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## INVESTIGATING THE IMPLEMENTATION OF INTEGRATED MANAGEMENT SYSTEM (IMS)

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**Abstract:** In order to sustain their business, companies must balance the fulfilment of requirements of all the parties involved. Their attempts to achieve sustainability rely on numerous international standards, but also on integrated management system which integrates all the elements of a business system (through better quality, improvements in environmental protection, data protection, etc.) into a unique and complete production management system in an organization so that the requirements of all the interested parties could be fulfilled and the business objectives achieved. The results of a survey conducted with the aim of investigating the importance of implementation of IMS in the companies which perform various kinds of sectors and industries are presented in this paper. The obtained results indicate a high level of implementation of different standards, obtained benefits, as well as a high level of the employees' awareness of the need to apply them.

**Keywords:** integrated management system (IMS), ISO standards, survey

### INTRODUCTION

The effort put in advancing the competitiveness of a company in the local and international market has never been a simple task because it involves extreme commitment and responsibility [1]. Competitiveness involves the implementation of different development programs, an integrated management system (IMS) based on ISO standards, innovations in new products and services always with same the aim [2]: to offer quality products, to provide continuing growth, to improve operations, as well as to ensure permanent adjustment of business strategy to market demands. ISO standards constantly have affected the increase of competitiveness of products and companies since the first standard was introduced in the 1990s of the 20<sup>th</sup> century (series ISO 9000), with all the reviews made so far (ISO 9001, 9004, 14001, OHSAS 18000, ISO 27000) along with the development of the new ones (OHSAS 18001, ISO 22000, ISO 27001, ISO 26000, ISO 45001, ISO 50001) [3]. On the other hand, ISO standards create scientific and technological basis for making legislative, health, safety and environmental frameworks at the state level [4,5,6]. Due to ISO standards and the use of practical models, we have a possibility to solve many everyday problems we face, from global management of water resources to improvement of food safety. It is a notorious fact that the application of ISO 9001 standard is voluntary, but companies are well aware of the importance of having a certificate of successful implementation of this standard. Unfortunately, examples of possessing this certificate just as a formality can always be found because the standard has not been properly implemented, hence, there are no appropriate effects resulting

thereof. Therefore, it is necessary for all the employees, particularly the top management, to comprehend the significance of all principles, instructions and requirements of quality management system [5]. Application of the basic ISO 9001 standard is only the beginning. It is desirable for a company to implement other international standards as well, particularly those aiming at environmental protection [4,7]. The implementation of IMS ensures a more efficient realization of set goals and business activities for employers and employees, especially those related to quality (quality management system (QMS)), environmental protection (environmental management system (EMS)), safety and health at work (Occupational Health & Safety OHSAS), risk analysis, critical points control, etc. (HCCP– Hazard analysis and Critical Control Point) [1]. Integrated management system implies permanent quality advancement in business in order to achieve business excellence of a modern organization.

### RESEARCH METHODOLOGY

#### ■ Problem and subject of research

It is a well-known fact that some companies do not possess the ISO certificate; on the other hand, some companies possess it, but just as a formality because the standard has not been properly implemented, and therefore there are no appropriate effects resulting from it. Also, the level of employees' awareness of the importance of implementing various standards is not enviable. In order to verify the veracity of these claims, a survey was conducted, and the subject of the survey were companies from various production activities (glass processing, automotive industry, household chemicals, cosmetics, etc.), as well as from an agency in

the field of providing certification and consulting services.

### Research objective

The goal of the investigation was to determine the importance of the implementation of IMS. The obtained results of the investigation indicated the level of awareness of the employees regarding the following: the importance of application of various standards, fulfilment of requirements of different regulations, importance of establishment of quality policy which ensures further definition of quality objectives, re-examination and the method which may be used to improve the quality and environmental policy which should comply with the mission and vision of the company. This investigation shows the real mindset of the employees regarding fulfilment of the requirements of the implemented standards as well as their desire and awareness of possible improvements in effectiveness of the integrated management system.

### Research instrument

The employees were asked to fill out the survey containing the questions formulated in such a way so that no confidential information is disclosed while at the same time respondents give responses to the questions within given topics.

### Research questions

Questions are formulated to obtain information about the number and type of implemented standards, benefits and improvements observed in the production processes upon their implementation, about advancement in environmental protection, realization of internal and external audits/controls, as well as about the awareness of employees of certain implemented standards in companies which perform various kinds of activities.

