Improving the Performance of Enterprises from Danube Riveran Countries, through the Implementation of a Quality Management System

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Abstract: A major commitment and objective in the conditions of a market economy is to improve the quality of production, with a special emphasis on increasing the efficiency of economic activity to meet the production and consumption requirements. A permanent competition on both domestic and international markets has challenged companies to continuously ensure the high quality of their products, in order to meet social needs. The advantages from improving the commodities quality are reflected in an increased labour productivity, reduced production costs, increased profitability. Currently, many companies are particularly interested in the quality assurance models as proposed by international standards of ISO 9000, ISO 14000, ISO 22000, OSHAH 18000, etc. Some of these companies have already a certified quality management system based on these standards. They consider that the quality system certification has a positive impact on business performance, acknowledging at the same time, the far-reaching importance of continuous improvement and implementation of this system, the principles of total quality management to ensure a successful performance in the competition.

Keywords: quality management system; ISO 9000; ISO 14000; ISO 22000; OSHAH 18000; ISO 26000

A prospective view to the global economy at the beginning of the XXI century allows us to point out the following trends: diversification and rapid renewal of products supply through an increased level of technical progress penetration, the globalization of markets, the increased requirements of the consumers. In this context, the goods and services quality was enforced as a determinant factor for the companies' competitiveness.

At present the quality represents a strategic tool of the global management of organizations because it determines at the highest level the competitiveness of the goods/services/ firms/companies on both internal and international scale (Paraschivescu, 2006, p. 19)

The huge volume of new knowledge about the goods and services quality, the importance and implications of quality on the economic and social indicators at micro and macroeconomic level, the introduction and improvement of ISO 9000 international standards are only some of the arguments in favour of the need for every

organization to make special efforts in order to attain professionalism in the approach to quality.

The IXth decade of the XXth brought a contribution to fundamental changes for the quality perspective through the introduction of three elements:

- ***The new international*** market governed by the quality on behalf of the client in which the XXI century companies are set to operate and compete;
- ***New technologies*** that determine, to a higher degree, the requirements for successful performance on the market.
- ***New business models*** that further define the significance of excellence for the XXI century companies (Paraschivescu, 2006, pp. 20-21)

These three great directions for development have created six new dimensions, respectively important domains for changes for the future of quality assurance (Feigenbaum, 2002, pp. 13-15):

❖ Achieving a high value for the client, associated to quality, materialized in goods and services;

❖ A successful use of technologies (information technology, reducing the terms of launching new products, ensuring the performance etc.)

❖ The human resources efficiency;

❖ The capability to productively work with suppliers and other important business partners;

❖ Integrating the economic aspects of quality assurance in the financial-accounting systems;

❖ The effect of quality assurance on the company leadership and management.

Acknowledging the reality that everything is progressing, all the more so is the quality management, where the bristliest devours the most sluggish and tardiest one, leads us to the conviction that change is the only constant thing.

From this perspective, at the integration of economic aspects of quality assurance with other key indicators of the managerial activities, it comes out that the XXI century firm does not confine itself to traditional accounting indices in top strategic planning of improving the product /service, for the leadership of value through quality and the leadership of the accurate cost that it assures. The continuous rise of demand for value through quality on behalf of the client, requires a uncompromising emphasis on excellence management at all levels of the process concerning the quality in the entire firm. (Paraschivescu, 2006, pp. 21-22)

In current economic conditions, in which quality has an increasing importance as a decisive factor for the competitiveness of organizations on the market, it can be

noticed that more and more enterprises are oriented towards increasing the efficiency and improving the implementation of quality management systems.

Such an orientation is favored by the issuance of the ISO 9000 standard 2000 version, that places a particular emphasis on meeting the clients' requirements through the integration of the processes that intervene in relation with the clients and on the continuous improvement of all the processes within an organization.

In such conditions, organizations must give an absolute priority to the management of relations with clients, applying corresponding techniques and tools for the identification of their requirements and the assessment of the degree of their satisfaction, in comparison with the competitors' offer. In addition it is widely recognized the determinant role of the human resources for assuring the success in every undertaking of the quality assurance domain. On the account of this the employees must understand the necessity of a continuous improvement to such an extent that it becomes an integral part of their state of mind.

