RESEARCH PAPERS
FACULTY OF MATERIALS SCIENCE AND TECHNOLOGY IN TRNAVA
SLOVAK UNIVERSITY OF TECHNOLOGY IN BRATISLAVA

2015 Volume 23, Number 36

INTEGRATED MANAGEMENT SYSTEM – SCOPE, POSSIBILITIES AND METHODOLOGY

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Abstract

Organizations are becoming more aware of the importance of integrated management systems (IMS). Interest in this subject indicates that IMS are seen as "management systems of the future". Based on this, the aim of this articles characterizes the possibility of building IMS through the identification of common elements and specific requirements in accordance with the ISO 9001, ISO 14001 and OHSAS 18001 professional references. Part of the article is the methodology of building IMS in the organization.

Key words

Integrated management system, Management systems: ISO 9001, ISO 14001, OHSAS 18001

INTRODUCTION

According to the Chartered Quality Institute, UK, integration means a combination that is putting all the internal management practices into one system in such a way that the components of the system are not separated but linked to form one integral part of the company's management system. In simple words, an integrated management system (IMS) is a management system, which combines all components of a business into one coherent system so as to enable the achievement of its purpose and mission (1).

The most common integrated international standards include:
- Quality Management Systems(QMS) according to ISO 9001,
- Environmental Management Systems(EMS) according to ISO14001or EMAS III,
- Occupational health and safety management systems according to OHSAS 18001.

Integration of the three management systems is possible because the ISO 9001 and ISO 14001 standards are compatible and OHSAS 18001 specification was modelled on ISO 14001;

all three have process oriented approach based on the PDCA concept (Plan - Do - Check - Act). The ultimate focus of ISO 9001 is to improve customer satisfaction. EMS according to ISO 14001 is focused on how the company cares about the environment (standard towards the outside) and OHSAS is focused on how the management manages their employees (standard towards inside).

These can also integrate other standards such as: ISO 27001 (Information security), ISO 26000 (Social responsibility), ISO 31000 (Risk management), or different industry standards ISO 50001 (Energy management), ISO 22000 (Food safety management systems), ISO 13485 (Medical devices), ISO/TS 16949 (Automotive quality management), etc., as well as internal standards developed by the company itself and valid within the (IKEA, SONY, Slovnaft).

Integrating two or more management systems into an integrated management system can have many advantages:

- alignment of objectives, processes, resources in different areas,
- reduction of paper work,
- elimination of duplications between procedures of the systems,
- reduction in external certification costs over single certification audits,
- holistic approach to managing business risks,
- improvement of internal and external communication,
- increase of effectivity management by merge three functional departments to one,
- time saving,
- better structured processes and clearer responsibilities,
- improved operational performance,
- cross-functional team work,
- integrated audits.

This is a time consuming and costly process. The integration of systems arise certain risks. One of them is assignment of different importance to each aspect, for example more attention is paid to aspects of quality at the expense of environmental aspects. It is important to remember that integration of systems does not mean that these systems will exist next to each other, but they have to be connected with each other forming a complete unit. Integration is therefore neither the software package administering documentation of all systems, nor the inclusion of managers for QMS, EMS and OHSAS in a single department.

SIMILARITIES AND SPECIFICATIONES OF INDIVIDUAL MANAGEMENT SYSTEMS

The similarities or the generic processes in a management system are: top management commitment, definition of a policy, planning of objectives and targets, procedures for training of employees, communication procedures, audits, documentation and records control, control of non-compliance, corrective and preventive actions, and management review.

Similarities and specifications in management are recorded in Table 1.

OVERVIEW OF SIMILARITIES AND SPECIFICATIONES OF THE ISO 9001, ISO 14001 AND OHSAS 18001 STANDARD (6, 7, 8) Table 1

SIMILARITIES OF MANAGEMENT SYSTEMS (QMS, EMS, OHSAS)	
General requirements	The organization shall establish, document, implement, maintain and continually improve a management systems.

Control of documents		Procedures to approve documents for adequacy prior to issue Procedures to update documents Procedures to available of documents at points of use Procedures to ensure the readability of documents Procedures to ensure identifiability documents (marking) Procedures to prevent the use of obsolete documents Procedures to distribution of external documents Each organization must have its archives and registration procedures (Act No. 395/2002 Coll.)
Control of records and procedures		Management review - Assessment report Records of workers: - personnel records - records about the required and carried out trainings Metrology and monitoring: - records/procedures for regular measurement of processes ??? - register of all measuring instruments - calibration data with defined time calibration Records of internal audit: - plan of audits - the internal audit program - checklist of audit - protocol of internal audit Records of non-conformity Corrective actions: - records of the criteria for repairable and irreparable product - records of the results of the corrective action taken Records of preventive action
SPECIFICITIES OF MANAGEMENT SYSTEMS (QMS, EMS, OHSAS)		
Documentation requirements	**Q** **M** **S**	A quality policy and quality objectives (shall be measurable) Quality manual Documented system: - control of documentation - control of records - control of internal audits - control of nonconformities (when purchasing, production) - control of corrective actions - control of preventive action Technical documentation: - operating procedures - manuals Records from review of requirements related to the product Records from design and development: - input records - requirements for function and performance - legislative requirements - information from previous design

