ABSTRACT: In the context of increased requirements of an ongoing developing market, nowadays organizations are implementing management systems able to respond the specific requirements concerning quality assurance, environment, health and security. By integrating the existent distinct management systems, it becomes possible to minimize overlapping, align the objectives and reduce costs. The concept of integrated management system tends to be adopted not only by production organizations, but also by higher education institutions. This paper analyses the benefits an integrated management system would present, the steps necessary for creating such a system, as well as the possible obstacles when implementing it. Our research shows that an integrated management system will constitute a unitary frame for ensuring that both external and internal norms that regulate the activity of a university are complied and the objectives of the institution are efficiently pursued.

Key words: integrated management system, higher education institutions, quality

1. INTRODUCTION

In the context of increased requirements of an ongoing developing market, nowadays organizations are implementing management systems able to respond the specific requirements concerning quality assurance, environment, health and security. The development of the management system is associated with the appearance of distinct branches and a segmentation of activities within the organization, corresponding to each type of management system. The problems appear when the organization is expanding and the activities related to the existing management systems are overlapping. Since the actions and decisions are made separately within the distinct structures of the organization, there is a great risk that they might not be optimal for the entire organization. Employees may face a proliferation of information and contradictory instructions which may affect their activity. Bureaucracy may increase. The phenomenon of lack of responsibility and ownership may manifest.

A solution would be to create an integrated management system (IMS). Using separate management systems within one organisation is clearly expensive in terms of time and finances, and inefficient. By integrating the management systems, it becomes possible to minimize overlapping, align the objectives and reduce costs. Such a system is doable since the legislation concerning quality assurance, environment, health and safety share many common elements. Integration can improve organization’s activity and reduce risks, identify areas less efficient, facilitate a restructuring of bureaucratic procedures, of audit procedures and remediate dysfunctions between departments.

2. DEFINITION. GENERAL MODELS

The integration of management systems was defined as: “the connection of the processes, procedures and practices of the working of applied at the organization in the aim of its politics implementation which can be more effective in achieving aims resulting from the politics than the approach through separate systems”[1].

IMS is a "set of interconnected processes that share a pool of human, information, material, infrastructure, and financial resources in order to achieve a composite of goals related to the satisfaction of a variety of stakeholders" [2].

The purpose of an IMS is “to integrate the systematic and coordinated implementation of the requirements laid down in various international standards and industry standards in a SINGLE uniform management system”[3].

Beckmerhagen et al. (2003) defines IMS as: “a process of putting together different function-specific management systems into a single and more effective integrated management system” [4].

As shown above, the literature provides various definitions for the integrated management system, an analysis of those outlining certain specific elements of this system: (1) the IMS provides a unitary frame that integrates and coordinates the existing management systems of an organization, (2) the integration concerns processes, procedures and practices from an organization and (3) its aim is to increase the efficiency of the organisation.

There is no agreement in the literature regarding the constituents of an IMS. The typical variants most studied are different combination, of two or three elements, between the quality management system, the environmental management system and the occupational health and safety management system (fig. 1).

A more comprehensive variant is approached by Asif et al. (2008), their IMS comprising, beside the three quality systems mentioned above, another element: the corporate social responsibilities [5].

Key words: integrated management system, higher education institutions, quality

References

Figure 1. The model of an Integrated Management System

The IMS from nowadays organizations take into consideration minimum two standards from the quality standards issued by the International Organization of Standardization, specifically ISO 9001 and ISO 14001. The extended IMSs comprise also elements concerning occupational health and safety and other systems.

Some studies [4], [6] researched the degrees of integration of different management systems within organizations. They identified three degrees of integration, as follows:

- harmonization – the documentation within the organization was partially integrated;
- cooperation – the documentation, internal audits and resources were partially integrated;
- amalgamation – a complete integration of documentation, resources and procedures is achieved.

3. ADVANTAGES AND DISADVANTAGES OF IMS

The benefits of implementing an IMS have been highlighted repeatedly in the literature. Asif et al. (2008), performing an exploratory research on drivers for IMS implementation, have identified a certain taxonomy of the benefits IMS present [5].