### Research sample

The survey was conducted in several companies in different industries. The target group were the employees whose positions include an active or passive participation in implementation of various standards. In case the positions of respondents were not directly related to management of standards, the condition was that they were familiarized with the details of the manner in which IMS is implemented in the company they work for.

## RESULTS AND DISCUSSION

The survey comprised the total of 30 respondents from 12 different sectors. Most of respondents were from glass production and glass processing

– 10 of them from different division so that a wide range of answers could be given from multiple point of view with a valid outcome in compliance with the intention of the survey investigator. There were 4 respondents from automotive industry, 3 respondents from each certification services and consulting services and 3 respondents from both household chemicals and cosmetic product manufacturers. Fewer respondents were from technical examination and analysis as well as from food industry, while the fewest were the respondents from agricultural production, distillation equipment production, road reconstruction, non-metal production, utility services and machine metal processing.

Most of respondents were from quality assurance departments, seven of them, followed by six respondents employed in human resources departments among whom were employees responsible for safety at work and environmental protection. There were 5 respondents from maintenance departments and 3 process engineers, while 3 chemical and cosmetic technologists also took part in the survey. The same number of employees responsible for the certification of ISO standards as technologists took part in the survey and also one respondent from each information technology and logistics and one project manager.

To the question as to which of ISO standards were implemented in their company, most respondents answered ISO 9001, which is shown in Figure 1.

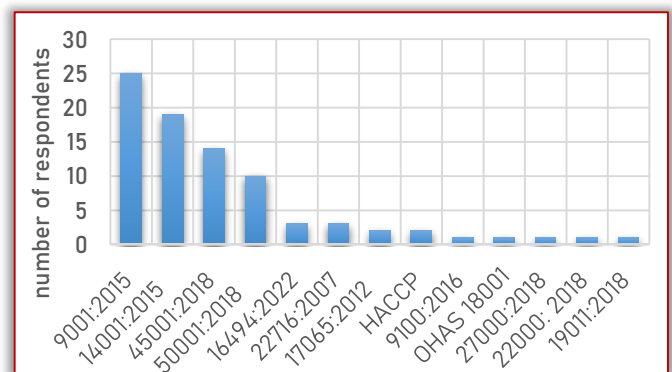


Figure 1. ISO standards share in analysed companies

The work tasks of the respondents from quality assurance departments are mainly related to ISO standard 9001:2015 and they are the most numerous; human resources departments mostly deal with standards focused on environmental issues (ISO 14001:2015 and ISO 45001:2018), while the respondents working in maintenance departments or engineers mostly deal with 50001:2018 standard related to energy

management. The work tasks and duties of the respondents within ISO standards are mostly related to implementation of standards and quality or system advancement which involve monitoring as well. Fewer respondents are in charge of documents presentation to auditors, while seven respondents perform the duties of internal controller once or twice a year (Fig.2).

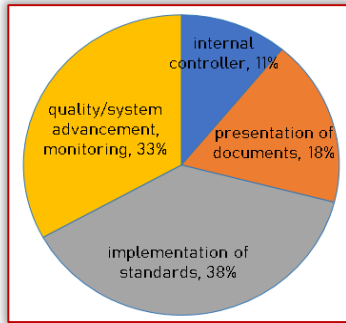


Figure 2. Type of work at the position related to ISO standard

When responding to the question as to whether they thought that the implementation of certain ISO standards could provide benefits to the company, the respondents were asked to give at least two benefits if their answer was positive. Most respondents cited advancement in the business system, which mainly comprised quality, organization of work, comprehensive view of documentation and efficiency (67%). As shown in Figure 3, 18% or 11 respondents agreed that implementation of ISO standards affected the company reputation. Less than 10% of respondents believed that the implementation could result in other benefits such as: consumer confidentiality, expenses reduction, increased product value and rise in employees' awareness, which were all legitimate and accurate answers.

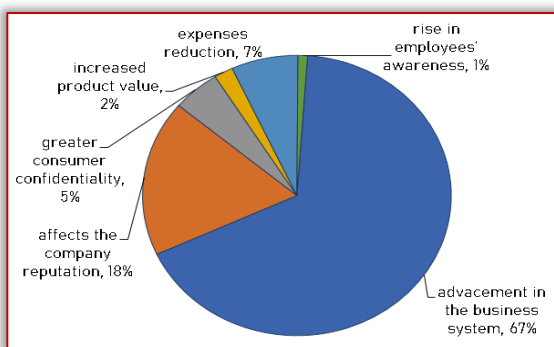


Figure 3. Possible positive benefits of ISO standards implementation

The next question was about the perceived improvements in the production process due to the implementation of ISO standards related to product quality. The respondents mentioned several improvements in the quality of the products which they believed were made due to the implementation of ISO standards; however, they underlined that the greatest

effect could be perceived in advancement of the product traceability, from the point where the material entered the manufacturing, until the point where the finished product left the company. One respondent from each group answered that the implementation of standards could also affect the increase in production capacity as well as more qualitative services offered to customers.