The idea of developing some standards that would enable the implementation of a quality system within a firm, but also to allow for an evaluation of it via a referential, was proposed for the first time within the Technical board (Committee) – **TC 176 "Quality Management and Quality Assurance"** of the International Standardization Organization in 1979. The efforts of this technical board materialized in 1986, by the publication of the ISO 8402 standard. This standard was subsequently updated in 1995, 2000, 2005 and 2008, that during this period it has undergone multiple modifications regarding the content and structure. (Todos, 2010, p. 32)

Thus, according to the last modifications from November 2008, **ISO 9001 "Systems of Quality Management. Requirements"**, specifies the requirements of a management system of quality for the organizations that are obliged to prove their capability to supply goods that would meet clients requirements but as well the applicable regulation requirements, having as aim increasing the customers' satisfaction.

This standard can be applied to[1]:

Organizations that are pursuing the aim of reaching some advantages through the implementation of a quality management system;

a) Organizations that are pursuing the aim of getting the suppliers confidence that their requirements concerning the goods would be met.
b) Products users.
c) Those interested in a mutual understanding of the terminology used in quality management (for example suppliers, clients, regulation authorities);

[1] The ISO 9000:2005 Standard Quality Management Systems – Fundamental Aspects and Vocabulary, p. 9

d) Those that from inside or outside an organization evaluate the quality management system or audit it for its conformity with the ISO 9001 requirements (for example auditors, regulation authorities, certification/ registration bodies);
e) Those that from inside or outside an organization, offer advice or training regarding the quality management system adequate for that given organization;
f) Developers of connected standards.

ISO 9001specifies the requirements of a quality management system for the organizations that want to prove their capability to supply goods that would meet customers' needs as well as the regulation requirements applicable, having as aim increasing the compliance with customers needs[1]. It establishes the requirements for a quality management system when an organization:

a) Needs to prove its capability to consistently supply goods that would meet customers' needs and also the requirements of applicable regulations,

b) Has the aim to increase the customer satisfaction through the efficient application of the system, including the processes of a continuous improvement of the system through assuring the compliance with the customers' needs and also with the applicable regulations.

The ISO 9901 standard can be used by both internal and external parties, including by the certification bodies, in order to evaluate the capability of the organization to comply with the customers' needs, the regulation ones and organizational proper.

The moment the organization wishes to implement these standards, it must[2]:

a) Identify the processes necessary for the quality management system and their application to the entire organization;
b) Determine consecutively and the interaction of these processes;
c) Determine the necessary criteria and methods in order to make sure that both the operation and control of these processes are effective;
d) Ensure the availability of the resources and information necessary for the support of the operation and monitoring of these processes;
e) Monitor, measure and analyze these processes;
f) Implement the necessary actions in order to achieve the planned results and the continuous improvement of these processes.

This standard promotes the adoption of an approach based on the process in the development, implementation and improving the efficiency of the quality management system, with the aim of increasing the compliance with the customers' needs by meeting their requirements. In order that an organization effectively unfolds its operation, it must identify and lead numerous correlated activities. An activity that uses resources, managed in such a way that it would enable transforming input

[1] The ISO 9001:2008 Standard "Quality Management System. Requirements", p. 1.
[2] The ISO 9001:2008 Standard "Quality Management System. Requirements", p. 12.

elements into output ones, can be considered as a process. Very often the output elements in a process make up the input elements from the following process.

An advantage of the process-oriented approach is the permanent control that it ensures as well concerning the connection between the individual processes within the framework of the processes system, and in what regards their combination and interaction.

When it is used within the framework of a quality management system, such an approach points out the importance of:

- The understanding and compliance with requirements;
- The necessity of considering the processes in accordance with the added value;
- Obtaining results in what concerns the performance and efficiency of the process;
- The continuous improvement of processes based on objective measurements.[1]

Within such a process the **Deming Cycle** could be applied or **PDCA Cycle**. „PDCA" represents the abbreviation of the stages „Plan – Do – Check – Act". In the specialized literature it can be encountered under this methodological denomination as first established in English specialized literature.

The implementation of a quality system in accordance with the ISO 9000 family, enables keeping under control the enterprise processes, generating consumers trust. Through such a system the enterprise is customer-oriented, pursuing the compliance with their needs, from the quality point of view, needs that are established within the framework of contractual relations.

