## The Need for Implementation of Integrated Management Systems (IMS) in Macedonian Companies

Elizabeta MITREVA\*, Nako TASKOV\*, Julijana SAZDOVA\*, Ivana GEORGIEVA\*, Hristijan GJORSHEVSKI\*\*

#### Abstract

In this paper we analyze the situation of Macedonia's companies in terms of implementation and certification of the quality system and the application of different system standards. Analyzing the results of the survey, we have come to the realization of the need for certified quality system in Macedonian companies occurred because of market pressure as the main driving force, but many of them only formally certificate the ISO 90001:2008 standards. Formal certification of the standards does not create desirable advantages in the market and does not meet the requirements of ISO standards.

A particular problem in the Macedonian economy is small and medium companies that do not have sufficient resources to be able to make the system requirements by themselves. The use of the requirements and certification of various standards/systems: quality, environment, health and safety of employees, social responsibility, the safety of food products, etc., requires a new proactive management style and system orientation and reengineering of the business processes. In this paper, based on the results of the survey, we propose a methodology that will help the Macedonian managers with the design and implementation of integrated management systems.

Keywords: quality system, ISO standards, integrated management systems, TQM strategy.

#### 1. Introduction

Companies that have introduced a certified ISO 9001:2008 quality system have knowledge about the value of quality and know how to manage it. Designed and implemented quality system means strong commitment of top management to quality of products and services, organizational structure, system documentation quality, training of staff and well-designed system of incentives (Mitreva, et al., 2012). The system of quality, especially the quality of the processes should not be based on "airless" space without established solid and stable relationship with the main objectives of the management without great perseverance and tenacity of the management. The use of a top quality system, not only classical quality control of products includes writing and implementation of standard operating procedures (SOP) and guidelines. In writing documents by changing the shape and content comes to changing the organizational structure and reengineering the business processes in all direction in the company to adapt to new requirements. The changes relate primarily to the new way of grouping of organizational units, delegation of responsibilities and accountability, as well as effective communication and coordination.

The global competitiveness in world imposed a race in the economic progress, new cultural values and new frequently asked questions:

- □ Where is the European business headed;
- What are the potential winners in the global competition race;
- What are the answers to the challenges ahead of Brazil, Russia, India and China (BRIC) in the new era of nanotechnology;
- Globalizations a race with the latest technology.

The answer is in the changes in technology and production, in the total quality management (TQM) and the acquisition of knowledge and ability of knowledge-based development (Koc, 2007).

Many authors suggest that the introduction of a quality system should help companies overcome their problems (Dale and Lascelles, (2007). According to the requirements of ISO 9001: 2008, companies not only need to work in a specific way but to think otherwise. That means they need to reengineering their business processes have a radically new way of thinking and working (Mitreva and Filiposki, (2012); Kulp, et al., (2004).

For many companies the implementation of ISO 9001 is the first step towards Total Quality Management (Mitreva, 2011). Upgrading to ISO 9001:2008 with TQM strategy means improving quality by examining the organizational processes not only in terms of definition, improvement and design process, but also improve productivity and optimizing costs. The total quality management means greater participation of employees in the identification and resolution of problems in the very setting of standards and the continuous effort of improvement. The day-to-day practice of the employees should not only include their self-control in their work, but they must be trained to act preventively. They need to be responsible, to correct their mistakes and expose any problem with quality that they discover (Evans, 2005).

## 1.1. The need for integrated management systems (IMS)

When a user of the business results of the organization looks from the perspective of individual he only looks for one particular system or a particular standard. Seen in terms of organization, it has a basic management system (MS) and its interest is to adapt in line with requirements of different standards, but in the same time integrating the existing resources, competencies, goals, plans, documents, training, inspections, improvements and certifications (Kulp et al., 2004).

In order to meet the requirements of all stakeholders (buyers/ customers, shareholders, employees, suppliers, state) it became

<sup>\* &</sup>quot;Goce Delcev" University, Faculty of Tourism and Business Logistics, Stip, Macedonia, Correspondent author: Elizabeta Mitreva, E-mail: elizabeta. mitreva@ugd.edu.mk; elizabeta.mitreva@gmail.com.

<sup>&</sup>lt;sup>\*</sup> UKIM, Faculty of Computer Science and Engineering (FCSE), Skopje, Macedonia.

a European trend to standardize individual management systems (quality, environmental, health and safety of employees, security food, ethnic norms, etc.), with the possibility of their integration (Sharma and Gadenne, 2002).

These management systems include the requirements of individual user groups and only in certain areas. The ISO 9001:2008 standard applies to the protection of the buyer and as such represents a cornerstone in the creation of the standards of other systems. For many authors global competitiveness imposed global increase in requests for building even stronger rules on companies that are seen through the application of different standards system. Application and certification to various standards/systems: quality, environment, health and safety of employees, social responsibility of the corporation, the safety of food products and others. All this requires a new proactive management style, an orientation system and reengineering of the business processes (Mitreva, et al., 2013).