The respondents from the companies which had applied ISO 14001 standard noticed a lot of benefits (Figure 4). However, a lot of respondents, 10 of them, admitted that ISO 14001 standard had not been applied in their companies, which makes up 33.33% of the total number of respondents.

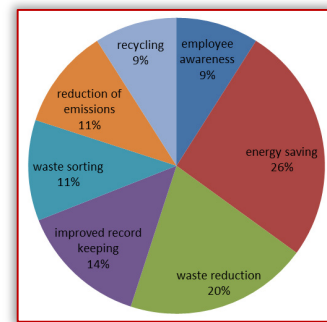


Figure 4. Perceived benefits of application of ISO 14001 standard

Accordingly, the percentages were calculated and presented based on the answers of the remaining 20 respondents who mentioned at least two benefits which they considered derived from the implementation of this standard. Most respondents said that the implementation of the standards focused on environmental issues could contribute to energy saving and reduction of waste. To the question as to which sectors should apply ISO 14001 standard, about 70% of respondents named a large number of companies which, owing to the fact that they are manufacturing companies, generated waste and were considered big or small polluters. Nevertheless, other respondents were resolute regarding industry or sector which should implement this standard. As one reason for the implementation of ISO standards they cited environmental protection and safety of all those found in the work or life environment. Although 10 respondents did not have ISO 14001 standard implemented in their companies, all of them answered this question, which undoubtedly shows that there is awareness of the need to apply this standard. However, two respondents answered that no sector should implement this standard without stating any reason for their opinion.



As much as 97% of respondents said that internal and external audits/controls of ISO standards were performed in the companies they worked for, while only 3% of them answered negatively to this question. In most cases audits were performed once a year as per answers of two thirds of respondents (Figure 5).

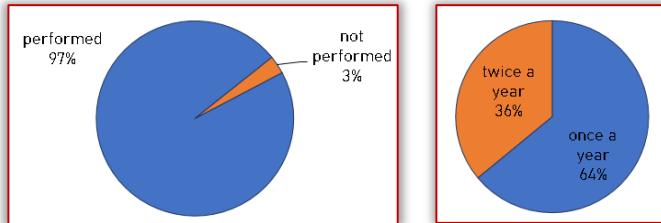


Figure 5. Are controls/audits conducted and how many times per year?

Is it important for all employees in the company to be informed that the company has ISO standards implemented or only those employees whose tasks are related to ISO standards? – this was the question which followed. The majority of respondents, 90% of them said that all employees should be informed, while the rest of them thought that only those employees whose tasks were related to ISO standards should be informed. One part of respondents said that not more than 30% of their co-workers were informed about the implementation of the standards in their company; the other part of respondents thought that this number was somewhere between 51% and 70% of their colleagues, while the largest number of respondents believed that 71–100% of their colleagues were informed about the standards. Although a larger number of respondents was of that opinion, a part of them also said that their colleagues were ill-informed about the manner in which the standard was implemented. Two respondents could not give their opinion about this question.

Finally, the last question in the survey was hypothetical: if they were the owners of the company they worked for, whether they would initiate implementation of ISO standards. There were 97% of positive answers although a part of respondents was not entirely familiarized with those standards which were not implemented in their company or the standards were not related to their assigned tasks. Only one respondent was not interested in application of standards in "his company" if he was to assume the role of a manager or owner.

### CONCLUSION

After a detailed consideration of the respondents' answers and the analysis of IMS functioning in different companies, it can be

concluded that it is necessary for every production to implement at least one ISO standard so it could be competitive in the market. Although the majority of respondents hold positions related to ISO standard 9001 in the quality assurance departments, 90% of them do not consider ISO 14001 standard less important and believe that it should be implemented in all sectors considered bigger or smaller polluters. The majority of respondents agree that the implementation of the standards may considerably contribute to the company's reputation and advancement of the business system, while the employer has a duty to recognize and realize this need. The answers offer the conclusion that the respondents are well aware of the need to implement ISO standards, although entrepreneurs must be continuously informed about the quality, IMS, business excellence and the similar.

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