On the other hand, the implementation of a medium level management system, according to the **ISO 14001** standard, enables the minimization of the impact upon the environment by the processes of the enterprise, responding in such a way to a wider range of interests.

Environment management system is defined as representing that part of the general management system, which includes the organizational structure, planning activities, responsibilities, practices, procedures and resources for the elaboration, implementation, realization, analysis and maintenance of the environment policy.[2]

The concerns, regarding the environment protection, have become particularly pressing since 1970, with the increase of the negative effects from the industrialization, effects that were acquiring a global dimension. With the aim of improving the created situation, a range of summits have been organized at the international level, during which various solutions have been reached, among which the elaboration of standards regarding the environment.

[1] The ISO 9001:2008 Standard "Quality Management System. Requirements", p. 8
[2] The ISO 14001:2004 "Environmental Management System. Specifications and Usage Guide", p. 6.

The first standard concerning the environment was created in 1992, by the British Standardization Institute. This standard had the title **„Specifications for the environment management system" – BS 7750**. A second variant of this standard has served as a basis for the elaboration and development of other standards for the environment in other countries, such as: Canada, France, Spain, Ireland, etc. (Todos, 2010, p. 39)

During the period of 1990-1991, at the initiative of International Standardization Organization the *Strategic Advisory Group regarding the Environment was set up*. This group had as a main task researching the opportunity of elaborating some standards regarding the environment management. At the recommendation of this group the technical board ISO/CT 207 "Environmental Management" was set up. At the first meeting, that took place in 1993, it was decided the elaboration of some international standards regarding the environment management with the following aims:

- *To harmonize the existing standards, assuring a unitary reference system in this domain, this would enable the international trade.*
- *To offer the organizations a tool, that would enable improving their performance concerning the environment and evaluate the recorded progress.* (Olaru, 1999, p. 439)

The ISO 14000 standards are general standards, designed to keep under control the impact of the processes from the entire organization upon the environment. They define some models of environmental management systems, which can be implemented by an organization for pursuing some internal or external purposes. At the same time they offer the necessary tools for evaluating the conformity of the environmental management system with its chosen referential, the evaluation of environment performance, the preliminary analysis and environment evaluation of the organization lay-out/emplacement.

The ISO 14000 standards referring to the environmental management systems have been conceived in such a way that they could be applied by any organization, regardless of the geographic zone or of the social-cultural medium in which it operates[1]. These standards do not assume the role of absolute referential however, "international lawmaker" (Fuior & Pirtea, 1997, p. 21) which would be used with the aim of modifying the commitments that belong to the organizations by virtue of valid regulations in use concerning the environment protection or any other applicable regulations.

The successful implementation of an environmental management system is conditioned by the involvement of all the administrative levels, especially the top managers of the organization.

[1] The ISO 14001:2004 "Environmental Management System. Specifications and Usage Guide", p. 4.

The ISO 14000 standards set forth requirements regarding the environmental management system, applicable for every organization that pursues:

- The implementation and improvement of the environmental management system;
- Ensuring the system conformity with its environmental policy;
- Proving the system conformity with this standard;
- Certification/registration of the environmental management system;
- Perform a self-evaluation or release on their risk and responsibility the conformity system with this standard.

The requirements of this standard are integral in the management system of the organization and its elements can be adapted in such a way that they would ensure conformity with the standard requirements.

From another perspective, the concrete modality of standard application depends upon a range of factors, among which: the environment policy of the organization, the nature of its activities, the concrete conditions in which it carries on its activities.

The *ISO 14001 "Environmental management system"* – is a standard that specifies the requirements for an environmental management system that would allow a society to express and implement a policy and objectives that take into consideration legal requirements concerning significant aspects regarding the environment.

The structure of the environmental management system elements, stipulated by the ISO 14001 standard, has been executed following the PDCA cycle, about which we have mentioned above, thus pointing out, the need for a continuous improvement of all the processes that are implied by such a system.

In 2004 a new variant of the ISO 14001 standard has been elaborated. The ISO 14001:2004 standard has a vast application at the international scale and contains some obligatory requirements regarding the observance of environmental law or other regulations applicable and represents the reference standard for the implementation of an environmental management system.

