, customers' requirements, and continuous improvement, which orients companies to be more centered towards the standard ISO 9001. Later, the companies felt the need to consider the environmental requirements for civil society, which led them to focus on the environmental management system ISO 14001. Soon after, the safety of people and goods became a major concern. Therefore, OHSAS 18001 was formulated as the basis for certification of occupational health and safety management.

Badreddine et al. (2008) consider the major difficulty of these three management systems deriving from the fact that they were separately developed and thus their combination is not an evident task. Generally, parallel management systems are used, leading to split and self-determining carrying outs of each system suffering from several weaknesses, as they require many duplicate management tasks, such as procedures, control forms and other documents suggested by the standards. Furthermore, the main gap is the lack of a standard that regulates the problems, needs and requests of a company's stakeholders and, focused on social responsibility, guarantees the involvement of customers and other stakeholders in the process of standardization. Presently under refinement by ISO Working Group on Social Responsibility (WG SR) and COPOLCO, the ISO 26000 standard was the turning point that initiated our research.

Research concerning integrated management systems was initiated the same time as the publication of ISO 14001 in 1996, by Puri, when a set of guiding principles were proposed with the aim of integrate the ISO 9001 (Quality Management System standard) and ISO 14001 (Environmental Management System standard). Once the ISO 18001 (Occupational Health and Safety Management System standard) was formulated, the need to consider the three systems was felt and many researchers have been carried out with the purpose of build more sustainable integrated management systems.

These researches can be taxonomised into three categories: the first focuses on the relations among the three management systems as similarities, compatibilities, and differences. On the

base of these three characteristics, the second one suggests a set of guidelines including ideas and factors for a successful integration of the three systems. On this base, Fresner and Engelhardt (2004) recommend through the experience of two small companies in Austria an immediate and visible improvement in ISO 18001, ISO 9001 and ISO 14001. Moreover, Jorgensen et al. (2006), propose three ambitious levels of integration i.e. correspondence, coordination, and integration for a more sustainable QMIS (quality management integrated system). In addition, Zeng et al. (2007) define the internal and external factors affecting the carrying out quality management integrated system through a structured questionnaire survey conducted in China and recently, Jorgensen (2008) proposes more sustainable management systems through life cycle management based on the three levels proposed in 2006. Using results and ideas from the second category, the third one focuses on models and approaches to carry out a quality management integrated system.

2. PROPOSED MODEL

Based on Jorgensen's three levels' integrated management system (Jorgensen et al., 2006), we envisioned a new integrated management system embodying the requirements of existent ISO 9001, 14001, OHSAS 18001 standards and undergoing ISO 26000 standard concerning Social Responsibility.

Hence, proposing a quality management integrated system including Quality, Safety, Social Responsibility and Environment management systems, which we will call QSSRE management system (Figure 1) we conceived a new process-based approach focused on carrying out an integrated management system founded on four aspects used as integrating factors: process approach, risk management, global monitoring system and, in addition, based on ISO 26000, involvement and responsibility.

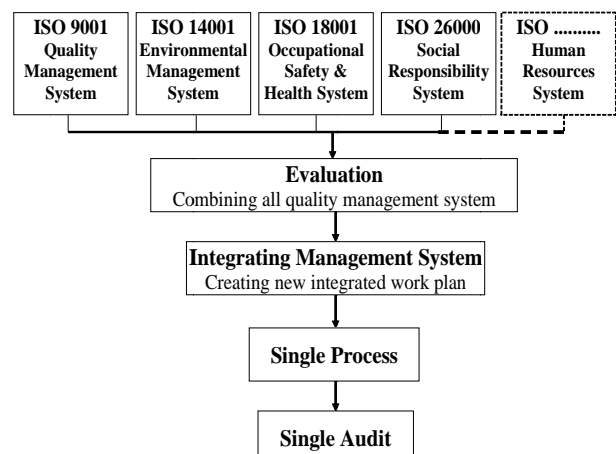


Fig. 1. Integration of quality management systems

These factors satisfy the three integration levels defined by Jorgensen (correspondence, coordination, integration) as well as a new level involvement and participation emerging from ISO 26000:

- Compatibility requires the match between the four systems, eliminating duplication, confusion among standards, specifications and redundant activities, streamlining internal and external audits;
- Coordination ensures the alignment of policies and objectives within the processes and tasks of PDCA cycle (Plan-Do-Check-Act);
- Integration involves the intertwining of policies and objectives as well as the development of a single process which underpins continuous improvement of quality in accordance with consumer demands;
- Participation requires interaction with stakeholders (local community, customers, suppliers, employees, state and local government), understanding internal and external factors of influence and company social responsibility.

Within this objective, we will develop a version of the model that will include a fifth quality management system related to human resources. The correspondent standard of the new quality system will focus on the enterprise's personnel as main target and on dedicated areas: personnel's recruitment and selection processes, staff files management, basic and advanced training activities, motivating systems, labor relations. This standard will complement ISO 18001 that refers only to employees' labor and health protection and safety. The result of the research will be remitted to International Organization for Standardization together with the proposal to initiate the process for creating this standard regulated at global level in human resources area. Therefore, the fifth factor will emerge - integrating performance management as well as the fifth level of integration - motivation.

3. CARRYING OUT METHODOLOGY

The new quality management systems are based on continuous quality improvement cycle - Plan, Do, Check, Act (PDCA) (Figure 2). Therefore, carrying them out without achieving of an effective integration can cause confusion, inconsistency, and incompatibility.

The planning phase (PLAN) allows understanding the current situation and defining for each process the requirements, tools, methods, responsibilities, and resources. This phase will involve six steps:

- 1) establish stakeholders' requirements and expectations specific for the four management systems (ISO 9001, ISO 14001, OHSAS 18001 and ISO 26000) and potential quality management system of human resources;
- 2) carrying out objectives results in each process (each process will aim to fulfill objectives of the four or five systems);
- 3) identify all possible risks of failure in accomplishing objectives;
- 4) analysis of each risk in terms of consequences;
- 5) complete an overall plan to carry out preventive and corrective actions;
- 6) establish monitoring system to ensure carrying out the management plan.

Carry out phase (DO) involves carrying out the plans outlined above, aiming at achieving efficient processes.

Verification phase (CHECK) involves measurement of indicators established in the first phase to determine the level of objectives' fulfillment.

Acting phase (ACT) requires readjustment of plans to achieve the objectives adequately.

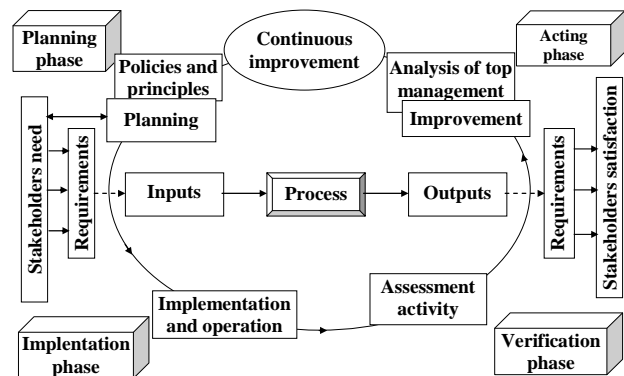


Fig. 2. PDCA cycle

The main advantage of our approach, and further, of the proposed model, is the connection among the components of the model and the eight fundamental principles of quality management: leadership, customer orientation, and process approach, factual approach to decision-making, continuous improvement, stakeholder involvement, and mutually beneficial relationships with suppliers.

4. CONCLUSIONS

To ensure participation and consumer involvement in quality assurance process we have developed an integrated management system based on a process based model. The model proposes a new process based approach for carrying an integrated management system that will meet the requirements for quality (ISO 9001), environmental quality (ISO 14001), occupational safety and health (OHSAS 18001), social responsibility (ISO 26000) and, possibly, a new system for human resources. The approach covers the entire cycle PDCA (Plan, Do, Check, Act) and ensures a coherent path.

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