		Records of the design and development: Records of the design and development verification Records of the design and development validation Records of the changes in design and development Purchasing: - records of the results of the evaluation of suppliers - Register of suppliers Records of validation processes Records of identification and traceability of products Records of customer property Records of monitoring and measurement of product
Documentation requirements	**E** **M** **S**	A environmental policy Long and short-term environmental objectives (shall be measurable) Program for achieving the long-term and short-term environmental objectives (responsibility, means and time frame) Register of environmental aspects: - identified significant environmental aspects and assess risk - records for the release of significant environmental aspect to the environment Records for identifying legal and other requirements The records for assessing compliance with legal and contractual requirements Records to ensure internal and external communication Records to identify potential emergency situations Records for responding in such situations
Documentation requirements	**O** **H** **S** **A** **S**	A policy and objectives of occupational health and safety (shall be measurable) Program for achieving objectives (responsibility, means and time frame) Description of the subject and the main elements The hazard identification, risk assessment: - the procedures for identifying hazards - procedures for risk assessment The procedure for identifying legal and other requirements The procedures for assessing compliance with legal and contractual requirements Procedures to ensure internal and external communication Procedures to identify potential emergency situations Procedures for responding in such situations

METHODOLOGY OF INTEGRATED MANAGEMENT SYSTEM

There are several approaches which can be taken, depending on an organisation's current position.

Conversion
If an organisation has a certificated QMS, it can build upon that by adding the necessary processes to cater for health, safety, environmental and other requirements of management system standards (2).

Merging systems
If an organisation has more than one formal system – e.g. a quality management system and an environmental management system – it can merge the two systems and proceed to integrate other systems as it begins their formalisation. With this method, the organisation can merge documentation where it supports the same process. However it will remain two separate systems unless the labels are removed and quality, safety and environment are no longer separated at the detail level (2).

System engineering approach
Whether an organisation has an existing formal system or no formal system, it can adopt the system engineering approach to management system development, i.e. design a system top-down to fulfil a specific objective. The benefits are that one coherent system can be built which serves business needs and does not tie the organisation to a particular standard (2).

Integration of methodology is as follows:

1. Decision and the full support of top management.
2. The project proposal of introducing IMS, approval of the project and define responsibilities (project manager, project team, common management representative).
3. Training of managers.
4. Policy statement and objectives of IMS.
5. Sufficient financial resources.
6. Analysis of actual situation - identification of missing or improperly processed documents, identification of duplicate documents or data, the abolition of unnecessary documents.
7. Identification of common elements and specifications of defined standards.
8. Integration of systems into one integrated system – IMS manual and other documentation, a common register of environmental aspects and safety risks, registry of legislation, specification of operational activities, records of monitoring and measurement, metrology, records of non-conforming product, corrective and preventive actions.
9. Internal training of employees.
10. Internal audits.
11. Informing stakeholders.
12. Management review.
13. Improvement.

This is a general methodology how to proceed in integration of management systems. It may be changed depending on complexity of the organizational structure of the company and the complexity of the processes that are running in the company. It exists to specify the British Standards Institute called PAS 99 which defines the requirements for the establishment and integrated management of joint requirements management systems. It is based on the principle of PDCA.

SEQUENCE INTEGRATED OF MANAGEMENT SYSTEMS

S. Karapetrovič and M. Casadesús carried out a survey in order to determine in which order organizations create the IMS. The analysis was implemented in the Spanish region (Catalonia). It included 176 organizations. The results were as follows: 11% respondents implemented an EMS and QMS simultaneously, while 3 % of companies implemented EMS before QMS. All

other respondents 86 % followed the path of a QMS preceding EMS. Similar analyzes were accomplished in China and the United Kingdom. In China, 61companies and in the UK, 28 companies were analyzed,. All companies studied in China and the UK, in which an IMS was being implemented, had begun with the QMS, subsequently integrating the EMS (3). In Slovakia, such research has not been carried out yet.

CONCLUSION

Integration of management systems into a single IMS brings many benefits to the organization. It is important to recognize, that IMS is a single structure used by organizations to manage their processes or activities that transform inputs of resources into a product or service which meet the organization's objectives and equitably satisfy the stakeholders quality, health, safety, environmental, security, ethical or any other identified requirement. If this condition is not met, for example in favouring one system over another, it may develop a risk. The results of several international studies show that the most companies implemented ISO 9001: 2000 first, followed by ISO 14001: 2004, and then OHSAS 18001:1999.

In Slovakia, such a study has not been conducted yet. Studies have also shown that small and medium-sized enterprises (SMEs) encounter problems with integration (4). SMEs reported the lack of time, human and financial resources, and the perception that that management systems are too bureaucratic. In general, SMEs do not realise that the adoption of IMS may not only improve their management and their internal efficiency, but also result in cost savings.

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