### 2. Research methods and analysis of results

This paper includes an in-depth analysis of Macedonian companies (one hundred and sixty) through researching their problems in a global market that market has imposed tougher working rules. The Macedonian companies were analyzed through a questionnaire and a detailed analysis of their condition via one of four pillars of the house of quality, the internal standardization, was made.

The structure of the surveyed companies – participants in the survey, according to the economic activity to which they belong (National Classification of Activities – NCA rev. 2 – "Official Gazette of the Republic of Macedonia" number 147 of November 26, 2008), figure 1.

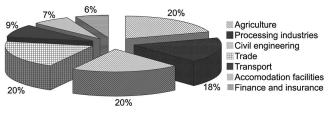


Figure 1. Companies' participation divided according their economic activities

The analysis was done in order to find out whether Macedonian companies have well designed and implemented quality system and if there is a concrete commitment of the top management for the quality of products, organizational structure, system documentation quality, training and motivation of employees. For this purpose it was asked: whether the surveyed companies have introduced an ISO 9001:2008 quality system and where do they see the benefits of the system.

The fact that only 40% of the one hundred and sixty companies surveyed have a quality system to ISO 9001:2008, of major concern. Analyses have shown that the need for job training on international standards for the European market performance and strategic connections with Western countries has made certain managers and owners to implement a quality system. The beginning of the process is associated with the determination and willingness of top management to improve primarily their own quality of work and to enable the competitive advantage in the market.

For this purpose, the companies that already had a certified ISO 9001:2008 quality system were asked where they see the benefits of the system:

- 60% of companies have introduced the system for quality, find the benefit in the higher quality of their products/services, reduction of total costs and customer satisfaction/ users;
- 25% of companies only have a formal quality system that is certified as a necessity imposed by the market. These

companies have the certificates hang on the wall without substantial meaning and need to specifically design the company, to produce quality products, to regulate the business processes for better cooperation with customers and partners around the world;

15% of surveyed companies that have certified quality system do not see any benefits, does not realize the desired advantages on the market and do not meet the requirements of ISO 9001 standards and only create unnecessary costs and bureaucracy.

Our theoretical analysis results indicate that companies who already use the system for quality management, as opposed to those who have not, realize the following benefits:

- ensuring quality of products/services that meet the requirements of customers/users;
- □ improvement in the quality of business processes;
- alignment between strategic and operational management of companies;
- the system of quality management ISO 9001 is basis for continuous improvement of quality, by applying the strategy of TQM;
- □ introduces order and discipline in the operation.

Our research has shown that companies that only formally certificate the system for quality of products/services do not meet the requirements of ISO standards and have no benefits from the formal certified quality system.

The analysis continues in the direction to find out whether Macedonian companies have an effective quality system by monitoring the way we manage the business processes starting from identifying, documenting and their control of the process. In order to find out whether documentation is built on system performance, the question: Does employees expect from their superiors standardized process for all business processes:

- □ 28.5% of the surveyed companies have made SOP (standard operating procedures) for business processes;
- 71. 5% of them reported that they receive precise orders only for complicated matters and specific requirements of the customers/users.

In order for the quality system to be effective and efficient, the staff should get clear and precise SOP (standard operating procedures) for each activity and there should be criteria for assessing the results. The results from the research suggest that in Macedonian companies have formally certified the quality system as a necessity imposed by the market without any substantial desire to regulate the company, to define duties and responsibilities, to improve the quality. The formal certification of ISO 9001:2008 standard does not yield the desired advantages in the market, does not meet the requirements of ISO standards. Hence, the conclusion follows that it is impossible to realize a total quality management without well designed and implemented a system for quality assurance.

The global competitiveness in the world imposed strong race in economic progress and other cultural values, and global increase in requests for building more robust rules in companies as well as implementing different system standards. The use of different standards/systems: quality, environmental, health and safety of employees, social responsibility of the corporation, the safety of food products and others requires a new proactive management style and system orientation and reengineering of the business processes. Macedonian companies were investigated for the application of different standards and certification and the following results were obtained.

Our tests showed that only 60% of surveyed companies, those that produce food and beverages have started with the implementation of HACCP and ISO 14000, and GMP (Good Manufacturing Practice) standards. This is due to legislation that requires all commercial entities that are involved in breeding, production and processing of food products to implement and certify HACCP and other standards by the end of 2009. Without a good quality of products/services sustainable advantages cannot be created in the domestic and international market.

Analyzing the results of the survey, one can conclude that Macedonian companies' need to apply different standards arose because of the pressure on the market as the main driving force, leading to an increased ability to work in a competitive environment, the need for expansion and maintenance of existing markets, and increased customer satisfaction/users.