Table 1. Benefits of IMS (adapted after [5])

<table>
<thead>
<tr>
<th>Category</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentation reduction</td>
<td>elimination of documentation duplication; less paperwork</td>
</tr>
<tr>
<td>Customer’s demand</td>
<td>prerequisite for business; enhanced customer satisfaction; improved image with customers</td>
</tr>
<tr>
<td>Cost reduction</td>
<td>cost reductions in manufacturing, operations, insurance premiums</td>
</tr>
<tr>
<td>Operational benefits</td>
<td>operational improvements; simplified systems; time saving; better synergies between systems; unification of internal audits; unification of training activities; common framework for continual improvement; overall organisational performance improvement</td>
</tr>
<tr>
<td>Resources allocation and utilization</td>
<td>better allocation of resources; saving of human resources; better utilization of resources</td>
</tr>
</tbody>
</table>

Among the problems organizations face when implementing an IMS are: lack of strategic planning, few experts and consultants, resistance, even hostility from employees, continually changing regulations and guidelines, need of fast reporting system [7].

Zeng et al. (2007) studied the factors that affect the implementation of an IMS. They divided the factors in two categories: (1) internal which include: human resources, organizational structure, company culture, and understanding and perception, and (2) external, including here technical guidance, certification bodies, stakeholders and customers, and institutional environment. They proposed a multi-level synergy model (strategic synergy, organizational structural-resource - cultural synergy, and documentation synergy) for an effective implementation of IMS [8].

The analysis of IMS in the industrial environment reveals multiple advantages. Obviously, these could be of benefit to the higher education institutions too, if IMSs would be implemented in a particularized manner that takes into considerations the specifics of a higher education institution.

4. INTEGRATED MANAGEMENT SYSTEMS IN HIGHER EDUCATION

In the recent years there has been an evident transition in higher education from traditional universities to entrepreneurial universities [9], [10]. Unlike the traditional universities, the entrepreneurial ones have a threefold activity: teaching, research and business services. In order to function efficiently and achieve their objectives, especially in the field of research and business services, universities need to adapt their management system and increase their focus. They focussed more on processes and start implementing quality systems based on international standards, specifically ISO 9001 and ISO 14001.

The first step in implementing management systems in higher education institutions is represented by the management systems for education quality assurance. Aside from the specific requirements imposed by national (The Romanian Agency for Quality Assurance in Higher Education, The Quality Assurance Agency for Higher Education – Great Britain; The Norwegian Agency for Quality Education in Higher Education etc.) and international (The European Association for Quality Assurance in Higher Education, The International Network for Quality Assurance Agencies in Higher Education, Central and Eastern European Network of Quality Assurance Agencies etc.) organisations of certification, many academic institutions have taken a step forward completing the instruments for quality assurance with the implementation and certification of quality management systems based on ISO 9001 [11], [12].

The standard ISO 9001 provides general rules for implementing a quality management system, it has universal applicability. In 2009 became applicable the norms from SR ISO IWA 2:2009 “Quality Management Systems – Guidelines for application of ISO 9001:2000 in education” that provide directions for the educational organizations concerning the
implementation and improvement of an effective quality management system.

The objective of SR ISO IWA 2:2009 is to ensure the global effectiveness of the quality management system from educational organization, as well as the continuous improvement of the educational services provided by these organizations. Thus, this international workgroup agreement is recommended as reference guide for the educational organizations where their highest level management wants to exceed the ISO 9001 standards, the final aim being continuous improvement and long-term success. SR ISO IWA 2:2009 comprises a self-evaluation questionnaire for educational organization and also examples of processes, assessments, records and educational instruments.

In Romania the regulations for education quality assurance are established by The Romanian Agency for Quality Assurance in Higher Education (RAQAHE). This is as autonomous public institution of national interest that has as main mission performing of an external evaluation of the quality of education offered by higher education institutions and other organizations that provide study programmes.

We performed an empirical analysis on the academic environment to see if Romanian universities have implemented quality assurance systems, what type of systems are these and whether or not they are integrated.

An excerpt of the results of our analysis is presented in Table 2. As the data from the table show, there are certain Romanian universities that, aside from the systems developed to meet the requirements of RAQAHE, have also implemented quality assurance management systems according to ISO 9001 standards and some even have implemented ISO 14001, ISO 22000 and OHSAS 18001.