Another standard that can be implemented for boosting the performance is **ISO 22000**. The ISO 22000 standard is a new international standard elaborated to ensure the catering chains at the international level. The standard has been elaborated within ISO by specialists from the catering industry, together with representatives from specialized international organizations in a tight cooperation with the Codex Alimentarius Commission, a body set up in collaboration with the United Nations Organization for Food and Agriculture and with the International Health Organization for the elaboration of standards regarding food products. ISO 22000 covers the HACCP principles and integrates the key standards requirements, elaborated by diverse distributors associations at the international level.

HACCP represents the abbreviation for **„Hazard Analysis and Critical Control Point"**. This concept first appeared at the beginning of the ‚60s in the USA. The first

who made use of these principles were „Pillsbury Corporation" close by „NASA Laboratories" and the „USA Military Laboratories", that had applied this method with the aim of carrying out the astronauts catering, that was providing the 100% insurance against bacteria and pathogen viruses.

HACCP represents a preventive control system concerning the insurance of foodstuffs quality. The HACCP principles (fig. 1) can be applied to all the sectors that produce foodstuffs and beverages, distribution and services from public food supply chain, as for the already existent products and for the new ones.

The supply, reception, storage, production and delivery are included in this system. Each of these system processes is assessed through the perspective of failure.

With the aim of reinforcing, consolidating the consumers trust in the security of foodstuffs in EU, a new Directive nr. 93/43/EEC/ from 14 June 1993 was adopted, regarding the hygiene of foodstuffs.

At present, the HACCP certification system has become an obligatory legislative requirement for the food industry enterprises from the EU and USA. According to a recent report by the European Parliament regarding the HACCP insurance of foodstuffs quality, Miss Maria Petre, a reporter at the European Parliament, requires a closer collaboration with the International Standardization Organization and a more extensive implementation of certain alternative systems such as HACCP Hazard Analysis and Critical Control Point.

In what regards the international dimension, she reveals the existence of certain competitive issues in relation with the main trade partners from EU; she is also concerned by the pressure exerted by the products from emerging countries, that do not conform to the same security and quality level and very often benefit from a doubtful control; she reaffirms from this point of view the need for the implementation of the concept of „access to the qualified market", supported in numerous resolutions of the European Parliament. This one requires concluding as many bilateral agreements as possible with the key markets, as well as concluding certain agreements in what concerns the counterfeiting control; she considers necessary the efforts from the part of the Commission in order to clarify the problems that the international protection of trademarks faces with.[1]

[1] http://www.iso.org – the official site of the International Standardization Organization

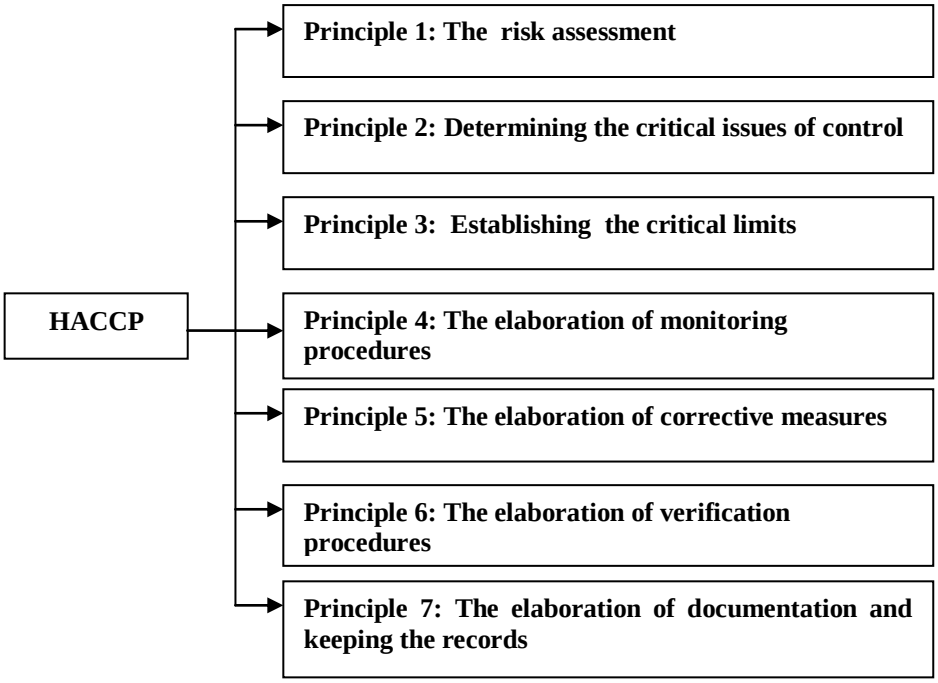

Figure 1.The HACCP principles[1]