In practice, the management of every organization is facing the problem of how to integrate the required standards in its basic management system. A particular problem is the small and medium enterprises that do not have enough resources to meet the system requirements and often face difficulties. The problems that arise are:

- the standards to be met are not entirely mutually aligned horizontally;
- engaging different consultants for the partial management systems often leads to confusion because of their different approach in creating these systems;
- each group (customers, shareholders, employees, suppliers and the state), requires only one system, according to a certain standard;
- certification bodies are not sufficiently trained to inspect integrated management systems.

The problems that the Macedonian managers face are solved by adapting and aligning too the different standards. The partial different management systems are concentrated in isolated areas that are often conflicting, especially in the responsibilities of the organization (Harrington, 1994). There is no need to wait for the formal horizontal alignment of the various ISO 9001:2008 standards, but in practice should be integration of the IMS (Integrated Management System) organization, based on the matrix of connecting elements that match (Mitreva, 2011).

In this paper, based on the results of the survey, we propose a methodology that will help the Macedonian managers in the design and implementation of integrated management systems. For the successfully completing of the integration of different management systems/standards in a single system it is required to make a connection between the requirements of different standards and methodologies and process of integration. The process of integration can be simplified if the specifics of any standard/systems are considered different aspects of quality.

# 2.1. Proposed methodology in the process of integrating partial standards/systems

There are practical experiences that confirm that the total, integrated management system – of quality, environment, health and safety is far more efficient and more productive than individual systems. The basis for the integration of the management systems is by promoting communication between different organizational units, the application of IT, with better cooperation between activities aimed at improving processes, not only the functions, which create conditions for the users (stakeholders) of the total management system (Mitreva et al., 2013).

Every organization has are two issues to solve in the integration of partial management systems:

1. How to integrate the partial standards/systems in a single IMS;

2. How to integrate IMS into business strategy and practice in basic MS organization.

Theoretically it is possible for any standard/system (MS) to be established as the first, or simultaneously after another. The most common examples for establishing the order of MS in the form of standards are:

- QMS after ISO 9001 which is the first, and then another MS;
- QMS simultaneously with another MS, then the rest of the MS;
- □ EMS as first, then another MS;
- □ HACCP (FSMS) first, and then another MS.

The steps in the integration of partial standards/IMS systems are:

- Step 1: With inclusion. First the documentation basic standard/system (QMS ISO 9001) is produced, and then it is extended to the requirements of other standards/ systems.
- □ **Step 2:** Addition. Where everyone has their own standard documentation associated with each other.

# 2.2. The need for integration of IMS strategy and practice of organization

In order for a MS in the form of standard to be effective and integrated with other MS, its development and application in practice of the organization must be realized through the adaptation of the existing MS (management system) with the requirements of a particular standard. It means that the existing policy, goals, planning, organization, processes, documents, resources, monitoring and measurement needs to be extended to meet the requirements of a particular standard/system. The most efficient and most economical way of integrating the standard/system is when the activities begin with its development and application, using PDCA (Plan, Do, Check, Act) cycle. Much of the steps are performed simultaneously and exclusively, including aspects of quality relating to various MS. Some of the steps are add on each other (maps of the processes flow, identifying the aspects of environmental and health hazards and safety).

In the practice of our organizations it is obvious that all the basic elements of MS are poorly developed and are unstructured.

The creation of MS in the form of a standard must be used in parallel as an opportunity to establish all the listed items starting with the basic MS, then extending to a given standard/system. If this is not done then all the elements of the created MS represent the structure itself, which exists in parallel with unchanged practices in the organization, and only for the purpose of certification. Such MS, is not only ineffective, but cannot be integrated with other standardized MS, especially to fit in the basic MS organization.

These specified standards/systems do not fully cover the complete range of basic MS organization, because there are financial and strategic management systems, system for stimulation of employees and others. For these reasons, however it is important to integrate the individual standardized MS, an more importantly the joint IMS should be successfully integrated in the basic MS organization

### 3. Conclusion

The benefits of Macedonian companies from the integration of partial management systems will be:

1. commitment, dedication, attention and involvement of the top management is much greater with integrated objectives ,measures and resources and there is a joint review of the management system (MS);

2. the integration of the management system enables efficient execution of daily operations without the involvement of top management and thus having more time and space for policy actions;

3. adaptation of the basic management system according to various standards is more efficient and cheaper than building and applying individual MS;

4. The integrated management system is effective, with more tricks of action, unlike the more partial management systems with one focus;

5. savings in the number of policies, documents and records (with their integration) in IMS, leading to rationalization of resources and effort;

6. the management of the integrates goals is more simple and efficient then the management of the goals in the individual MS;

7. the integration of the IMS in the strategy and practice of the organization is more simple and efficient then the integration of the individual MS in strategy and practice;

## QUALITY MANAGEMENT

8. The application and maintenance of the system through integrated research, verification, review and evaluation saves a lot of money and time;

9. cheaper and more effective re-engineering processes;

10. cheaper and more effective internal audit and preparation for certification of IMS, for each of the individual MS;

11. gaining confidence which customers and a positive image in the market and the state;

12. The integrated system provides a higher level of management control to the management of different systems;

13. optimization priorities (being named a management representative responsible for IMS, compared with more people in charge of different systems that have their own focus and priorities); 14. better acceptance by employees, less conflicts and greater motivation;

15. single training program for the IMS, thus saving time and money, and reduces the appearance of confusion among employees with training on different systems.