<table>
<thead>
<tr>
<th>UNIVERSITY</th>
<th>ISO 9001</th>
<th>ISO 14001</th>
<th>ISO 22000</th>
<th>OHSA S 18001</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;I Decembrie 1918&quot; University</td>
<td>X</td>
<td></td>
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<tr>
<td>University of Bacau</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Academy of Economic Studies</td>
<td>X</td>
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<tr>
<td>University of Bucuresti</td>
<td>X</td>
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<tr>
<td>Academy of Military Technique</td>
<td>X</td>
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<tr>
<td>University of Art and Design</td>
<td>X</td>
<td></td>
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<tr>
<td>&quot;Tuliu Hatieganu&quot; University of Medicine and Farmacy</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>University of Agriculture Sciences and Veterinary Medicine</td>
<td>X</td>
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<tr>
<td>&quot;Bogdan Voda&quot; University</td>
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<tr>
<td>Maritime University</td>
<td>X</td>
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<tr>
<td>&quot;Danubius&quot; University</td>
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</tbody>
</table>

"Ion Ionescu de la Brad" University of Agriculture Sciences and Veterinary Medicine

"Gr.T. Popa" University of Medicine and Farmacy

"Ol - Gas" University

"Eftimie Murgu" University

"Constantin Brancusi" University

University of Agriculture Sciences and Veterinary Medicine of Banat

A concise formulation of the information presented so far would be that higher education institutions must meet certain quality assurance requirements/standards either imposed by different national and international organizations, or self-imposed.

As far as Romanian universities are concerned, a supplementary regulation element comes from the law of internal/managerial control - OMFP no. 946/2005, document that aims at systematizing the activities from Romanian public institutions, including universities.

As can be noticed, there are three main systems: the RAQAHE regulations, the norms of Ministry of Public Finances concerning internal/managerial control and the internal regulations of each university, which essentially establish regulations for the same domain (fig. 2).

They all target quality assurance in academic institutions through procedures and processes that will lead to an efficient and effective pursue of institutions’ objectives.

![Figure 2](image-url)
5. INTEGRATED MANAGEMENT SYSTEM AT “LUCIAN BLAGA” UNIVERSITY OF SIBIU

At “Lucian Blaga” University of Sibiu we intend to establish an integrated management system that meets the legal requirements regarding quality assurance.

The further development of the system will mean incorporating other requirements in the domains of environmental management and health and safety management. In order to create the integrated management system we need to unify the existent regulations specific for quality assurance for the main processes: management processes, base activity processes (education and research) and support processes.

These regulations were formulated in order to meet the requirements of RAQAHE, of Ministry of Public Finances (regarding the internal/managerial control system) and of the internal system of quality assurance (which follows the generic mechanisms created by ISO 9001 standard). An appropriate manner to realize this objective is the procesual approach. The IMS model in our university is based on the following processes:

- managerial processes – coordinate all the other processes within the university;
- educational processes;
- research processes;
- tertiary processes (from the interaction between university and external environment – economic organisations, public administration, NGO etc.);
- support processes – sustain and ensure normal functioning of all the processes.

Following there are presented the steps we consider necessary to take to create the IMS.

1. identifying the processes necessary for IMS (activities management processes, resources assurance processes, services providing processes, measurement, analysis, control and improvement processes);
2. determining the succession and the interaction of the identified processes;
3. establishing the necessary criteria and methods to ensure that both the performance, and their control are efficient;
4. ensuring the availability of necessary resources and information to perform, monitor and control these processes;
5. monitoring, measuring and analysing these processes;
6. implementing the actions necessary to achieve planned results and continuous improvement of the processes.

The IMS we intend to establish at “Lucian Blaga” University of Sibiu is organized so as to exercise (through internal audits) an exigent and permanent control of all the activities with impact on quality. It focuses more on prevention (prevention mechanisms created by ISO 9001 standard). An appropriate manner to realize this objective is the procesual approach. The IMS model in our university is based on the following processes:

- management processes – coordinate all the other processes within the university;
- educational processes;
- research processes;
- tertiary processes (from the interaction between university and external environment – economic organisations, public administration, NGO etc.);
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