The **ISO 22000:2005 standard „Management system of foodstuffs security – Requirements**" for the organizations from the domain" represent an organization system and assurance of production and processing security of foodstuffs on the way of the entire operational chain: from the raw material and packing up to the delivery of the product to the end user. In contrast to the other systems of quality control, which are based on the periodical verification of raw material and end product, HACCP guarantees a permanent control of the entire production cycle.

ISO 22000:2005 enables the enterprise to exercise a more severe control of the product security at all stages of the production process and to maintain the quality at the highest level. This standard is integrated with ISO 9001 and implies an interactive exchange of information at all stages of production, the execution of a systemic management of the production processes, the realization of the obligatory preventive measures programme and the observance of all HACCP principles.

Since the ancient times people have been concerned with the occupational protection and have searched for diverse ways to protect themselves. The more the work processes were evaluating the more the risks of getting injured, ill or dying were rising; thus they started to look for adequate protection means and ways to avoid work place accidents.

[1] http://www.iso.org – the official site of the International Standardization Organization.

With this purpose in view several occupational health and safety management systems have been elaborated at international, regional, sectorial level. These models are very often well thought but they do not inscribe in the set of occupational health and safety principles, and the security principles are the best reflected in the - **occupational management system of health safety**, elaborated by the International Standardization Organization. OHSMS represents the English abbreviation of „Occupational Health and Safety Management Systems".

The occupational health and safety management systems represent a set of elements with a decision-making, organizational, informational, motivational, etc. character, within the organization through which a set of OHSMS processes and relations are being exercised, with the aim of obtaining the expected level of health and safety at work. (Oprea & Suciu, 2005, p. 401)

The implementation of a health and safety management system in conformity with the OHSAS 18001 represents a proactive approach specific for the domain in order to help organization formulate policies and objectives regarding the occupational health and safety.

In addition, OHSAS 18001defines the authority and responsibility within the organization as well as a structured approach of risks. This one includes monitoring the occupational health and safety weak aspects and the audit of the key activities and processes of the organization.

OHSAS 18001 can be applied for every organization which wishes to eliminate or minimize the risk that employees or other involved contributors could be exposed to associate with the work they perform.[1]

The OHSAS system is applicable to every organization that wishes to:

❖ Establish an occupational health and safety management system, in order to eliminate the risks for the employees and other interested parts that could be exposed to risks associated with their occupation;

❖ To implement, maintain and increasingly improve a OHSAS management system;

❖ To ensure their own conformity with the declared OHSAS policy;

❖ To demonstrate this conformity to other entities;

❖ to obtain the certification/registration of its OHSAS management system by an external organization;

❖ to execute an auto-determination and declaration of conformity with the OHSAS specification.[1]

[1] http://zoom-consultanta-iso.ro/index.php/consultanta-iso-18001 the official page of the Consultancy Board Zoom Consulting.

Not of lesser importance is the following standard ISO 26000, an international standard that provides some directive lines concerning the social responsibility. The standard is designed for all types of organizations, from the public or private sector, from developed, developing or transition countries. It contains instructions for voluntary work but not requirements and this is not to be used as a certification standard such as ISO 9001:2008 and ISO 14001:2004.[2]

ISO 26000 guide of Social Responsibility has the purport, thus to offer to the organizations, regardless of their objectives and size, a set of clear and practical tools necessary for: defining a policy of social responsibility; integrating in their own main activities of social responsibility; identifying interested groups and getting them involved in those decisions that could affect them; reporting about their social performance and developing sustainably. In such a way the ISO 26000 standard encourages organizations that in their decisions and activities report not only to legal obligations, but also to all those social responsibilities and also to the environment.

This standard provides:

- concepts, terms and definitions referring to the social responsibility;
- origins, tendencies and characteristics of the social responsibility;
- principles and practices concerning the social responsibility;
- central issues of social responsibility;
- domains of activity of social responsibility;
- integration, materialization and promotion of a socially responsible behavior within the organization through its policies and practices, relating to its sphere of influence;
- identification of interested factors and a dialogue with them and
- communication of engagements and achievements regarding the social responsibility.