The idea of creating integrated management systems accompanies some risks of creating parallel systems, extensive documentation which from the documented system creates a system of documents etc. Internal development organizations who are preparing for the biggest market trials pay for quality improvement, which will certainly pay off and will ensure sustainable development.

Q-as

#### References

- [1] Bhagwat, R. and Sharma, K. M. (2007), Performance measurement of supply chain management: A balanced scorecard approach, Computers & Industrial Engineering (53): 43-62.
- [2] Chepujnoska, V. (2009), Quality Management Theory, Science and Practice, Faculty of Metallurgy, Skopje, pp. 45-89.
- [3] Dale, B. G. and Lascelles, D. M. (2007), Levels of TQM adoption, in Dale, B.G. (Ed.), Managing Quality, (5th ed.), Blackwell, Oxford.
- [4] Evans, J. R. (2005), Total Quality: Management, Organization and Strategy, (4th ed.), Thomson South-Western, Mason, OH.
- [5] Flegel, M. and Brozova, H. (2011), Fuzzy Decision-Making for Implementing ISO 9001 and/or ISO 14001, 12th WSEAS International Conference on Mathematics and computers in business and economics (MCBE '11), Romania.
- [6] Harrington, J. H. (1994), The collapse of prevailing wisdom, 38th EOQ Annual Congress, Lisbon.
- [7] Kulp, S. C., Lee, H. L. and Ofek, E. (2004), Manufacturer benefits from information integration with retail customers, Management Science 50(4): 431-444.
- [8] Kaplan, S. R. and Norton, P. D. (2008), The execution premium: linking strategy to operations for competitive advantages, Boston, USA: Harvard Business School Publishing Corporation.
- [9] Koc, T. (2007), The impact of ISO 9000 quality management systems on manufacturing, Journal of Materials Processing Technology 186(1-3): 207-213.
- [10] Khir, H. and Kai, C. (2012), An integrated modeling method for assessment of quality systems applied to aerospace manufacturing supply chain, Journal of Intelligent Manufacturing 23(4): 1365-1378.
- [11] Lysons K. and Farrington B. (2006), Purchasing and Supply Chain Management, Prentice Hall, New York.
- [12] Lee, D. E., Lim, T. K. and Arditi, D. (2011), An Expert System for Auditing Quality Management Systems in Construction, Computer-Aided Civil and Infrastructure Engineering 26(8): 612-631.
- [13] Mitreva, E. (2011), Model-integral methodology for successful designing and implementing of TQM system in Macedonian companies, International Journal for Quality Research 5(4): 255-260.
- [14] Mitreva, E., Jakovlev, Z., Koteski, C., Kitanov, V. and Angelkova, T. (2012), Analysis of the existing management system in Macedonian companies and the necessity of accepting the TQM philosophy, International Journal of Pure and Applied Sciences and Technology 8(2): 54-63.
- [15] Mitreva, E. and Filiposki, O. (2012), Proposal methodology of the subsystem-internal standardization as part of TQM system, International Journal for Quality Research 6(3): 251-258.
- [16] Mabert, V., Soni, A. and Venkataramanan, M. (2003), Enterprise resource planning: managing the implementation process, European Journal of Operational Research 146(2): 302-314.
- [17] Mitreva, E. (2012), The need for planning and implementing educational activities in Macedonian companies, International Journal for Quality Research 6(2): 143-149.
- [18] Mitreva, E., Taskov, N., Kitanov, V., Filiposki, O. and Dzaleva, T. (2013), The Need for Information System Design in Building a House of Quality, International Journal of Pure and Applied Sciences and Technology 16(1): 26-33.
- [19] Mitreva, E. (2013), The superior customer's value of the new economy implemented within Macedonian companies, International Journal for Quality Research 7(2): 215-220.
- [20] Sharma, B. and Gadenne, D. (2002), An inter-industry comparison of quality management practices and performance, Managing Service Quality 12(6).
- [21] Tsai, W. H. and Choua, W. C. (2009), Selecting management systems for sustainable development in SMEs: A novel hybrid model based on DEMATEL, ANP, and ZOGP, Expert Systems with Applications 36(2): 1444-1458.