Directive lines covered by ISO 26000 are inspired by the best practices developed by the initiatives of social responsibility from the public and private. They are correlated and complementary with the relevant declarations and conventions of United Nations and its specialized institutions, in particular International Labour Organization, with which the ISO concluded an agreement, in order to establish the conformity with the labor standards of ILO. ISO has also signed an agreement with the ILO International Board for Conventions and also with the Organization for the Economic Cooperation and Development in order to increase the collaboration concerning the ISO 26000 standard.

Thus we can conclude that the implementation of a quality standard brings certain advantages, among which we would like to mention:

[1] http://www.calitate-management.ro/ohsas18001.htm- the official page of the Consultancy Firm
[2] http://www.iso.org – the official site of the International Standardization Organization

Benefits obtained by the enterprise at the standard implementation	
ISO 9001:2008	• Earning the customers trust; • Increasing the customers satisfaction; • The continuous increase of the general performance; • The active and systematic adaptation to the market conditions; • The employees satisfaction; • Improving the performance; • Transparence and efficiency of the organization internal processes; • Avoiding the errors instead of correcting them; • Saving the time and money; • Carrying out the company policies and objectives.
ISO 14001:2004	• The systematization of all the relevant environment activities that lead to the reduction of environmental risks. • Improving the environmental performance through the organization • Increasing the community, governmental, banks, insurance and clients trust • Economy of costs through a systematic and pro-active thinking and action • The legal safety as a result of a systematic observance of environment legislation and regulations through which it is implemented.
ISO 22000:2005	• Assuring the hygienic quality of the goods (the foodstuffs safety) • Contributing to the reduction of wastes and customers claims; • Extending the validity term of the goods • Increasing the customers and employees trust in the company in its capacity to exclusively constantly produce goods of high quality, • Creating a competitive advantage • The contribution to improving the firm's image and credibility on the international markets, as well as for the prospective investors
OHSAS 18001:2008	• Reducing the number of accidents due to a systematization of all relevant activities for the occupational health and safety • Keeping under control of professional risks by a real determination of occupational risks • Reduced risks – that promote reduced costs • Reduced material loses due to work accidents

	• The security of the juridical legislation due to a strict application of all the applicable laws and regulations • Identification and increased motivation of employees due to the management implementation in the OHSAS processes • Reducing the insurance contribution for the work accidents and occupational illnesses • An improved image and a competitive ability through the system performance • The possibility to participate at auctions
ISO 26000:2010	• A better anticipation and management of social risks, legal and of environment protection and an increased ability to cope with the changes. The companies that promote a permanent dialogue with the community have the capacity to anticipate and respond to environmental, economic and social changes that could take place and which would present a potential risk for the business. They have rather a proactive behavior than a reactive one. • Improving the reputation: the reputation or brand is funded on such values as trust, credibility, quality and responsibility. Reputation is an intangible asset of a huge importance for the company and it must be carefully managed. • An increased ability to recruit, develop and retain personnel: the feeling of pride generated by the goods and practices of the company and the wish to associate themselves with a company that cares and which involves itself in the resolution of community problems. • Improving the competitiveness and the position on the market: involving in CSR activities, that could lead to a better access on the market or to the integration onto new markets, enabling the differentiation from competitors and the increase of customers' loyalty. • Reducing the costs: could result in the implementation of certain procedures to reduce the resources consumption and to recycle • The access to capital: the financial institutions increasingly record the economic, social, and equality of chances criteria, in their evaluation regarding the new projects of the companies. When they take important financial decisions, they are searching for indices that would point out an efficient management in the RS domain.

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***The ISO 9001:2008 Standard "Quality Management System. Requirements".

***The Law of the Republic of Moldova "Regarding the Entrepreneurship and Enterprises", no. 845-XII from 3 January 1992, amendments and additions by the Law nr. 320-XII from 3 November 1995.

http://www.calitate-management.ro/ohsas18001.htm- the official page of the Consultancy Firm.

http://www.iso.org – the official site of the International Standardization Organization.

http://zoom-consultanta-iso.ro/index.php/consultanta-iso-18001 the official page of the Consultancy Board Zoom Consulting.